Spasticity in children and young people with non-progressive brain disorders: management of spasticity, co-existing motor disorders and their early musculoskeletal complications

Appendices A-L

National Collaborating Centre for Women's and Children's Health

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This guideline has been fully funded by NICE. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient.

Implementation of this guidance is the responsibility of local commissioners and/or providers

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Appendix A Scope

NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE SCOPE

1 Guideline title

Spasticity in children and young people with non-progressive brain disorders: management of spasticity and co-existing motor disorders and their early musculoskeletal complications

1.1 Short title

Spasticity in children and young people with non-progressive brain disorders

2 The remit

The Department of Health has asked NICE: 'To prepare a clinical guideline on the management of spasticity in children with a non-progressive brain injury'.

3 Clinical need for the guideline

3.1 Epidemiology

- a) Spasticity is a sign found in some motor disorders which is characterised by hyperexcitability of the stretch reflex, resulting in a velocity-dependent increase in tonic stretch reflexes (muscle tone) with exaggerated tendon jerk. It is one components of the upper motor neuron syndrome.
- Spasticity is a common and often serious abnormality affecting motor function. Spasticity results in an increased resistance to passive movement of a muscle through hyperactive stretch reflexes causing rapid

and strong contraction of the muscle. This dysregulation of tone with movement can result in a wide range of clinical manifestations and functional impairments.

- c) Spasticity in children and young people is most often seen in cerebral palsy, although it can also occur with other forms of non-progressive and progressive brain disorders, the latter is outside the remit of this guideline.
- d) In children and young people with cerebral palsy, the motor disorder can be characterised using the following approaches:
 - Anatomic distribution of motor disorder
 Unilateral involvement or bilateral involvement
 Description of involvement of each limb, trunk and oropharynx
 - Nature of motor disorder
 Spastic, dyskinetic or ataxic as predominate abnormality
 Dyskinetic further divided into dystonic or choreathetosis
 Additional tone or movement problems listed as secondary types
 - Functional motor ability
 Gross Motor Function Classification System (GMFCS) used to assess ambulation
 - Manual Ability Classification System (MACS) used to assess hand and arm function
 - Accompanying Impairments

This system of classification was developed by the Surveillance of Cerebral Palsy in Europe (SCPE) project and replaces the previous classification where the following terms were used to describe anatomic distribution:

- Hemiplegia one side of body affected, arm usually more severely than leg
- Diplegia legs predominantly affected, mild to moderate upper limb impairment
- Quadriplegia sever impairment of arms and legs, often with trunk

weakness and oropharyngeal involvement

As the guideline will be referring to literature over the last few decades, these terms will still be used in the assessment of the evidence for management of spasticity.

- e) Cerebral palsy describes a group of permanent disorders of the development of movement and posture, causing activity limitation that are attributed to non-progressive disturbances that occurred in the developing foetal or infant brain. The motor disorders of cerebral palsy are often accompanied by disturbances of sensation, perception, cognition, communication, and behaviour, by epilepsy, and by secondary musculoskeletal problems.
- f) The prevalence of cerebral palsy in the UK is about 2 per 1000 live births. This figure has not changed significantly in the past 40 years. Around 40% of children with cerebral palsy were born prematurely. In many of these children the precise cause of cerebral palsy is not apparent, but various risk factors can be identified, including maternal illness and postnatal events.
- g) Although in cerebral palsy the causative brain damage is static, the motor manifestations change over time. Typically, abnormalities of movement and posture are first recognised during infancy or early childhood and progressive disability can occur.
- h) Up to 80% of children with cerebral palsy have a spastic motor impairment. Other types of motor impairment in cerebral palsy include dyskinetic (with athetosis, dystonia and chorea) and ataxic (with abnormalities of coordination and balance). It is quite common for children with spastic cerebral palsy to also have other motor disorders such as dystonia or ataxia.
- i) Examples of non-progressive disorders that may affect the brain of a fetus or infant include brain malformations, prenatal vascular events (stroke) and infections (such as cytomegalovirus), perinatal hypoxic or ischaemic

encephalopathy, and postnatal head injury or meningitis. When this damage occurs in the developing brains of children under three years of age, it is referred to in this guideline as cerebral palsy.

- j) Non-progressive disturbances may also occur in older children and young people, for example, from head trauma, encephalitis or meningitis. Non-progressive disturbances affecting movement and posture occurring after this age are defined in this guideline as being "acquired".
- k) Depending on which parts of the motor cortex are damaged, the imbalance between flexor and extensor muscles may lead to abnormal posture of the joints. It is important to distinguish dynamic postural abnormalities (due to muscle spasticity) from fixed contractures (muscles that have become permanently shortened after long-term spasticity).
- The functional abilities of children with spasticity often deteriorate over time. The cause of the progression is not often identified. It may include weakness, posturing, contracture, dystonia, ataxia or other motor disorders. Incorrect diagnosis and high expectations can all lead to functional deterioration. Effective management of spasticity and other motor problems could be important in preventing functional decline.
- m) The muscular imbalances associated with spasticity often result in abnormal posture, which is initially 'dynamic' with the potential to improve with effective treatment of spasticity. In time the abnormal posturing can become permanent because of contractures, which in turn, may cause fixed joint deformities. Uncorrected deformities in spastic cerebral palsy can cause pain, impair function, reduce mobility and cause difficulties in caring for the child.
- Subluxation or full dislocation of joints arise most commonly in the hips,
 but shoulder, elbow and ankle dislocations also occur though infrequently.
 Significant bony deformities can form such as kyphosis and scoliosis of the spine.
- o) These changes may substantially worsen the child's functional disability

and impair the ability to walk or sit. Postural management or other specialist equipment may be necessary. Children and young people may avoid walking if it becomes unsafe or uncomfortable or if it requires a large effort. Abnormal posturing of the shoulder, elbow, or hand may greatly impair the function of the upper limb. These functional deteriorations can cause a consequent reduction in the individual's independence, for example in dressing or toileting or in access to education or play. A lack of independence leads to an increased need for support by paid carers or family members. It may also reduce employment opportunities.

- p) Progressive disability requires acknowledgment, surveillance, prevention and management, especially during the transition to young adulthood when the demands of normal teenage life become more dominant in determining the health of the individual.
- q) Successful treatment of spasticity might lead to better motor function, reduction or prevention of contractures and other fixed musculoskeletal deformities, enhanced functional abilities and independence, and ultimately an improvement in the person's quality of life.

3.2 Current practice

- a) The aims of managing spasticity are to minimise the effect that it has on the child to treat pain, improve motor function, improve ease of care, and prevent the consequences of spasticity. In combination with other interventions dealing with the child's associated motor disorders and comorbidities, the aim is to promote independence and to achieve as complete an integration into society as possible for the affected child or young person.
- b) Many treatments are used in the management of spasticity, with considerable variation in practice.
- c) Many physiotherapy regimens are commonly used in children and young people with spasticity. These include passive stretching, muscle

strengthening therapeutic exercises, serial casting, using splints and discouraging and preventing postures and movement that lead to disability and deformity, and encouraging postures and movement that improve function.

- d) Orthoses, aids and appliances are used to manage seating and posture or– for example – to hold limbs in an advantageous position to improve functionality and to prevent or treat deformity. Ankle–foot orthoses of various sorts are frequently used. Similar devices are also used to immobilise the knee or to encourage hip abduction. Upper limb orthoses may be employed.
- e) Spasticity may be alleviated by a wide range of interventions aimed at modulating the abnormal stretch reflex:
 - Oral anti-spastic medications such as baclofen may be used in those with extensive spasticity.
 - Intrathecal baclofen is administered into the cerebrospinal fluid using an implanted pump. It is used for severe spasticity.
 - Local injection with botulinum toxin A may be effective. This works by temporarily blocking the release of the neuromuscular transmitter acetylcholine.
 - Selective dorsal rhizotomy is used to reduce spasticity in the legs by interruption of the spinal reflex, and is covered by 'Selective dorsal rhizotomy for spasticity in cerebral palsy', NICE interventional procedure guidance 373 (2010). This procedure has potential adverse effects such as hip instability and spinal deformity.
- f) Orthopaedic surgery has a major role in the management of early and late consequences of spasticity. Muscle–tendon lengthening procedures can both release shortened muscles and weaken spastic muscle, thereby improving the balance of forces influencing joint position. Osteotomy procedures can correct deformities and stabilise hip dislocation.

 Rotational osteotomy can correct torsional deformities and relieve malaligned muscular forces. Spinal deformities can be treated with fusion

and instrumentation techniques. Disorders such as pes equinus and pes varus, scissoring and hip instability can be managed using such techniques. Hip subluxation or dislocation occurs in up to 25% of children with cerebral palsy and surgery can be helpful to stabilise joints. Surgical procedures can alleviate many of the consequences of spasticity, resulting in significant functional improvement.

g) Expertise in and access to various types of treatment varies. Bracing techniques may be employed inappropriately or without evidence of benefit. Conversely, in some areas orthoses are not funded. Placement of intrathecal baclofen pumps is available in certain regional centres only.

4 The guideline

The guideline development process is described in detail on the NICE website (see section 6, 'Further information').

This scope defines what the guideline will (and will not) examine, and what the guideline developers will consider. The scope is based on the referral from the Department of Health.

The areas that will be addressed by the guideline are described in the following sections.

4.1 Population

4.1.1 Groups that will be covered

- a) Children and young people from birth up to their 19th birthday who have spasticity as a result of a non-progressive brain disorder. It will include those with spasticity resulting from cerebral palsy and those with spasticity resulting from a non-progressive brain injury acquired later in childhood or adolescence.
- b) Subgroups of this population will be considered in relation to the anatomic distribution of the motor disorder and the nature of the motor disorder.

4.1.2 Groups that will not be covered

- a) Adults 19 years and older.
- b) Children and young people with spasticity resulting from a progressive brain disorder. However, many of the recommendations on the management of spasticity might also apply to these children and young people.
- c) Children with a pure dystonia or other motor disorders which do not coexist with spasticity.

4.2 Healthcare setting

a) All settings in which NHS care is provided.

4.3 Clinical management

4.3.1 Key clinical issues that will be covered

Unless otherwise stated, each issue will be considered in relation to the subgroups of people with unilateral spasticity and bilateral spasticity. If clinically appropriate, each issue will also be considered in relation to the severity of the functional impairment using GMFCS and MACS. However, as this classification system has only recently come into general use, we will also use the older classification system (of spastic monoplegia, diplegia, hemiplegia and quadriplegia with severity graded as mild, moderate, or severe) as necessary to describe the reported evidence.

- a) Physiotherapy and occupational therapy interventions that have a direct effect to reduce spasticity, its musculoskeletal consequences, or accompanying motor disorders for example, muscle shortening.
- b) Orthoses (for example, ankle-foot orthoses, knee splints, serial casting and upper limb orthoses) for preventing and treating contractures and improving function (such as mobility).
- c) Oral medications specifically baclofen, benzodiazepines (diazepam,

nitrazepam, clonazepam), levodopa, tizanidine and dantrolene

- d) Long-term use of intramuscular botulinum toxin A and B to reduce spasticity, maintain motor function and prevent secondary complications.
- e) Whether an effective response to a bolus dose of intrathecal baclofen predicts an effective long-term response in children and young people with moderate to severe spasticity.
- f) The intrathecal baclofen pump to reduce spasticity, maintain motor function, to improve posture and improve health related quality of life in children and young people with moderate to severe spasticity.
- g) Orthopaedic surgery specifically (tendon lengthening and transfer procedures, and osteotomy) to prevent and correct deformities and prevent joint dislocations.
- h) Multilevel surgery (multiple surgical procedures done at the same time) compared with interval surgery (consecutive operations) to improve health related quality of life in children and young people.
- i) Selective dorsal rhizotomy.

4.3.2 Clinical issues that will not be covered

- a) Diagnosis and assessment of spasticity and co-existing motor disorders.
- b) Management of spasticity and co-existing motor disorders caused by a progressive brain disorder or a spinal cord injury.
- c) Management of motor disorders which do not co-exist with spasticity.
- d) Holistic management of cerebral palsy or other non-progressive brain disorders.
- e) Play therapy.
- f) Complementary and alternative therapies.

- g) Management of the following complications:
 - kyphosis
 - scoliosis.
- h) Management of comorbidities, including:
 - cognitive and learning disabilities
 - visual, hearing and speech impairments
 - epilepsy
 - feeding difficulties (including enteral tube feeding)
 - disorders of nutrition and growth
 - impaired bone mineralisation (osteoporosis)
 - pressure sores
 - urological disorders (voiding difficulties or incontinence)
 - gastrointestinal disorders (including gastro-oesophageal reflux and constipation)
 - respiratory disorders (including apnoea, airway obstruction and chronic aspiration).

4.4 Main outcomes

- a) Reduction of spasticity.
- b) Optimisation of movement and function.
- c) Reduction of pain.
- d) Adverse effects of interventions.
- e) Acceptability and tolerability in children and young people.
- f) Health related quality of life.

4.5 Economic aspects

Developers will take into account both clinical and cost effectiveness when making recommendations involving a choice between alternative interventions. A review of

the economic evidence will be conducted and analyses will be carried out as appropriate. The preferred unit of effectiveness is the quality-adjusted life year (QALY), and the costs considered will usually only be from an NHS and personal social services (PSS) perspective. Further detail on the methods can be found in 'The guidelines manual' (see 'Further information').

4.6 Status

4.6.1 Scope

This is the final scope.

4.6.2 Timing

The development of the guideline recommendations will begin in July 2010.

5 Related NICE guidance

5.1 Published guidance

Selective dorsal rhizotomy for spasticity in cerebral palsy. NICE interventional procedure guidance 373 (2010). Available from www.nice.org.uk/guidance/IPG373.

6 Further information

Information on the guideline development process is provided in:

- 'How NICE clinical guidelines are developed: an overview for stakeholders' the public and the NHS'
- 'The guidelines manual'.

These are available from the NICE website (www.nice.org.uk/guidelinesmanual). Information on the progress of the guideline will also be available from the NICE website (www.nice.org.uk).

Appendix B Declarations of interest

All GDG members' interests were recorded on declaration forms provided by NICE. The forms covered consultancies, fee-paid work, shareholdings, fellowships and support from the healthcare industry. GDG members' interests are listed in this section. This appendix includes all interests declared on or before 13 July 2012. No material conflicts of interest were identified during development of the guideline.

GDG member	Interest
Paul Eunson (Chair)	Non-personal pecuniary
	Lothian Health Board received funding (to be used for books, meetings and study leave for departmental staff) in relation to membership of a European working group on intrathecal baclofen, and in relation to a physicians advisory panel for Medtronic (resigned from the advisory panel when offered position of GDG chair)
	Personal non-pecuniary

Member of British and European working parties developing consensus documents for use of intrathecal baclofen in management of spasticity in children and adults; co-author of article published in the European Journal of Paediatric Neurology (Bernard Dan, Francesco Motta, Johann SH Vles, Michael Vloeberghs, Jules G Becher, Paul Eunson, Vincent Gautheron, Sonnhild Lutjen, Volker Mall, Samuel Ignacio Pascual-Pascual, Petra Pauwels, Geir Ketil Røste, Consensus on use of intrathecal baclofen therapy in paediatric spasticity, European Journal of Paediatric Neurology, 19 June 2009, e-pub ahead of press); wrote two chapters for a textbook (aimed at healthcare professionals) on use of intrathecal baclofen; gave a lecture at the Royal College of Paediatrics and Child Health (RCPCH) in relation to management of motor disorders in children with cerebral palsy; presented a paper relating to spasticity at the Society of British Neurosurgeons

Gordon Allan

No interests declared

Liz Barnes

Personal pecuniary

Received travel and subsistence expenses from HemiHelp in relation to a presentation about 'The Hemiplegia Handbook' (see below)

Non-personal pecuniary

HemiHelp received funding from Ipsen for editorial input to a botulinum toxin type A information sheet

Personal non-pecuniary

Trustee of HemiHelp with responsibility for information services; involved in producing information sheets relating to treatments covered by the guideline (including botulinum toxin, orthopaedic surgery, and orthoses); HemiHelp has not recommended or endorsed any particular drug or orthosis; contributed to

chapters about social care, family life, education, etc as joint author of 'The Hemiplegia Handbook' (published by Mac Keith Press)

Lucinda Carr

Personal pecuniary

Received books from Mac Keith Press in lieu of payment as co-author on two chapters of a book (Stroke and cerebrovascular disease, international review of child neurology, Mac Keith Press 2009) relating to outcome and rehabilitation after stroke in children; received travel and subsistence expenses in relation to two European consensus group meetings sponsored by Allergan on the use of botulinum toxin in children with cerebral palsy, and received an honorarium in relation to one of the meetings; both meetings resulted in publication of articles in the European Journal of Paediatric Neurology (neither publication recommended a specific botulinum toxin product)

Personal non-pecuniary

Contributed to guidelines on use of botulinum toxin in children with cerebral palsy; made presentations to the Dystonia Society, made a cerebral palsy information video for NHS Choices, and spoke about cerebral palsy on BBC Casenotes; wrote a chapter (an overview of cerebral palsy) of a book (Oxford textbook of orthopaedics and trauma, Oxford University Press, in press)

Stephanie Cawker

Personal pecuniary

Received an educational grant from Ipsen towards fees, travel and accommodation to attend an international hip management course in Liverpool

Personal non-pecuniary

Member of the national committee of the Association of Paediatric Physiotherapists; clinical interest liaison officer at the Chartered Society of Physiotherapy

Elspeth Dixon

Personal pecuniary

Tutor for an Open College Network validated postural care course, and using it in current NHS job

Personal non-pecuniary

Member of an informal focus group on postural care that includes healthcare professionals and families from around the country; the group has not made any public statements on spasticity

Christina Gericke

Personal non-pecuniary

European delegate and council member of the British Association of Occupational Therapists

Alec Musson

Personal pecuniary

Attended a national study day for botulinum toxin physiotherapist injectors that was sponsored by Allergen, Ipsen, Medtronic and Caiyside Imaging Ltd; will receive travel, accommodation and subsistence expenses in relation to a course on advanced clinical applications and injection techniques for botulinum toxin type A in the management of spasticity that is sponsored by Ipsen (the GDG's recommendations in relation to botulinum toxin were made before course registration took place); funded by Leeds Teaching Hospitals NHS Trust to visit a team in the USA that performs selective dorsal rhizotomy (SDR); gave a lecture at a neurology network meeting that was sponsored by Medtronic

James Robb

Personal pecuniary

Received royalties from sale of a book (Editors Luqmani R, Robb JE, Porter DE, Keating JF, Textbook of orthopaedics, trauma and rheumatology, Mosbey Elsevier, 2008) and received a copy of the book; will receive an honorarium as

co-author of chapters (on orthopaedic management of cerebral palsy, and hereditary and developmental neuromuscular disorders, respectively) in another book (Editors Benson, Fixsen, Macnicol and Parsch, Children's orthopaedics and fractures, third edition, Springer, 2010); received travel and accommodation expenses for an international meeting on hip management in cerebral palsy held in Liverpool (personal remit was to consider salvage surgery for the dislocated hip; a position statement is expected to be published)

Personal non-pecuniary

Member of a working party aiming to establish a Scottish screening programme for hip surveillance in children and young people with cerebral palsy; invited to write a review article on the management of the hip in people with cerebral palsy

Trudy Ward

Personal pecuniary

Receives health expert witness fees for work undertaken as instructions to the courts through Triangle (www.triangle.org.uk); court instruction work relates to children with complex health needs and disability; receives funding through Triangle (mainly from local authorities) for training related to disabled children; received the Action for Sick Children Norah Rees Award comprising a one-off payment, a crystal award, free attendance at the conference, and payment of travel expenses; receives travel expenses relating to position as representative of the Royal College of Nursing (RCN) on the Care Quality Commission review of support for families with disabled children; receives travel expenses from the RCN as representative on the Council for Disabled Children

Personal non-pecuniary

Chair of the RCN and Young People's Continuing and Community Care Forum, which supports RCN members working with children and young people with acute, long-term and palliative care needs within community settings; represents the RCN on the Council for Disabled Children

Jane Williams

Personal pecuniary

Receives travel expenses for attending meetings of the British Academy of Childhood Disability (BACD), the British Association of Community Child Health (BACCH) and meetings of the RCPCH; received fees from BACD as a guest lecturer on a non-related topic

Personal non-pecuniary

Chair of BACD; member of BACCH, British Paediatric Neurology Association (BPNA), European Academy of Childhood Disability (EACD), and editorial board of Developmental Medicine and Child Neurology (Mac Keith Press); referred patients to a team involved in intrathecal baclofen research; refers patients for assessment for botulinum toxin treatment; editing a book on children with disability to be published by Mac Keith Press (the book will include chapters on cerebral palsy and the management of spasticity)

Table C.2 NCC staff members' declarations of interest

Interest
No interests declared

Table C.3 External advisors' declarations of interest

External advisor	Interest
Christopher Morris	Personal pecuniary
	Receives a royalty for editing a book (Paediatric orthoses)
	Non-personal pecuniary
	Runs a childhood disability research unit funded by Cerebra, which conducts research including evaluation of orthoses
	Personal non-pecuniary
	Published papers and gave presentations expressing opinions about orthotic management
Andrew Roberts	No interests declared

Appendix C Stakeholders

Below is the list of registered stakeholder organisations as of 17 May 2012. For the most up-to-date list please see the NICE website at http://guidance.nice.org.uk/CG/Wave22/5/SHRegistration/SHList/pdf/English

Alder Hey Children's NHS Foundation Trust

Allergan Ltd UK

AOP Orphan Pharmaceuticals

Association of Anaesthetists of Great Britain and Ireland

Association of Paediatric Anaesthetists of Great Britain and Ireland

Association of Paediatric Chartered Physiotherapists

Bayer HealthCare

Birmingham Children's Hospital NHS Foundation Trust

Black Country Partnership Foundation Trust

Bradford District Care Trust

Brighton and Sussex University Hospital NHS Trust

British Academy of Childhood Disability

British Association of Bobath Trained Therapists

British Association for Community Child Health

British Association of Music Therapy

British Association of Paediatric Urologists

British Association of Prosthetists & Orthotists

British Medical Association

British Medical Journal

British National Formulary

British Orthopaedic Association

British Paediatric Neurology Association

British Pain Society

British Psychological Society

British Society for Children's Orthopaedic Surgery

British Society of Rehabilitation Medicine

Cambridge University Hospitals NHS Foundation Trust

Cambridgeshire Primary Care Trust

Camden Link

Care Quality Commission (CQC)

Central Lancashire Primary Care Trust

Cerebra

Chartered Society of Physiotherapy

Cochrane Developmental, Psychosocial and Learning Problems

College of Occupational Therapists

Commission for Social Care Inspection

Criminal Justice Womens Strategy Unit

D.M.Orthotics Ltd

Department for Communities and Local Government

Department for Education

Department of Health

Department of Health, Social Services and Public Safety - Northern Ireland

Dorset Primary Care Trust

George Eliot Hospital NHS Trust

Go Kids Go

Great Ormond Street Hospital

Great Western Hospitals NHS Foundation Trust

Health Protection Agency

Health Quality Improvement Partnership

Healthcare Improvement Scotland

HemiHelp

Hindu Council UK

Humber NHS Foundation Trust

Information Centre for Health and Social Care

International Neuromodulation Society

ISPO UK NMS

Johnson & Johnson

KCARE

Lambeth Community Health

Lancashire Care NHS Foundation Trust

Leeds Primary Care Trust (aka NHS Leeds)

Leeds Teaching Hospitals NHS Trust

Liverpool Community Health

Liverpool PCT Provider Services

Liverpool Primary Care Trust

McTimoney Chiropractic Association

Medicines and Healthcare products Regulatory Agency

Medicines for Children Research Network

Medtronic

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Medtronic International Trading Sarl

Mencap

Ministry of Defence

Mother and Child Foundation

National Clinical Guideline Centre

National Collaborating Centre for Cancer

National Collaborating Centre for Mental Health

National Collaborating Centre for Women's and Children's Health

National Institute for Health Research Health Technology Assessment Programme

National Patient Safety Agency

National Public Health Service for Wales

National Spinal Injuries Centre

National Treatment Agency for Substance Misuse

Neonatal & Paediatric Pharmacists Group

NHS Clinical Knowledge Summaries

NHS Connecting for Health

NHS Coventry Community Health Services

NHS Direct

NHS Islington

NHS Manchester

NHS Plus

NHS Sheffield

NHS Warwickshire Primary Care Trust

NHS West Essex

North Bristol NHS Trust

North Somerset Primary Care Trust

North Tees and Hartlepool NHS Foundation Trust

Office of the Children's Commissioner

Partneriaeth Prifysgol Abertawe

Patients Watchdog

Peacocks Medical Group

PERIGON Healthcare Ltd

Public Health Wales NHS Trust

Robert Jones & Agnes Hunt Orthopaedic & District Hospital NHS Trust

Rochdale and District Disability Action Group

Royal Berkshire NHS Foundation Trust

Royal College of Anaesthetists

Royal College of General Practitioners

Royal College of General Practitioners in Wales

Royal College of Midwives

Royal College of Nursing

Royal College of Obstetricians and Gynaecologists

Royal College of Paediatrics and Child Health

Royal College of Paediatrics and Child Health, Gastroenetrology, Hepatology and Nutrition

Royal College of Pathologists

Royal College of Physicians

Royal College of Psychiatrists

Royal College of Radiologists

Royal College of Surgeons of England

Royal National Institute of Blind People

Royal Pharmaceutical Society

Royal Society of Medicine

Salisbury NHS Foundation Trust

Sandwell Primary Care Trust

Scope

Scottish Centre for Children with Motor Impairments

Scottish Intercollegiate Guidelines Network

Sensory Integration Network

Sheffield Childrens Hospital

Social Care Institute for Excellence

Social Exclusion Task Force

Society for Research in Rehabilitation

Society of British Neurological Surgeons

Society of Chiropodists & Podiatrists

Solent Healthcare

South Asian Health Foundation

Southampton University Hospitals Trust

St Jude Medical UK Ltd.

Tees, Esk and Wear Valleys NHS Trust

The Children's Trust

The College of Social Work

The Princess Royal Trust for Carers

The Rotherham NHS Foundation Trust

UK Multiple Sclerosis Specialist Nurse Association

Unite - the Union

United Lincolnshire Hospitals NHS

University of Sheffield

Warrington Primary Care Trust

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Welsh Government

Welsh Scientific Advisory Committee

West London Mental Health NHS Trust

Western Cheshire Primary Care Trust

Western Health and Social Care Trust

Wolfson Neurodisability Service, The

Worcestershire Acute Hospitals Trust

York Hospitals NHS Foundation Trust

Appendix D Review protocols

Question 1 What is the effectiveness of physical therapy (physiotherapy and/or occupational therapy) interventions in children with spasticity with or without other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non progressive brain disorder?

	Details	Additional comments
Review question	What is the effectiveness of physical therapy (physiotherapy and/or occupational therapy) interventions in children with spasticity with or without other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non progressive brain disorder?	
Objectives	To establish the clinical effectiveness of physiotherapy and occupational therapy interventions in managing spasticity and the negative consequences of spasticity caused by a non-progressive brain disorder in children and young people Specifically to reduce pain, to reduce its musculoskeletal consequences (for example, muscle shortening or fixed contractures), to optimise movement and functional ability and to improve health-related quality of life and participation	
Language	English	
Study design	Randomised controlled trials (RCTs) and systematic reviews of RCTs will be include	
	Studies n<10 will be excluded	
	Case series are excluded	
Status	Published papers	
Population	Children with spasticity with or without other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder	
Interventions	Strengthening interventions	
	Progressive resistive exerciseRebound therapyTreadmill training	
	2. Stretching	
	Casting/serial castingPassive stretching	
	3. Postural management	
	 24-hour postural management Functional sitting position (FSP) Seating solutions/moulded seats Knee blocks Sleep systems Standing frames 	

4. Task focused active use therapy (including constraint-induced movement therapy; CIMT)

Comparison

- Active use functional programme versus no active use functional programme
- Strengthening versus usual care (if not including strengthening)
- 3. Serial casting versus usual care (if not including serial casting)
- Early casting after botulinum toxin (BoNT) versus delayed casting after BoNT
- 5. Early casting: at time of injection
- 6. Delayed: from 1 week
- 7. Casting plus BoNT versus BoNT only
- 8. Postural management versus usual care (if not including postural management)
- Passive stretching versus usual care (if not including passive stretching)

Outcomes

(To be categorised as short term (up to 3 months using shortest in study) or medium term (3-12 months using longest in study)

Reduction of spasticity

- · Ashworth and Modified Ashworth
- · Tardieu, if Ashworth not available

Optimisation of movement

- · Active range of movement
- Passive range of movement (also proxy measure of contractures)

Optimisation of function

- Gross Motor Function Measure (GMFM)
- Pediatric Evaluation of Disability Inventory (PEDI) physical score, global score
- GAS
- COPM P
- AHA
- SHUE
- Speed or distance of walking (where relevant)

Quality of life

- Child Health Questionnaire (CHQ)
- PedsQL
- Others as reported

Pain - reduction of pain (assessment time under 3 months)

• Pain scale - any objective scale

Acceptability and tolerability

- COPM-S
- Compliance
- · Family estimate of acceptability/ tolerability

Adverse effects

- · Overstretch injury
- Pain
- Fractures/dislocations/subluxations
- Pressure sores
- · Pressure pulses
- Eczema
- Skin rupture

Other criteria for inclusion/ exclusion of studies Papers which include comparisons such as 'usual care', 'routine physiotherapy', 'conventional physiotherapy' but do not describe

f these interventions will be excluded

Search strategies

See separate document

Searches will be limited to papers published from 1970 in Europe,

USA, Canada and Australia

Review strategies

Studies will be assessed for study quality according to the process described in the NICE guidelines manual (January 2009)

A list of excluded studies will be provided following weeding

Evidence tables and an evidence profile will be used to summarise

the evidence

Question 2 What is the effectiveness of orthotic interventions (for example, ankle-foot orthoses, knee splints, and upper limb orthoses) as compared to no orthoses to optimise movement and function, to prevent or treat contractures in children with spasticity and with or without other motor disorders caused by a non-progressive brain disorder?

	Details	Additional comments
Review question	What is the effectiveness of orthotic interventions (for example, ankle-foot orthoses, knee splints, and upper limb orthoses) as compared to no orthoses to optimise movement and function, to prevent or treat contractures in children with spasticity and with or without other motor disorders caused by a non-progressive brain disorder?	
Objectives	To determine the effectiveness of orthoses (for example, ankle- foot orthoses, knee splints, and upper limb orthoses)	
	in improving posture and functionin preventing contracturesin treating contractures	
	2. To identify the information needs of parents carers children and young people for making informed choices	
Language	English	
Study design	Randomised controlled trials and systematic reviews of RCTs will be included.	
	Studies that compare results from different treatment groups will be included if there are no RCTs available.	
Status	Published papers	

Population

Children with spasticity and with or without other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder

Intervention

- 1. Ankle-foot orthoses (AFO)
- 2. Knee orthoses
- 3. Hip orthoses
- 4. Upper limb orthoses
- 5. Body trunk orthoses

Comparison

A) Comparisons to no treatment/no orthosis

Wrist hand orthoses versus no treatment

Thumb abduction orthoses versus no treatment

Knee orthoses versus no treatment

Hip abduction orthoses (trade name SWASH) versus no

treatment

Solid ankle foot orthosis (AFO) versus no treatment

(weightbearing or non-weight bearing)

Prescribed footwear / orthopaedic boots versus no treatment

Body trunk orthoses versus no treatment

B) Comparisons to Solid AFOs (SAFOs)

Hinged AFO with plantarflexion stop versus SAFO

Posterior leaf spring AFO versus SAFO

Anterior ground reaction AFO (a variation on solid AFO) versus

SAFO

Supramalleolar foot orthosis (SMO/AFO) versus SAFO

Foot orthosis / heel cup versus SAFO

 C) Orthosis 1 versus Another treatment - if clinically relevant for lower limb/upper limb/trunk)

Outcomes

- 1. Optimisation of movement
 - Active range of movement (AROM)
 - Passive range of movement (PROM)
- 2. Optimisation of function
 - Goal attainment scale (GAS)
 - GMFM (Gross Motor Function Measure)
 - PEDI (pediatric evaluation of disability inventory) physical and if not global scale
 - · Handling objects
 - · Gait efficiency
 - Speed or distance of walking (where relevant)
- 3. Reduction of pain

As reported

4. Quality of life

Child Health Questionnaire

5. Acceptability & tolerability

As reported by patient or carer or CYP report including cosmesis

- 6. Adverse effects
 - · Effects on adjacent joints
 - · Effects on muscle strength
 - · Over-lengthening of musculotendinous unit
 - · Effects on sensation
 - skin breakdown

Other criteria for inclusion/ exclusion of studies Exclude babies/children/young people with extreme dystonia where orthoses are contraindicated

Search strategies

See separate document

Review strategies

Studies will be assessed for study quality according to the process

described in the NICE guidelines manual (January 2009)

A list of excluded studies will be provided following weeding

Evidence tables and an evidence profile will be used to summarise

the evidence

Question 3 What is the effectiveness of oral medications including baclofen, benzodiazepines (diazepam, nitrazepam, clonazepam), tizanidine, dantrolene, clonidine, trihexyphenidyl, tetrabenazine and levodopa in the treatment of spasticity and other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder in children and young people?

	Details	Additional comments
Review question	What is the effectiveness of oral medications including baclofen, benzodiazepines (diazepam, nitrazepam, clonazepam), tizanidine, dantrolene, clonidine, trihexyphenidyl, tetrabenazine and levodopa in the treatment of spasticity and other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder in children and young people?	
Objectives	To examine the use of oral medications for the management of spasticity/dystonia	
	By comparing oral medications against placebo – to establish if they work, in whom they work, and to consider when their use is indicated and when it should be stopped. Also to consider whether their administration gives additional benefit compared to physiotherapy alone	
	By comparing different medications – to establish the comparative effectiveness of medications given singly or in combination	
	To establish if there is evidence of additional benefit of oral medications in combination	
	To establish the evidence for indications for lines of treatment (adjunctive or "instead of other treatment")	
Language	English	
Study design	We will include results from a systematic review if it reports a relevant outcome and if it is up-to date. We will include parallel and crossover RCTs with a minimum of n=10 and n=5 respectively. Those with n<30 and n<15 respectively will be discussed with the topic group before inclusion. Studies that are n>30 or n>15 respectively will be included. We will not include	

controlled clinical trials, cohort studies or non comparative studies such as case studies, case series or case control studies

Status Published papers

Population Children and young people aged 0 to 18 years old with spasticity with or

without other motor disorders (dystonia, muscle weakness and

choreoathetosis) caused by a non-progressive brain disorder

Intervention Oral medications:

baclofen

- benzodiazepines (diazepam, nitrazepam, clonazepam)
- tizanidine
- dantrolene
- clonidine
- trihexyphenidyl
- tetrabenazine
- levodopa

Comparison Medication 1 versus placebo or no treatment

- Diazepam versus placebo or no treatment
- · Nitrazepam versus placebo or no treatment
- Clonazepam versus placebo or no treatment
- Any benzodiazepine versus placebo or no treatment
- Baclofen versus placebo or no treatment
- Dantrolene versus placebo or no treatment
- · Clonidine versus placebo or no treatment
- Trihexyphenidyl versus placebo or no treatment
- Levodopa versus placebo or no treatment
- Tetrabenazine versus placebo or no treatment
- Tizanidine versus placebo

Medication 1 versus Medication 2

- Baclofen versus any benzodiazepine
- · Baclofen versus tizanidine
- · Baclofen versus trihexyphenidyl
- Baclofen versus levodopa

Medication 1 + Medication 2 versus placebo or no treatment

No comparisons requested

Medication 1 + Medication 2 versus Medication 1

- Dantrolene + baclofen versus baclofen
- Diazepam + baclofen versus baclofen
- Trihexyphenidyl plus tetrabenazine versus trihexyphenidyl

Medication 1 + Medication 2 versus Medication 3

- Baclofen plus dantrolene versus tizanidine
- Baclofen plus Dantrolene plus diazepam versus baclofen

Within medication class - Medication 1 versus Medication 2

- Diazepam versus clonazepam
- Nitrazepam versus clonazepam
- Diazepam versus nitrazepam

Outcomes

Reduction of spasticity/dystonia

- Ashworth scale or Modified Ashworth scale
- Tardieu scale
- · Health professional assessment
- Scissoring
- Frequency of spasms
- Severity of spasms (Barry Albright Dystonia scale)

Optimisation of function

- GMFM
- Change in functioning (parents' estimation)
- PEDI
- GAS
- Walking performance, speed or distance or timed up and go
- Ability to climb steps, time maintained in sitting position, time maintained in hand knee position, time required to rollover
- Change in ease of bathing, bracing, dressing, wheelchair transfer, self help, ease of handling and other activities of daily living (nurse estimation)
- · Evaluation of activities of daily living
- Changes in self help skills ability to reach for and transfer objects, to place pegs in a board, operate a wheelchair – occupational therapy assessed

Acceptability & tolerability

· However measured

Quality of life

- However measured
- (to include Well being of the child, enhancement of the behavioural profile of the child, participation)

Reduction of pain

However measured

Adverse effects

- · Extrapyramidal symptoms
- Nausea
- Weight loss
- · Appetite suppression
- Constipation
- Increased drooling
- Seizure severity and seizure frequency
- Drowsiness
- hypotonia

Other outcomes

- · Respiratory function
- · Articulatory speed
- Blood count *(monitoring for Tizanidine)
- · liver function (monitoring for Dantrolene & Tizanidine)

Other criteria for inclusion/ exclusion of studies Search strategies

See separate document

Review strategies

Studies will be assessed for study quality according to the process

described in the NICE guidelines manual (January 2009)

A list of excluded studies will be provided following weeding

Evidence tables and an evidence profile will be used to summarise the

evidence

Question 4 What is the effectiveness of the long-term use of Intramuscular botulinum toxin A or B (BoNT) in combination with other interventions (physiotherapy/occupational therapy/orthoses) as compared to other interventions at reducing spasticity, maintaining motor function and preventing secondary complications in children with spasticity and with or without other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder?

is/ caused by a non-progressive brain disorder:	
Details	Additional comments

Review question

What is the effectiveness of the long-term use of Intramuscular Botulinum toxin A or B (BoNT) in combination with other interventions (physiotherapy/occupational therapy/orthoses) as compared to other interventions at reducing spasticity, maintaining motor function and preventing secondary complications in children with spasticity and with or without other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder?

Objectives

- To examine clinical effectiveness of a single BoNT treatment at 3-4 and at 6 months and of repeated BoNT treatments at 3-4 and at 12 months in comparison to other treatment modalities
- To identify subgroups in whom treatment is particularly (in)effective: By age, severity of spasticity
- To examine BoNT administration methods e.g. guidance techniques, single or multilevel administration
- To examine effectiveness by BoNT use in different muscle groups
- To examine effectiveness by no or frequency of repeat injections
- To consider the information needs of parents, carers, children and young people to make informed decisions

Language English

Study design Systematic reviews

Randomised controlled trials

Status Published papers

Population Children with spasticity and with or without other motor

disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain

disorder

Intervention

Single or repeated injections of intramuscular BoNT-A (given with a defined programme of physical therapy using stretching, casting, positioning, strengthening, enforced therapy or orthoses)

Comparison

BoNT versus another treatment 1

- · BoNT and therapy versus therapy alone
- BoNT and therapy v placebo and therapy (Therapy interventions: stretching, casting, positioning, strengthening, constraint therapy, orthoses)
- BoNT and therapy versus oral antispasmodic medication and therapy
- BoNT-A versus BoNT-B

Outcomes

1. Reduction of spasticity

Upper and Lower limb

- Ashworth scale/modified Ashworth scale for preference.
- Tardieu/modified Tardieu
- 2. Optimisation of movement
 - · Active range of movement
 - · Passive range of movement
- 3. Optimisation of function
 - Goal attainment scale (GAS)
 - GMFM (Gross Motor Function Measure)
 - PEDI (pediatric evaluation of disability inventory) physical and if not global scale
 - COPM-P

Lower Limb

- Walking speed and distance only
- 4. Quality of life
 - · Child Health Questionnaire
- 5. Acceptability & tolerability
 - · As reported by patient, carer or CYP
 - COPM-S
- 6. Reduction of pain
 - As reported
- 7. Adverse effects
 - Antibody build up

Upper limb

- Breathing and swallowing problems
- · Muscle weakness

Lower limb

- · Loss ability to walk
- Muscle weakness

- 8. Prevention of secondary complications
 - Contractures (proxy measurement is PROM)

Outcomes assessed at 3-4 months (i.e. within the expected therapeutic period) and at 6 months (i.e. beyond the therapeutic period) were prioritised for the review by the GDG.

Other criteria for inclusion/ exclusion of studies

 ${\sf Exclude: BoNT\ versus\ placebo\ or\ no\ treatment/usual}$

care

Exclude: BoNT versus casting

Consider BoNT and constraint therapy versus BoNT (or constraint therapy) as part of physical therapy protocol

Exclude BoNT (with some background physiotherapy/occupational therapy/orthoses) versus physiotherapy/occupational therapy/orthoses treatment 1 + physiotherapy/occupational therapy/orthoses

treatment 2

Search strategies

See separate document

Review strategies

Studies will be assessed for study quality according to the process described in the NICE guidelines manual

(January 2009)

A list of excluded studies will be provided following

weeding

Evidence tables and an evidence profile will be used to summarise the evidence

Question 5 In children and young people with spasticity due to a non-progressive brain disorder does an intrathecal baclofen test help to identify those likely to benefit from continuous pump-administered intrathecal baclofen (CITB)?

	Details	Additional comments
Review question	In children and young people with spasticity due to a non-progressive brain disorder does an intrathecal baclofen test help to identify those likely to benefit from continuous pump-administered intrathecal baclofen (CITB)?	
Objectives	To consider if clinical and cost benefits of performing a pre- implantation test outweigh harms of not performing a test dose	To consider if clinical and cost benefits of performing a pre-implantation test outweigh harms of not performing a test dose for a responder or a non responder
Language	English	
Study design	Parallel or crossover randomised controlled trials (RCTs) with a long-enough follow-up of at least one of the groups in which the pump was implanted	
	Systematic reviews of RCTs	

Studies n<10 will be excluded

Studies with n=10 - 30 will be discussed with the topic group

Studies n>30 will be included

If there is no higher quality evidence then controlled clinical trials will be included and if these are not available then cohort studies, case control studies or case studies where the sample size is >50 will be included

Status

Published papers

Population

Children 0 to 18 years old with spasticity and other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder

Population:

Studies with < 60-70% of children in a mixed adult/children population will be excluded.

Studies with < 60-70% of children with spasticity in a mixed population of children with/without spasticity will be excluded.

Studies with < 80-90% of children with non-progressive brain disorder (NPBD) in a mixed population of children with NPBDs and other disorders will be excluded

Intervention

Testing with intrathecal baclofen prior to pump implementation

Comparison

Response to intrathecal baclofen testing versus response to Pump administered intrathecal baclofen

E.a.

a) intrathecal baclofen testing versus no intrathecal baclofen testing

b) intrathecal baclofen testing versus placebo test

Outcomes

Reduction of spasticity

- Ashworth (preferred) or Tardieu
- Reduction in spasms
- Passive Range of Movement (PROM)

Reduction of dystonia

Optimisation of movement and function GMFM (preferably, if available GMFM 66)

PEDI GAS

Reduction of pain (validated scores if available

Ease of care (validated scores if available)

Acceptability (parent/carer and or CYP report)

Quality of life

Serious adverse events

Other criteria for inclusion/ exclusion of studies

Exclude studies which only report results from neurophysiological tests but not related to clinical outcomes

Search strategies

See separate document

Review	
strategie	S

Studies will be assessed for study quality according to the process

described in the NICE guidelines manual (January 2009)

A list of excluded studies will be provided following weeding

Evidence tables and an evidence profile will be used to summarise

the evidence

Question 6 In children and young people with spasticity due to a non-progressive brain disorder what are the benefits and risks of continuous intrathecal baclofen therapy (CITB)?

	Details	Additional comments
Review question	In children and young people with spasticity due to a non-progressive brain disorder what are the benefits and risks of continuous intrathecal baclofen therapy (CITB)?	
Objectives	To examine the effectiveness and safety of continuous pump administered intrathecal baclofen (CITB)	
Language	English	
Study design	Parallel or crossover randomised controlled trials (RCTs) with follow-up of at least one of the groups in which the pump was implanted	
	Systematic reviews of RCTs	
	Studies n<10 will be excluded	
	Studies with n=10 - 30 will be discussed with the topic group	
	Studies n> 30 will be included	
	If there is no higher quality evidence then controlled clinical trials or cohort studies will be included. If these are not available then prospective case studies where the sample size is >50 will be included	
	Case control studies will be included only for adverse effects outcomes but not for effectiveness	
	Retrospective case series will be excluded	
Status	Published papers	
Population	Children 0 to 18 years old with spasticity and other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder	
	Population:	
	Studies with < 60-70% of children in a mixed adult/children population will be excluded	
	Studies with < 60-70% of children with spasticity in a mixed population of children with/without spasticity will be excluded	
	Studies with < 80-90% of children with non-progressive brain disorder (NPBD) in a mixed population of children with NPBDs and other disorders will be excluded	
Intervention	Continuous intrathecal baclofen for at least 6 months	

Comparison

Intrathecal baclofen versus traditional care however (as defined by authors)

Outcomes

Reduction of spasticity

- · Ashworth (preferred) or Tardieu
- Reduction in spasms
- Passive Range of Movement (PROM)

Reduction of dystonia

Optimisation of movement and function GMFM (preferably, if available GMFM 66)

PEDI GAS COPM-P

Reduction of pain (validated scores if available)

Ease of care (validated scores if available)

Acceptability and tolerability

COPM-S

Parent/carer and or CYP report

Quality of life

Child Health Questionnaire, PedsQL, or as reported

Serious adverse events and complications of treatment

- 1. Surgical Complications e.g. Infection, CSF leak, wound breakdown
- 2. Mechanical Complications e.g. Catheter fracture/kink/disconnection
- Pump/Operator failure e.g. overdose or sudden withdrawal of Baclofen
- Additional Complications for other medical / surgical treatments
 e.g. magnetic resonance imaging, high frequency ultrasound
 scan, scoliosis and hip surgery, ventriculo-peritoneal shunting

Other criteria for inclusion/ exclusion of studies

Exclude studies which only report result from neurophysiological tests but not related to clinical outcomes

Search strategies

See separate document

Review strategies

Studies will be assessed for study quality according to the process described in the NICE guidelines manual (January 2009)

A list of excluded studies will be provided following weeding

Evidence tables and an evidence profile will be used to summarise the evidence

Question 7 What is the effectiveness of orthopaedic surgery in preventing or treating musculoskeletal deformity in children with spasticity caused by a non-progressive brain disorder?

	Details	Additional comments
Review question	What is the effectiveness of orthopaedic surgery in preventing or treating musculoskeletal deformity in children with spasticity caused by a non-progressive brain disorder?	
Objectives	 To establish the clinical effectiveness of orthopaedic surgery To determine the indications for orthopaedic surgery To determine optimal timing of orthopaedic surgery 	
Language	English	
Study design	Parallel or crossover randomised controlled trials and systematic reviews of RCTs are included	
	Studies n<10 will be excluded	
	Studies with $n=10-30$ will be discussed with the topic group	
	Studies n> 30 will be included	
	If there is no higher quality evidence then controlled clinical trials or cohort studies will be included. If these are not available then prospective case series will be included	
Status	Published papers	
Population	Children with spasticity caused by a non-progressive brain disorder	
Intervention	1. tendon lengthening	
	2. tendon transfer	
	3. osteotomy	
	4. joint fusion/arthrodesis	
	5. early bony and/or soft tissue	
Comparison	Comparisons to examine efficacy	
	1. tendon lengthening versus no intervention	
	2. tendon transfer versus no intervention	
	3. osteotomy versus no intervention	
	4. joint fusion/arthrodesis versus no intervention	
	5. early bony and/or soft tissue versus no intervention	
	6. early bony and soft tissue versus soft tissue alone	
	7. surgery (the above procedures) versus physiotherapy	
	8. surgery (the above procedures) versus orthoses	
	9. surgery (the above procedures) versus botulinum toxin	
	10. early surgery versus delayed surgery	

Outcomes

- 1. Optimisation of movement and function
 - Goal attainment scale (GAS)
 - · Active and passive range of movement
 - GMFM (Gross Motor Function Measure)
 - PEDI (pediatric evaluation of disability inventory) physical and if not global scale
 - COPM-P
 - timed walk
 - · timed up and go
 - · Any other speed or distance of walking estimate
 - · Ease of care
- 2. Prevention of deterioration

Hip Migration Percentage

3. Reduction of pain

As reported

4. Quality of life

As reported, or from the Child Health Questionnaire or PedsQL

5. Acceptability & tolerability

COPM-S

As reported by patient or carer or CYP

6. Adverse effects

Other criteria for inclusion/ exclusion of studies

Search strategies

See separate document

Review strategies

Studies will be assessed for study quality according to the process

described in the NICE guidelines manual (January 2009)

A list of excluded studies will be provided following weeding

Evidence tables and an evidence profile will be used to summarise

the evidence

Question 8 What is the effectiveness of single event multilevel orthopaedic surgery (SEMLS) in managing musculoskeletal deformity in children with spasticity caused by a non-progressive brain disorder?

	Details	Additional comments
Review question	What is the effectiveness of single event multilevel orthopaedic surgery (SEMLS) in managing musculoskeletal deformity in children with spasticity caused by a non-progressive brain disorder?	
Objectives	To establish the clinical effectiveness of SEMLS	
Language	English	
Study design	Parallel or crossover randomised controlled trials and systematic reviews of RCTs are included	
	Studies n<10 will be excluded	

Studies with n=10 - 30 will be discussed with the topic group

Studies n>30 will be included

If there is no higher quality evidence then controlled clinical trials or cohort studies will be included.

Status Published papers

Population Children with musculoskeletal deformity associated with spasticity

(with or without other motor disorders) caused by a non-

progressive brain disorders

Intervention Single Event Multilevel surgery

Procedures:

- 1. tendon lengthening
- 2. tendon transfer
- 3. osteotomy
- 4. joint fusion/arthrodesis
- 5. early bony
- 6. soft tissue

Comparison

- 1. SEMLS (the above procedures) versus orthopaedic surgery
- 2. SEMLS (the above procedures) versus Physiotherapy
- 3. SEMLS (the above procedures) versus orthoses
- 4. SEMLS (the above procedures) versus BoNT

Outcomes

- 1. Optimisation of movement and function
 - Goal attainment scale (GAS)
 - · Active and passive range of movement
 - GMFM (Gross Motor Function Measure)
 - PEDI (pediatric evaluation of disability inventory) physical and if not global scale
 - COPM P
 - · timed walk
 - · timed up and go
 - Any other speed or distance of walking estimate
 - · Ease of care
- 2. Prevention of deterioration
 - Hip Migration Percentage
- 3. Reduction of pain
 - · As reported
- 4. Quality of life
 - As reported, for example Child Health Questionnaire, PedsQL
- 5. Acceptability & tolerability
 - COPM-S
 - As reported by patient or carer or CYP report
- 6. Adverse effects

As reported

Other criteria for inclusion/ exclusion of studies

Search strategies

See separate document

Review

Studies will be assessed for study quality according to the process

strategies described in the NICE guidelines manual (January 2009)

A list of excluded studies will be provided following weeding

Evidence tables and an evidence profile will be used to summarise

the evidence

Question 9 What is the clinical effectiveness of Selective Dorsal Rhizotomy in children and young people with spasticity caused by a non-progressive brain disorder?

	Details	Additional comments
Review question	What is the clinical effectiveness of Selective Dorsal Rhizotomy in children and young people with spasticity caused by a non-progressive brain disorder?	,
Objectives	To establish clinical effectiveness and long-term outcomes of SDR in children and young people with spasticity	
Language	English	
Study design	Randomised controlled trials (RCTs) and systematic reviews of RCTs will be included.	
	Non-randomised prospective comparative studies will be included	
	Case series > 200 will be included for evidence on major adverse events that are clearly related to the SDR procedure	
Status	Published papers	
Population	Children and young people with spasticity (with or without other motor disorders) caused by a non-progressive brain disorder	
Intervention	Selective Dorsal Rhizotomy	
Comparisons	SDR and therapy versus therapy alone	
	SDR and therapy versus Soft Tissue Surgery (e.g., tendonotomy) and therapy	
	SDR and therapy versus Intrathecal Baclofen and therapy	
	SDR and therapy v Programme of Botulinum injections and therapy	

Outcomes

Reduction of spasticity

- · Ashworth (preferred) or Tardieu
- · Active and passive range of movement (PROM)

Optimisation of movement and function

- · Walking speed and distance
- GMFM (preferably, if available GMFM 66)
- PEDI
- GAS-T

Reduction of pain (validated scores if available, otherwise non validated reporting)

Acceptability (parent/carer and or CYP report)

Serious adverse events, including

- Mortality
- Bladder dysfunction (voiding difficulties)
- Bowel dysfunction (faecal incontinence)
- Scoliosis
- Hip dislocation

Quality of life

Time frames for measured outcomes

Early - < 6 Months (if multiple measurements pre 6 months take earliest reported in study)

Intermediate 6-12 months

Late > >12 months (if multiple measurements post 12 months take the last time-point)

Other criteria for inclusion/ exclusion of studies

Search strategies

....

Studies will be assessed for study quality according to the process described in the NICE guidelines manual (January 2009)

A list of excluded studies will be provided following weeding

Evidence tables and an evidence profile will be used to summarise the evidence

Review strategies

Appendix E Outcome measures

Reduction of spasticity

Data assessing muscle tone were preferentially extracted if measured using Ashworth scores. The Guideline Development Group (GDG) acknowledged that although there was no consistent method of presenting or summarising outcomes using this categorical scoring method, it was more readily and commonly performed in clinical practice than estimates derived using Tardieu scores. The NCC-WCH technical team recorded in the evidence tables how Ashworth scores were estimated in the included studies. Where Ashworth scores were not available, Tardieu scores (the estimate R2 – R1) were included.

Optimisation of movement and function

Movement incorporates joint movement and walking ability. Functional ability was assessed using validated tools that estimate the child or young person's skills and ability to reach developmental milestones, predefined tasks, general mobility, or in combined activities reflecting domains of participation (for example, self-care) in the World Health Organization's International Classification of Functioning, Disability and Health (ICF Framework; http://www.who.int/classifications/icf/en/). Functional ability could be reported by the child or young person, their parent or other carers.

The GDG recognised the importance of individualised goal setting in determining functional optimisation. The GDG considered the limitations of each tool (for example, its application to children and young people of different ages and with different disabilities and levels of comprehension, its sensitivity to detect change, and floor and ceiling effects).

The GDG prioritised the following assessments of movement and function.

Movement

Range of movement

Estimates of active and passive range of movement were included where possible. Range of movement is the distance and direction a joint can move between its limits. Active range of movement is ideally measured with a goniometer and estimates the range of movement through which a child or young person can move a joint actively (without assistance) using the adjacent muscles (that is, active movements use contractile muscle tissues as well as inert tissues). Further testing with passive motion and manual resistance helps to clarify the tissues at fault and the source of any associated pain. Passive range of movement is assessed while the joint is moved with assistance and with no effort from the child or young person (that is, the contractile muscle tissues are not engaged and movement, or pain, is a function of inert tissues only).

The GDG's view was that improvements in active and passive range of movement would become clinically worthwhile when they resulted in clinically important improvement in function, For example, passive range of movement might translate to an improvement in ease of care, reduction of pain, or improved Gross Motor Function Measure (GMFM; see below). In the absence of long-term studies, the GDG's view was that passive range of movement was a reasonable early indicator (proxy) for development of contractures.

Function

Walking

Gait assessment varies in complexity. It can range through observation of walking, examination of footprints in paint on a strip of paper, to a full gait analysis using specialised computerised equipment to observe the effort required to walk and specific parameters of motion, positioning and forces generated by the leg and foot during walking. The GDG prioritised estimations of walking speed and distance because clinically these would be universally estimable and because they believed that ultimately they are the most important outcomes for children and young people. The GDG noted that inability to walk would not be a relevant outcome for girls aged under 15 months or boys aged under 18 months, although for early walkers a pattern of walking typical of cerebral palsy (for example, walking on the toes or dragging a leg) would warrant further investigation.

Goal Attainment Scaling

The GDG agreed with emerging evidence that goals are more likely to be achieved if children and young people are involved in setting them. The GDG therefore gave a high prioritisation to Goal Attainment Scaling (GAS). This is a mathematical technique for quantifying achievement (or non achievement) of set goals. Usually three to five specific, measurable, achievable, realistic, and timebound (SMART) goals are identified individually to suit the child or young person, and levels are set around current and expected levels of performance. Goals may be weighted in order of priority for an individual child or young person and anticipated difficulty. Each goal is rated on a five-point scale indicating improvement or deterioration. The composite goal score can be transformed mathematically into a standardised T-score, with a mean of 50 and standard deviation (SD) of 10.

The GDG believed that this technique would avoid some potential problems of other standardised measures, such as a ceiling effect, lack of sensitivity and disjunction between the child or young person's main concerns and domains of the measure.

Canadian Occupational Performance Measure

The Canadian Occupational Performance Measure (COPM) records change in performance over time as perceived by the child or young person. It is completed by the child or young person with assistance from an occupational therapist. The GDG noted that this tool may be difficult to use with children or young people who have communication problems or who cannot understand the scoring system. The developers of the COPM reported difficulty using it with children aged under 8 years. The COPM is individualised for the child or young person, restricting generalised interpretation of its results.

There are two components to the COPM: performance (COPM-P) and satisfaction (COPM-S). The GDG considered COPM-P as a measure of function and COPM-S as a measure of acceptability and tolerability. Goals are set with the child or young person for daily activities in three domains: self-care, productivity, and leisure. The child or young person then chooses their five most important activities and grades each of them from 1 to 10 for performance and satisfaction. The mean values of the five scores become the baseline performance and satisfaction scores (minimum of 1, maximum of 10). Scoring is repeated for the same activities after a period of time. Evidence suggests that a change of two or more points at reassessment is clinically meaningful.

Paediatric Evaluation of Disability Inventory

The Paediatric Evaluation of Disability Inventory (PEDI) is a paediatric clinical assessment tool that supports a programme of intervention priorities and goal setting by describing functional skill attainment (rather than component skills) and detecting delays in attainment in children aged 6 months to 7.5 years with a range of disabling conditions and mixed impairments (Haley 1992). It can also be used to evaluate skills of older children whose abilities are below those expected of a child aged 7.5 years. It can be used to evaluate progress over time in individuals or groups or changes following an intervention.

The tool is administered by healthcare professionals and educators through observation or structured interviews with parents or carers. It evaluates three separate domains (self-care, mobility and social function), which can be examined separately or in combination. Scores for capability and performance are calculated for each domain and can be further analysed as a normative standard or scaled score.

Clinically meaningful differences in scores are those that exceed two standard errors (SEs) above or below the standard normative score for a particular domain (self-care, mobility, or social function) or two SEs above or below the scaled score for a particular domain. This has been expressed as a change score of 11.5, or approximately 11% (at a 95% confidence level), in a study that aimed to determine the minimal clinically important difference for children for inpatient rehabilitation (Lyer 2003).

Gross Motor Function Measure

The GMFM is a clinical assessment tool that measures gross motor function and has been validated for use in children and young people with cerebral palsy aged 5 months to 16 years. There are two versions: the GMFM-88 has 88 items and raw scores are summarised on an ordinal scale; the more recently developed GMFM-66 contains a subset of GMFM-88 and is converted to an interval scale.

Parents and therapists assess five dimensions (A to E) of the child or young person's functioning: dimension A, lying and rolling; dimension B, sitting; dimension C, crawling and kneeling; dimension D, standing; and dimension E, walking running and jumping. Each item of the tool is scored from 0 (does not initiate) to 3 (completes) in each dimension. Research has identified that at least 13 items are needed to produce meaningful scores.

Clinically meaningful differences in scores (where 0 is 'not important' and 7 is 'tremendously important') have been researched from parents' and therapists' perspectives. The results obtained for parents were: 4.6 (2.7% increase in GMFM score), 5.8 (5.2% increase in GMFM score change), and 6.0 (1.6% increase in GMFM score). The results for therapists were: 3.8 (1.8% increase in GMFM score), 5.4 (7% increase in GMFM score), and 6.0 (24% increase in GMFM score).

Reduction of pain

The GDG considered all reported measures of pain.

Adverse effects of interventions

The GDG prioritised intervention-specific adverse effects (for example, drowsiness with benzodiazepines, antibodies raised to botulinum toxin, and urinary problems following selective dorsal rhizotomy (SDR)). The GDG also considered all outcomes indicative of deterioration (for example, development of contractures or increased pain).

Acceptability and tolerability

For evaluating acceptability and tolerability in children and young people, the GDG prioritised validated assessment techniques (for example, COPM-S) and also considered study-specific questionnaire.

Health-related quality of life

The Child Health Questionnaire (CHQ), a generic quality of life instrument designed for children and young people aged 5-18 years, measures dimensions in two domains: physical and psychosocial. The physical domain includes scales for physical functioning, role or social limitations, general health perceptions, and body pain. The psychosocial domain includes scales for role or social limitations, emotions and behaviour, self-esteem, mental health, general behaviour, impact on parents' emotions, impact on parents' time, family activities; and family cohesion.

There are four versions of the CHQ, these being parent forms with 98, 50 or 28 items (CHQ-PF98, CHQ-PF50, and CHQ-PF28, respectively), and a self-report form for children and young people aged 10-18 years, although the self-report form is rarely used. CHQ-PF50 is used most frequently, and there is conflicting evidence regarding its reliability for assessing the outcome of an intervention in children and young people with cerebral palsy.

Generic questionnaires tend to have lower responsiveness to change and less sensitivity than disease-specific measures. The GDG noted concerns regarding the relevance of some items in the CHQ for children and young people with severe cerebral palsy, particularly the items relating to physical functioning (for example, cycling and playing football). The GDG also noted that the CHQ does not address issues related to transferring or handling, limiting its value when applied to children and young people with cerebral palsy. The GDG was aware that floor and ceiling effects have been reported, with floor effects occurring more frequently in physical domains, and ceiling effects occurring more frequently in psychosocial domains. The GDG recognised that this suggests poor face validity of parent-reported CHQ data when applied to children and young people with cerebral palsy, but concluded that the CHQ was an acceptable tool for evaluating health-related quality of life in the quideline.

Clinically important differences in outcome measures

Clinically important differences in the outcome measures prioritised for consideration in the guideline were discussed by the GDG, as outlined above, but the possibility of defining clinically important differences for each measure was eventually discounted by the GDG for reasons including the following.

Some of the prioritised outcomes were primarily of clinical interest, and did not necessarily represent the child or young person's value judgements about clinical benefit. For example, reduction of tone would be of clinical importance only if associated pain was reduced, or if functional improvement (such as the ability to self-care, or to walk, or if body positioning was improved) was attained. Clinically important differences would be more appropriately assessed using GAS scores which reflect the child or young person's perspective of benefit, but such outcomes were not reported for all interventions considered in the guideline.

Some outcome measures were not assessed and recorded in a standard way in all the included studies. For example, Ashworth scores were generally analysed as continuous rather than categorical variables, they sometimes comprised a single estimate from a muscle group, and in other cases they comprised a composite score from assessment in muscle groups in upper and/or lower limbs. Therefore, a standardised measure of a clinically important difference could not be determined.

Treatment effect sizes vary according to the body part being examined for some outcome. For example, expected range of movement around the ankle is different to range of movement at the knee or elbow. Moreover, achieving a clinically important difference at one joint might not result in a clinically important difference in functioning overall. It was not always clear from the included studies whether an improvement in a particular outcome resulted in a corresponding improvement in another outcome (for example, whether an improvement in range of movement resulted in improved function where results were derived from different studies).

The expectations of treatment would vary according to the type and severity of spasticity in an individual child or young person. In the studies included in the guideline reviews, the participants had different severities of spasticity (for example, in the review question on oral drugs) or specific types of spasticity (for example, in the review question on orthoses, all the participants had hemiplegia in some studies, whereas all the participants had diplegia in other studies).

References

Haley S et al. 1992. Pediatric Evaluation of Disability Inventory (PEDI) Development, Standardization and Administration Manual. Boston: PEDI Research Group, New England Medical Center Hospitals:1992

Lyer LV et al. 2003 .Establishing minimal clinically important differences for scores on the pediatric evaluation of disability inventory for inpatient rehabilitation Phys.Ther. 83(10) 888-98

Appendix F Search strategies

Question 1 What is the effectiveness of physical therapy (physiotherapy and/or occupational therapy) interventions in children with spasticity with or without other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non progressive brain disorder?

Ovid MEDLINE(R) 1950+

SPAST_Q1_physio_RCTs_SRs_ medline_060910

#	Searches
1	randomized controlled trial.pt.
2	controlled clinical trial.pt.
3	DOUBLE BLIND METHOD/
	SINGLE BLIND METHOD/
4	
5	RANDOM ALLOCATION/
6	RANDOMIZED CONTROLLED TRIALS/
7	or/1-6
8	((single or double or triple or treble) adj5 (blind\$ or mask\$)).tw,sh.
9	clinical trial.pt.
10	exp CLINICAL TRIAL/
11	exp CLINICAL TRIALS AS TOPIC/
12	(clinic\$ adj5 trial\$).tw,sh.
13	PLACEBOS/
14	placebo\$.tw,sh.
15	random\$.tw,sh.
16	or/8-15
17	or/7,16
18	META ANALYSIS/
19	META ANALYSIS AS TOPIC/
20	meta analysis.pt.
21	(metaanaly\$ or meta-analy\$ or (meta adj analy\$)).tw,sh.
22	(systematic\$ adj5 (review\$ or overview\$)).tw,sh.
23	(methodologic\$ adj5 (review\$ or overview\$)).tw,sh.
24	or/18-23

26	review\$.pt.
	(medline or medlars or embase or cinahl or cochrane or psycinfo or psychinfo or psychit or "web of science" or "science citation" or scisearch).tw.
27 (((hand or manual\$) adj2 search\$).tw.
	(electronic database\$ or bibliographic database\$ or computeri?ed database\$ or online database\$).tw,sh.
29 ((pooling or pooled or mantel haenszel).tw,sh.
30 ((peto or dersimonian or der simonian or fixed effect).tw,sh.
31	or/26-30
32	and/25,31
33	or/24,32
34 l	letter.pt.
35	case report.tw.
36	comment.pt.
37 e	editorial.pt.
38 ľ	historical article.pt.
39	or/34-38
40 1	17 not 39
41 3	33 not 39
42	or/40-41
43 N	MUSCLE SPASTICITY/
44	exp SPASM/
45 e	exp MUSCLE HYPERTONIA/
46 ((spastic\$ or spasm\$).ti,ab.
47 r	hyperton\$.ti,ab.
48	or/43-47
49 e	exp BRAIN INJURIES/
50 (((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
51 <i>A</i>	ABI.ti,ab.
52	static encephalopath\$.ti,ab.
53 (CEREBRAL PALSY/
54 ((cerebral adj3 pals\$).ti,ab.
55 e	exp MENINGITIS/
56 ((meningitis or meningococcal).ti,ab.
57 e	exp CRANIOCEREBRAL TRAUMA/
	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
59 e	exp ENCEPHALITIS/
60	encephaliti\$.ti,ab.

61	exp CEREBROVASCULAR DISORDERS/
62	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
63	exp HYDROCEPHALUS/
64	hydrocephal\$.ti,ab.
65	SHAKEN BABY SYNDROME/
66	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
67	or/49-66
68	and/48,67
69	exp PHYSICAL THERAPY MODALITIES/
70	exp REHABILITATION/
71	OCCUPATIONAL THERAPY/
72	((physical or occupational) adj3 therap\$).ti,ab.
73	physiotherap\$.ti,ab.
74	(rehab\$ or habilitat\$).ti,ab.
75	exp EXERCISE THERAPY/
76	exp EXERCISE MOVEMENT TECHNIQUES/
77	RESISTANCE TRAINING/
78	exp MUSCLE STRENGTH/
79	(musc\$ adj3 (strength\$ or strong\$)).ti,ab.
80	((exercis\$ or mov\$) adj3 therap\$).ti,ab.
81	kinesi?therap\$.ti,ab.
	((resist\$ or strength\$ or weight\$ or agonist\$ or circuit\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab.
~ ~	((function\$ or locomot\$ or e#centric or concentric or target\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab.
84	treadmill\$.ti,ab.
85	(multi?gym\$ or multi gym\$).ti,ab.
86	(cycle\$ or bicycle\$ or bike\$ or tricycle\$ or trike\$ or hand cycle\$ or hand?cycle\$).ti,ab.
87	((rebound or trampolin\$) adj3 therap\$).ti,ab.
88	(proprioceptive neuromuscular facilitation or PNF).ti,ab.
89	(motor adj3 (learn\$ or train\$ or re learn\$ or re?learn\$ or perform\$)).ti,ab.
90	MRP.ti,ab.
91	((task\$ or environment\$ or context\$ or occupat\$ or participat\$ or function\$ or activit\$) adj3 (manipulat\$ or approach\$ or train\$ or therap\$)).ti,ab.
92	dynamic system\$.ti,ab.
93	ACTIVITIES OF DAILY LIVING/
94	(activ\$ adj3 (daily living or daily life)).ti,ab.

95	ADL.ti,ab.
	(bobath or NDT).ti,ab.
97	((neuro?development\$ or neuro development\$ or neuromuscular or key point\$) adj3 (train\$ or treatment\$ or therap\$ or facilitat\$ or approach\$ or control\$)).ti,ab.
98	system\$ approach\$.ti,ab.
99	(normal adj2 mov\$ adj2 (pattern\$ or facilitat\$)).ti,ab.
100	(abnormal adj2 mov\$ adj2 (inhibit\$ or control\$)).ti,ab.
101	RESTRAINT, PHYSICAL/
102	(constraint\$ adj3 therap\$).ti,ab.
103	(CIMT or MCIMT or "forced use").ti,ab.
104	MUSCLE STRETCHING EXERCISES/
105	((activ\$ or passiv\$ or musc\$ or dynamic\$ or static\$ or isometric\$ or relax\$ or ballistic\$) adj3 (stretch\$ or mov\$)).ti,ab.
106	CASTS, SURGICAL/
107	((serial or series) adj3 cast\$).ti,ab.
108	exp POSTURE/
109	(postur\$ adj3 (care\$ or caring or manag\$)).ti,ab.
110	(functional sitting position\$ or FSP).ti,ab.
111	((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab.
112	(knee\$ adj3 block\$).ti,ab.
113	(sleep\$ adj3 system\$).ti,ab.
114	(stand\$ adj3 (fram\$ or practi\$)).ti,ab.
115	HYDROTHERAPY/
116	(hydrotherap\$ or aquatherap\$).ti,ab.
117	((water or swim\$ or aquatic) adj3 therap\$).ti,ab.
118	exp ELECTRIC STIMULATION THERAPY/
119	(electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab.
120	FES.ti,ab.
121	(home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab.
122	BIOFEEDBACK, PSYCHOLOGY/
123	(bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab.
124	THERAPY, COMPUTER-ASSISTED/
125	(virtual realit\$ or VR).ti,ab.
126	(balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab.
127	wii fit.ti,ab.
128	(computer\$ adj3 (therap\$ or game\$)).ti,ab.
129	or/69-128
130	and/68,129

131	limit 130 to english language
132	limit 131 to animals
133	limit 131 to (animals and humans)
134	132 not 133
135	131 not 134
136	limit 135 to yr="1970 -Current"
137	and/42,136

Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations

SPAST_Q1_physio_medline_in-process_060910

#	Searches
1	(spastic\$ or spasm\$).ti,ab.
2	hyperton\$.ti,ab.
3	or/1-2
4	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
5	ABI.ti,ab.
6	static encephalopath\$.ti,ab.
7	(cerebral adj3 pals\$).ti,ab.
8	(meningitis or meningococcal).ti,ab.
9	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
10	encephaliti\$.ti,ab.
11	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
12	hydrocephal\$.ti,ab.
13	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
14	or/4-13
15	and/3,14
16	((physical or occupational) adj3 therap\$).ti,ab.
17	physiotherap\$.ti,ab.
18	(rehab\$ or habilitat\$).ti,ab.
19	(musc\$ adj3 (strength\$ or strong\$)).ti,ab.
20	((exercis\$ or mov\$) adj3 therap\$).ti,ab.
21	kinesi?therap\$.ti,ab.
22	((resist\$ or strength\$ or weight\$ or agonist\$ or circuit\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab.
23	((function\$ or locomot\$ or e#centric or concentric or target\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab.

- 24 treadmill\$.ti,ab.
- 25 (multi?gym\$ or multi gym\$).ti,ab.
- (cycle\$ or bicycle\$ or bike\$ or tricycle\$ or trike\$ or hand cycle\$ or hand?cycle\$).ti,ab.
- 27 ((rebound or trampolin\$) adj3 therap\$).ti,ab.
- 28 (proprioceptive neuromuscular facilitation or PNF).ti,ab.
- 29 (motor adj3 (learn\$ or train\$ or re learn\$ or re?learn\$ or perform\$)).ti,ab.
- 30 MRP.ti,ab.
- ((task\$ or environment\$ or context\$ or occupat\$ or participat\$ or function\$ or activit\$) adj3 (manipulat\$ or approach\$ or train\$ or therap\$)).ti,ab.
- 32 dynamic system\$.ti,ab.
- 33 (activ\$ adj3 (daily living or daily life)).ti,ab.
- 34 ADL.ti,ab.
- 35 (bobath or NDT).ti,ab.
- ((neuro?development\$ or neuro development\$ or neuromuscular or key point\$) adj3 (train\$ or treatment\$ or therap\$ or facilitat\$ or approach\$ or control\$)).ti,ab.
- 37 system\$ approach\$.ti,ab.
- 38 (normal adj2 mov\$ adj2 (pattern\$ or facilitat\$)).ti,ab.
- 39||(abnormal adj2 mov\$ adj2 (inhibit\$ or control\$)).ti,ab.
- 40 (constraint\$ adj3 therap\$).ti,ab.
- 41 (CIMT or MCIMT or "forced use").ti,ab.
- ((activ\$ or passiv\$ or musc\$ or dynamic\$ or static\$ or isometric\$ or relax\$ or ballistic\$) adj3 (stretch\$ or mov\$)).ti,ab.
- 43 ((serial or series) adj3 cast\$).ti,ab.
- 44 (postur\$ adj3 (care\$ or caring or manag\$)).ti,ab.
- 45 (functional sitting position or FSP).ti,ab.
- 46 ((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab.
- 47 (knee\$ adj3 block\$).ti,ab.
- 48 (sleep\$ adj3 system\$).ti,ab.
- 49||(stand\$ adj3 (fram\$ or practi\$)).ti,ab.
- 50 (hydrotherap\$ or aguatherap\$).ti,ab.
- 51 ((water or swim\$ or aquatic) adj3 therap\$).ti,ab.
- 52 (electric stimulation adj3 (therap or function or neuromuscular)).ti,ab.
- 53 FES.ti,ab.
- (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab.
- 55 (bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab.
- 56 (virtual realit\$ or VR).ti,ab.
- 57 (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab.
- 58 wii fit.ti,ab.

59	(computer\$ adj3 (therap\$ or game\$)).ti,ab.
60	or/16-59
61	and/15,60

EBM Reviews - Cochrane Central Register of Controlled Trials

SPAST_Q1_physio_cctr_060910

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.
6	or/1-5
7	exp BRAIN INJURIES/
8	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
9	ABI.ti,ab.
10	static encephalopath\$.ti,ab.
11	CEREBRAL PALSY/
12	(cerebral adj3 pals\$).ti,ab.
13	exp MENINGITIS/
14	(meningitis or meningococcal).ti,ab.
15	exp CRANIOCEREBRAL TRAUMA/
16	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
17	exp ENCEPHALITIS/
18	encephaliti\$.ti,ab.
19	exp CEREBROVASCULAR DISORDERS/
20	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
21	exp HYDROCEPHALUS/
22	hydrocephal\$.ti,ab.
23	SHAKEN BABY SYNDROME/
24	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
25	or/7-24
26	and/6,25
27	exp PHYSICAL THERAPY MODALITIES/
28	exp REHABILITATION/

- 29 OCCUPATIONAL THERAPY/
- 30 (physical or occupational) adj3 therap\$).ti,ab.
- 31 physiotherap\$.ti,ab.
- 32 (rehab\$ or habilitat\$).ti,ab.
- 33 exp EXERCISE THERAPY/
- 34 exp EXERCISE MOVEMENT TECHNIQUES/
- 35 RESISTANCE TRAINING/
- 36 exp MUSCLE STRENGTH/
- 37 (musc\$ adj3 (strength\$ or strong\$)).ti,ab.
- 38 ((exercis\$ or mov\$) adj3 therap\$).ti,ab.
- 39 kinesi?therap\$.ti,ab.
- ((resist\$ or strength\$ or weight\$ or agonist\$ or circuit\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab.
- ((function\$ or locomot\$ or e#centric or concentric or target\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab.
- 42 treadmill\$.ti,ab.
- 43 (multi?gym\$ or multi gym\$).ti,ab.
- (cycle\$ or bicycle\$ or bike\$ or tricycle\$ or trike\$ or hand cycle\$ or hand?cycle\$).ti,ab.
- 45 ((rebound or trampolin\$) adj3 therap\$).ti,ab.
- 46 (proprioceptive neuromuscular facilitation or PNF).ti,ab.
- 47 (motor adj3 (learn\$ or train\$ or re learn\$ or re?learn\$ or perform\$)).ti,ab.
- 48 MRP.ti,ab.
- ((task\$ or environment\$ or context\$ or occupat\$ or participat\$ or function\$ or activit\$) adj3 (manipulat\$ or approach\$ or train\$ or therap\$)).ti,ab.
- 50 dynamic system\$.ti,ab.
- 51 ACTIVITIES OF DAILY LIVING/
- 52 (activ\$ adj3 (daily living or daily life)).ti,ab.
- 53 ADL.ti,ab.
- [54] (bobath or NDT).ti,ab.
- ((neuro?development\$ or neuro development\$ or neuromuscular or key point\$)
 adj3 (train\$ or treatment\$ or therap\$ or facilitat\$ or approach\$ or control\$)).ti,ab.
- 56 system\$ approach\$.ti,ab.
- 57 (normal adj2 mov\$ adj2 (pattern\$ or facilitat\$)).ti,ab.
- 58 (abnormal adj2 mov\$ adj2 (inhibit\$ or control\$)).ti,ab.
- 59 RESTRAINT, PHYSICAL/
- 60 (constraint\$ adj3 therap\$).ti,ab.
- 61 (CIMT or MCIMT or "forced use").ti,ab.
- 62 MUSCLE STRETCHING EXERCISES/
- 63|((activ\$ or passiv\$ or musc\$ or dynamic\$ or static\$ or isometric\$ or relax\$ or

	ballistic\$) adj3 (stretch\$ or mov\$)).ti,ab.
64	CASTS, SURGICAL/
65	((serial or series) adj3 cast\$).ti,ab.
66	exp POSTURE/
67	(postur\$ adj3 (care\$ or caring or manag\$)).ti,ab.
68	(functional sitting position\$ or FSP).ti,ab.
69	((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab.
70	(knee\$ adj3 block\$).ti,ab.
71	(sleep\$ adj3 system\$).ti,ab.
72	(stand\$ adj3 (fram\$ or practi\$)).ti,ab.
73	HYDROTHERAPY/
74	(hydrotherap\$ or aquatherap\$).ti,ab.
75	((water or swim\$ or aquatic) adj3 therap\$).ti,ab.
76	exp ELECTRIC STIMULATION THERAPY/
77	(electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab.
78	FES.ti,ab.
	(home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab.
80	BIOFEEDBACK, PSYCHOLOGY/
81	(bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab.
82	THERAPY, COMPUTER-ASSISTED/
83	(virtual realit\$ or VR).ti,ab.
84	(balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab.
85	wii fit.ti,ab.
86	(computer\$ adj3 (therap\$ or game\$)).ti,ab.
87	or/27-86
88	and/26,87

EBM Reviews - Cochrane Database of Systematic Reviews 2005+, EBM Reviews - Database of Abstracts of Reviews of Effects

SPAST_Q1_physio_cdsrdare_060910

#	Searches
1	MUSCLE SPASTICITY.kw.
2	SPASM.kw.
3	MUSCLE HYPERTONIA.kw.
4	(spastic\$ or spasm\$).tw,tx.
5	hyperton\$.tw,tx.
6	or/1-5

BRAIN INJURIES.kw. 8 ((non progressive or non?progressive or acquired) adj2 brain injur\$).tw,tx. 9 ABI.tw,tx. 10 static encephalopath\$.tw,tx. 11 CEREBRAL PALSY.kw. 12 (cerebral adj3 pals\$).tw,tx. 13 MENINGITIS.kw. 14 (meningitis or meningococcal).tw,tx. 15 CRANIOCEREBRAL TRAUMA.kw. ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw,tx. 17 ENCEPHALITIS.kw. 18 encephaliti\$.tw,tx. 19 CEREBROVASCULAR DISORDERS.kw. ((brain vascular or intra cranial vascular or intra?cranial vascular or 20 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw,tx. 21 HYDROCEPHALUS.kw. 22 hydrocephal\$.tw,tx. 23 SHAKEN BABY SYNDROME.kw. 24 (shak\$ adj3 (injur\$ or syndrome\$)).tw,tx. 25 or/7-24 26 and/6,25 27 PHYSICAL THERAPY MODALITIES.kw. 28 REHABILITATION.kw. 29 OCCUPATIONAL THERAPY.kw. 30 (physical or occupational) adj3 therap\$).tw,tx. 31 physiotherap\$.tw,tx. 32 (rehab\$ or habilitat\$).tw,tx. 33 EXERCISE THERAPY.kw. 34||EXERCISE MOVEMENT TECHNIQUES.kw. 35 RESISTANCE TRAINING.kw. 36 MUSCLE STRENGTH.kw. 37 (musc\$ adj3 (strength\$ or strong\$)).tw,tx. 38 ((exercis\$ or mov\$) adj3 therap\$).tw,tx. 39 kinesi?therap\$.tw,tx. ((resist\$ or strength\$ or weight\$ or agonist\$ or circuit\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).tw,tx. ((function\$ or locomot\$ or e#centric or concentric or target\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).tw,tx.

- 42 treadmill\$.tw,tx.
- 43 (multi?gym\$ or multi gym\$).tw,tx.
- (cycle\$ or bicycle\$ or bike\$ or tricycle\$ or trike\$ or hand cycle\$ or hand?cycle\$).tw,tx.
- 45 ((rebound or trampolin\$) adj3 therap\$).tw,tx.
- 46 (proprioceptive neuromuscular facilitation or PNF).tw,tx.
- 47 (motor adj3 (learn\$ or train\$ or re learn\$ or re?learn\$ or perform\$)).tw,tx.
- 48 MRP.tw,tx.
- ((task\$ or environment\$ or context\$ or occupat\$ or participat\$ or function\$ or activit\$) adj3 (manipulat\$ or approach\$ or train\$ or therap\$)).tw,tx.
- 50 dynamic system\$.tw,tx.
- 51∥ACTIVITIES OF DAILY LIVING.kw.
- 52 (activ\$ adj3 (daily living or daily life)).tw,tx.
- 53 ADL.tw.tx.
- 54 (bobath or NDT).tw,tx.
- ((neuro?development\$ or neuro development\$ or neuromuscular or key point\$) adj3 (train\$ or treatment\$ or therap\$ or facilitat\$ or approach\$ or control\$)).tw,tx.
- 56 system\$ approach\$.tw,tx.
- 57 (normal adj2 mov\$ adj2 (pattern\$ or facilitat\$)).tw,tx.
- 58 (abnormal adj2 mov\$ adj2 (inhibit\$ or control\$)).tw,tx.
- 59 RESTRAINT, PHYSICAL.kw.
- 60 (constraint\$ adj3 therap\$).tw,tx.
- 61 (CIMT or MCIMT or "forced use").tw,tx.
- 62 MUSCLE STRETCHING EXERCISES.kw.
- ((activ\$ or passiv\$ or musc\$ or dynamic\$ or static\$ or isometric\$ or relax\$ or ballistic\$) adj3 (stretch\$ or mov\$)).tw,tx.
- 64 CASTS, SURGICAL.kw.
- 65 ((serial or series) adj3 cast\$).tw,tx.
- 66 POSTURE.kw.
- 67 (postur\$ adj3 (care\$ or caring or manag\$)).tw,tx.
- 68 (functional sitting position\$ or FSP).tw,tx.
- 69 ((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).tw,tx.
- 70 (knee\$ adj3 block\$).tw,tx.
- 71 (sleep\$ adj3 system\$).tw,tx.
- 72 (stand\$ adj3 (fram\$ or practi\$)).tw,tx.
- 73 HYDROTHERAPY.kw.
- 74 (hydrotherap\$ or aquatherap\$).tw,tx.
- 75 ((water or swim\$ or aquatic) adj3 therap\$).tw,tx.
- 76 ELECTRIC STIMULATION THERAPY.kw.
- 77 (electric stimulation adj3 (therap or function or neuromuscular)).tw,tx.

	FES.tw,tx.
79	(home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).tw,tx.
80	BIOFEEDBACK, PSYCHOLOGY.kw.
81	(bio feedback\$ or bio?feedback\$ or feedback\$).tw,tx.
82	THERAPY, COMPUTER-ASSISTED.kw.
83	(virtual realit\$ or VR).tw,tx.
84	(balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).tw,tx.
85	wii fit.tw,tx.
86	(computer\$ adj3 (therap\$ or game\$)).tw,tx.
87	or/27-86
88	and/26,87

EMBASE 1980+

 ${\tt SPAST_Q1_physio_RCTs_SRs_embase_060910}$

#	Searches
1	CLINICAL TRIALS/
2	(clinic\$ adj5 trial\$).ti,ab,sh.
3	SINGLE BLIND PROCEDURE/
4	DOUBLE BLIND PROCEDURE/
5	RANDOM ALLOCATION/
6	CROSSOVER PROCEDURE/
7	PLACEBO/
8	placebo\$.ti,ab,sh.
9	random\$.ti,ab,sh.
10	RANDOMIZED CONTROLLED TRIALS/
11	((single or double or triple or treble) adj (blind\$ or mask\$)).ti,ab,sh.
12	randomi?ed control\$ trial\$.tw.
13	or/1-12
14	META ANALYSIS/
15	((meta adj analy\$) or metaanalys\$ or meta-analy\$).ti,ab,sh.
16	(systematic\$ adj5 (review\$ or overview\$)).ti,sh,ab.
17	(methodologic\$ adj5 (review\$ or overview\$)).ti,ab,sh.
18	or/14-17
19	review.pt.
20	(medline or medlars or embase).ab.
21	(scisearch or science citation index).ab.
22	(psychlit or psyclit or psychinfo or psycinfo or cinahl or cochrane).ab.

[clectronic database\$) or bibliographic database\$ or computeri?ed database\$) online database\$).tw. [25] (pooling or pooled or mantel haenszel).tw. [26] (peto or dersimonian or "der simonian" or fixed effect).tw. [27] or/20-26 [28] and/19,27 [29] or/18,28 [30] (book or conference paper or editorial or letter or note or proceeding or short survey).pt. [31] 13 not 30 [32] 29 not 30 [33] or/31-32 [34] SPASTICITY/ [35] exp MUSCLE SPASM/ [36] exp MUSCLE HYPERTONIA/ [37] (spastic\$ or spasm\$).ti,ab. [38] hyperton\$.ti,ab. [39] or/34-38 [40] exp BRAIN INJURY/ [41] ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. [42] ABI.ti,ab. [43] static encephalopath\$.ti,ab. [44] (Cerebral adj3 pals\$).ti,ab. [45] (cerebral adj3 pals\$).ti,ab. [46] exp MENINGITIS/ [47] ((meningitis or meningococcal).ti,ab. [48] exp HEAD INJURY/		
cerebral adj3 pals\$).ti,ab. 24 online database\$).tw. 25 (pooling or pooled or mantel haenszel).tw. 26 (peto or dersimonian or "der simonian" or fixed effect).tw. 27 or/20-26 28 and/19,27 29 or/18,28 30 (book or conference paper or editorial or letter or note or proceeding or short survey).pt. 31 13 not 30 32 29 not 30 33 or/31-32 34 SPASTICITY/ 35 exp MUSCLE BYSSM/ 36 exp MUSCLE HYPERTONIA/ 37 (spastic\$ or spasm\$).ti,ab. 38 hyperton\$.ti,ab. 39 or/34-38 40 exp BRAIN INJURY/ 41 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 42 ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ ((forain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS(55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	23	((hand or manual\$) adj2 search\$).tw.
26 (peto or dersimonian or "der simonian" or fixed effect).tw. 27 or/20-26 28 and/19,27 29 or/18,28 30 (book or conference paper or editorial or letter or note or proceeding or short survey).pt. 31 13 not 30 32 29 not 30 33 or/31-32 34 SPASTICITY/ 35 exp MUSCLE SPASW/ 36 exp MUSCLE HYPERTONIA/ 37 (spastic\$ or spasm\$).ti,ab. 39 or/34-38 40 exp BRAIN INJURY/ 41 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 42 ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ 53 ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 (exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	24	(electronic database\$ or bibliographic database\$ or computeri?ed database\$ or online database\$).tw.
27 or/20-26 28 and/19,27 29 or/18,28 30 (book or conference paper or editorial or letter or note or proceeding or short survey),pt. 31 13 not 30 32 29 not 30 33 or/31-32 34 SPASTICITY/ 35 exp MUSCLE SPASM/ 36 exp MUSCLE HYPERTONIA/ 37 (spastic\$ or spasm\$).ti,ab. 38 hyperton\$.ti,ab. 39 or/34-38 40 exp BRAIN INJURY/ 41 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 42 ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	25	(pooling or pooled or mantel haenszel).tw.
28 and/19,27 29 or/18,28 30 (book or conference paper or editorial or letter or note or proceeding or short survey).pt. 31 13 not 30 32 29 not 30 33 or/31-32 34 SPASTICITY/ 36 exp MUSCLE SPASM/ 36 exp MUSCLE HYPERTONIA/ 37 (spastic\$ or spasm\$).ti,ab. 38 hyperton\$.ti,ab. 39 or/34-38 40 exp BRAIN INJURY/ 41 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 42 ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ 53 ((brain vascular or intra cranial vascular or insulficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab.	26	(peto or dersimonian or "der simonian" or fixed effect).tw.
29 or/18,28 30 (book or conference paper or editorial or letter or note or proceeding or short survey).pt. 31 13 not 30 32 29 not 30 33 or/31-32 34 SPASTICITY/ 35 exp MUSCLE SPASM/ 36 exp MUSCLE HYPERTONIA/ 37 (spastic\$ or spasm\$).ti,ab. 38 hyperton\$.ti,ab. 39 or/34-38 40 exp BRAIN INJURY/ 41 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 42 ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ encephaliti\$.ti,ab. 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	27	or/20-26
Survey Surv	28	and/19,27
survey).pt. 31	29	or/18,28
32 29 not 30 33 or/31-32 34 SPASTICITY/ 35 exp MUSCLE SPASM/ 36 exp MUSCLE HYPERTONIA/ 37 (spastic\$ or spasm\$).ti,ab. 38 hyperton\$.ti,ab. 39 or/34-38 40 exp BRAIN INJURY/ 41 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 42 ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	30	
33 or/31-32 34 SPASTICITY/ 35 exp MUSCLE SPASM/ 36 exp MUSCLE HYPERTONIA/ 37 (spastic\$ or spasm\$).ti,ab. 38 hyperton\$.ti,ab. 39 or/34-38 40 exp BRAIN INJURY/ 41 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 42 ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	31	13 not 30
34 SPASTICITY/ 35 exp MUSCLE SPASM/ 36 exp MUSCLE HYPERTONIA/ 37 (spastic\$ or spasm\$).ti,ab. 38 hyperton\$.ti,ab. 39 or/34-38 40 exp BRAIN INJURY/ 41 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 42 ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	32	29 not 30
35 exp MUSCLE SPASM/ 36 exp MUSCLE HYPERTONIA/ 37 (spastic\$ or spasm\$).ti,ab. 38 hyperton\$.ti,ab. 39 or/34-38 40 exp BRAIN INJURY/ 41 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 42 ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 (CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ (((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	33	or/31-32
36 exp MUSCLE HYPERTONIA/ 37 (spastic\$ or spasm\$).ti,ab. 38 hyperton\$.ti,ab. 39 or/34-38 40 exp BRAIN INJURY/ 41 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 42 ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	34	SPASTICITY/
37 (spastic\$ or spasm\$).ti,ab. 38 hyperton\$.ti,ab. 39 or/34-38 40 exp BRAIN INJURY/ 41 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 42 ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	35	exp MUSCLE SPASM/
38 hyperton\$.ti,ab. 39 or/34-38 40 exp BRAIN INJURY/ 41 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 42 ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 ((meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ (((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	36	exp MUSCLE HYPERTONIA/
 39 or/34-38 40 exp BRAIN INJURY/ 41 (((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 42 ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 ((meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 (((head or brain or skull or cerebral or craniocerebral) adj3 ((injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ (((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/ 	37	(spastic\$ or spasm\$).ti,ab.
 exp BRAIN INJURY/ ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. ABI.ti,ab. static encephalopath\$.ti,ab. (CEREBRAL PALSY/ (cerebral adj3 pals\$).ti,ab. exp MENINGITIS/ (meningitis or meningococcal).ti,ab. exp HEAD INJURY/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. exp ENCEPHALITIS/ encephaliti\$.ti,ab. exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. exp HYDROCEPHALUS/ hydrocephal\$.ti,ab. SHAKEN BABY SYNDROME/ 	38	hyperton\$.ti,ab.
41 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 42 ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ o damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ (((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	39	or/34-38
ABI.ti,ab. 43 static encephalopath\$.ti,ab. 44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ (((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	40	exp BRAIN INJURY/
 static encephalopath\$.ti,ab. CEREBRAL PALSY/ (cerebral adj3 pals\$).ti,ab. exp MENINGITIS/ (meningitis or meningococcal).ti,ab. exp HEAD INJURY/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. exp ENCEPHALITIS/ encephaliti\$.ti,ab. exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. exp HYDROCEPHALUS/ hydrocephal\$.ti,ab. SHAKEN BABY SYNDROME/ 	41	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
44 CEREBRAL PALSY/ 45 (cerebral adj3 pals\$).ti,ab. 46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	42	ABI.ti,ab.
 (cerebral adj3 pals\$).ti,ab. exp MENINGITIS/ (meningitis or meningococcal).ti,ab. exp HEAD INJURY/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. exp ENCEPHALITIS/ encephaliti\$.ti,ab. exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. exp HYDROCEPHALUS/ hydrocephal\$.ti,ab. SHAKEN BABY SYNDROME/ 	43	static encephalopath\$.ti,ab.
46 exp MENINGITIS/ 47 (meningitis or meningococcal).ti,ab. 48 exp HEAD INJURY/ 49 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	44	CEREBRAL PALSY/
(meningitis or meningococcal).ti,ab. (meningitis or disturbs or insults)).ti,ab. (meningitis or disturbs or insults).ti,ab. (meningitis or disturbs or insults).ti,ab. (meningitis or disturbs or insults)).ti,ab. (meningitis or disturbs or insults).ti,ab. (meningitis or disturbs or insults).ti,a	45	(cerebral adj3 pals\$).ti,ab.
48 exp HEAD INJURY/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 50 exp ENCEPHALITIS/ 51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	46	exp MENINGITIS/
((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ o damage\$ or disturb\$ or insult\$)).ti,ab. Exp ENCEPHALITIS/	47	(meningitis or meningococcal).ti,ab.
damage\$ or disturb\$ or insult\$)).ti,ab. Exp ENCEPHALITIS/	48	exp HEAD INJURY/
51 encephaliti\$.ti,ab. 52 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ 55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	49	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
52 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 54 exp HYDROCEPHALUS/ hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	50	exp ENCEPHALITIS/
((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. Exp HYDROCEPHALUS/	51	encephaliti\$.ti,ab.
cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. Exp HYDROCEPHALUS/ hydrocephal\$.ti,ab. SHAKEN BABY SYNDROME/	52	exp CEREBROVASCULAR DISEASE/
55 hydrocephal\$.ti,ab. 56 SHAKEN BABY SYNDROME/	53	cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or
56 SHAKEN BABY SYNDROME/	54	exp HYDROCEPHALUS/
	55	hydrocephal\$.ti,ab.
57 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.	56	SHAKEN BABY SYNDROME/
	57	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.

58	or/40-57		
59	and/39,58		
60	exp PHYSIOTHERAPY/ or PEDIATRIC PHYSIOTHERAPY/		
61	exp REHABILITATION/ or PEDIATRIC REHABILITATION/		
62	OCCUPATIONAL THERAPY/		
63	((physical or occupational) adj3 therap\$).ti,ab.		
64	physiotherap\$.ti,ab.		
65	(rehab\$ or habilitat\$).ti,ab.		
66	exp KINESIOTHERAPY/		
67	MOVEMENT THERAPY/		
68	MUSCLE TRAINING/		
69	RESISTANCE TRAINING/		
70	MUSCLE STRENGTH/		
71	(musc\$ adj3 (strength\$ or strong\$)).ti,ab.		
72	((exercis\$ or mov\$) adj3 therap\$).ti,ab.		
73	kinesi?therap\$.ti,ab.		
74	((resist\$ or strength\$ or weight\$ or agonist\$ or circuit) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab.		
75	((function\$ or locomot\$ or e#centric or concentric or target\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab.		
76	TREADMILL/ or TREADMILL EXERCISE/		
77	treadmill\$.ti,ab.		
78	(multi?gym\$ or multi gym\$).ti,ab.		
79	BICYCLE/		
80	(cycle\$ or bicycle\$ or bike\$ or tricycle\$ or trike\$ or hand cycle\$ or hand?cycle\$).ti,ab.		
81	((rebound or trampolin\$) adj3 therap\$).ti,ab.		
82	(proprioceptive neuromuscular facilitation or PNF).ti,ab.		
83	MOTOR PERFORMANCE/		
84	(motor adj3 (learn\$ or train\$ or re learn\$ or re?learn\$ or perform\$)).ti,ab.		
85	MRP.ti,ab.		
86	((task\$ or environment\$ or context\$ or occupat\$ or participat\$ or function\$ or activit\$) adj3 (manipulat\$ or approach\$ or train\$ or therap\$)).ti,ab.		
87	dynamic system\$.ti,ab.		
88	DAILY LIFE ACTIVITY/		
89	(activ\$ adj3 (daily living or daily life)).ti,ab.		
90	ADL.ti,ab.		
91	NEUROMUSCULAR FACILITATION/		
92	(bobath or NDT).ti,ab.		
93	((neuro?development\$ or neuro development\$ or neuromuscular or key point\$)		

	adj3 (train\$ or treatment\$ or therap\$ or facilitat\$ or approach\$ or control\$)).ti,ab.				
94	system\$ approach\$.ti,ab.				
95	(normal adj2 mov\$ adj2 (pattern\$ or facilitat\$)).ti,ab.				
96	(abnormal adj2 mov\$ adj2 (inhibit\$ or control\$)).ti,ab.				
97	CONSTRAINT INDUCED THERAPY/				
98	(constraint\$ adj3 therap\$).ti,ab.				
	(CIMT or MCIMT or "forced use").ti,ab.				
	STRETCHING EXERCISE/				
101	((activ\$ or passiv\$ or musc\$ or dynamic\$ or static\$ or isometric\$ or relax\$ or ballistic\$) adj3 (stretch\$ or mov\$)).ti,ab.				
=	PLASTER CAST/				
	((serial or series) adj3 cast\$).ti,ab.				
	BODY POSTURE/				
	(postur\$ adj3 (care\$ or caring or manag\$)).ti,ab.				
	SITTING/				
	(functional sitting position\$ or FSP).ti,ab.				
=	((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab.				
_	(knee\$ adj3 block\$).ti,ab.				
=	(sleep\$ adj3 system\$).ti,ab.				
	(stand\$ adj3 (fram\$ or practi\$)).ti,ab.				
112	HYDROTHERAPY/				
113	(hydrotherap\$ or aquatherap\$).ti,ab.				
114	((water or swim\$ or aquatic) adj3 therap\$).ti,ab.				
115	FUNCTIONAL ELECTRICAL STIMULATION/				
116	(electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab.				
117	FES.ti,ab.				
118	exp HOME CARE/				
119	HOME REHABILITATION/ or HOME PHYSIOTHERAPY/				
120	(home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab.				
121	exp FEEDBACK SYSTEM/				
122	(bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab.				
123	exp COMPUTER ASSISTED THERAPY/				
124	VIRTUAL REALITY/				
125	(virtual realit\$ or VR).ti,ab.				
126	(balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab.				
=	wii fit.ti,ab.				
128	(computer\$ adj3 (therap\$ or game\$)).ti,ab.				
129	or/60-128				

130	and/59,129
131	limit 130 to english language
132	limit 131 to yr="1970 -Current"
133	and/33,132

CINAHL 1981+

SPAST_Q1_physiotherapy_cinahl_060910

#	Query	Limiters/Expanders
S146	S145	Limiters - Exclude MEDLINE records Search modes - Boolean/Phrase
S145	S44 and S144	Search modes - Boolean/Phrase
S144	S45 or S46 or S47 or S48 or S49 or S50 or S51 or S52 or S53 or S54 or S55 or S56 or S57 or S58 or S59 or S60 or S61 or S62 or S63 or S64 or S65 or S66 or S67 or S68 or S69 or S70 or S71 or S72 or S73 or S74 or S75 or S76 or S77 or S78 or S79 or S80 or S81 or S82 or S83 or S84 or S85 or S86 or S87 or S88 or S89 or S90 or S91 or S92 or S93 or S94 or S95 or S96 or S97 or S98 or S99 or S100 or S101 or S102 or S103 or S104 or S105 or S106 or S107 or S108 or S109 or S110 or S111 or S112 or S113 or S114 or S115 or S116 or S117 or S118 or S119 or S120 or S121 or S122 or S123 or S124 or S125 or S126 or S127 or S128 or S129 or S130 or S131 or S132 or S133 or S134 or S135 or S136 or S137 or S138 or S139 or S140 or S141 or S142 or S143	Search modes - Boolean/Phrase
S143	AB (computer N3 therap*) or AB (computer N3 game*)	Search modes - Boolean/Phrase
S142	TI (computer N3 therap*) or TI (computer N3 game*)	Search modes - Boolean/Phrase
S141	TI (wii fit) or AB (wii fit)	Search modes - Boolean/Phrase
S140	AB (balance N3 train*) or AB (balance N3 practi*) or AB (balance N3 exercis*) or AB (balance N3 game*)	Search modes - Boolean/Phrase
S139	TI (balance N3 train*) or TI (balance N3 practi*) or TI (balance N3 exercis*) or TI (balance N3 game*)	Search modes - Boolean/Phrase
S138	TI (virtual realit* or VR) or AB (virtual realit* or VR)	Search modes - Boolean/Phrase
S137	MH VIRTUAL REALITY OR MH VIDEO GAMES	Search modes - Boolean/Phrase

MH THERAPY, COMPUTER ASSISTED+	Search modes - Boolean/Phrase
TI (bio-feedback* or biofeedback* or feedback*) or AB (bio-feedback* or biofeedback* or feedback*)	Search modes - Boolean/Phrase
MH BIOFEEDBACK	Search modes - Boolean/Phrase
AB (home* N3 activ*) or AB (home* N3 handl*) or AB (home* N3 interven*) or AB (home* N3 therap*) or AB (home* N3 program*) or AB (home* N3 care*) or AB (home* N3 caring)	Search modes - Boolean/Phrase
TI (home* N3 activ*) or TI (home* N3 handl*) or TI (home* N3 interven*) or TI (home* N3 therap*) or TI (home* N3 care*) or TI (home* N3 care*) or TI (home* N3 caring)	Search modes - Boolean/Phrase
MH HOME REHABILITATION+	Search modes - Boolean/Phrase
TI (FES) or AB (FES)	Search modes - Boolean/Phrase
TI (functional electric* stimulation or electric* stimulation therap* or neuromuscular electric* stimulation) or AB (functional electric* stimulation or electric* stimulation therap* or neuromuscular electric* stimulation)	Search modes - Boolean/Phrase
MH ELECTRIC STIMULATION+	Search modes - Boolean/Phrase
AB (water N3 therap*) or AB (swim* N3 therap*) or AB (aquatic N3 therap*)	Search modes - Boolean/Phrase
TI (water N3 therap*) or TI (swim* N3 therap*) or TI (aquatic N3 therap*)	Search modes - Boolean/Phrase
TI (hydrotherap* or aquatherap*) or AB (hydrotherap* or aquatherap*)	Search modes - Boolean/Phrase
MH HYDROTHERAPY+	Search modes - Boolean/Phrase
AB (stand* N3 fram*) or AB (stand* N3 practi*)	Search modes - Boolean/Phrase
TI (stand* N3 fram*) or TI (stand* N3 practi*)	Search modes - Boolean/Phrase
TI (sleep* N3 system*) or AB (sleep* N3 system*)	Search modes - Boolean/Phrase
TI (knee* N3 block*) or AB (knee* N3 block*)	Search modes - Boolean/Phrase
TI (speciali?ed seat* or adapt* seat* or seat* solution* or mo#ld* seat*) or AB (speciali?ed seat* or adapt*	Search modes - Boolean/Phrase
	TI (bio-feedback* or biofeedback* or feedback*) or AB (bio-feedback* or biofeedback* or feedback*) MH BIOFEEDBACK AB (home* N3 activ*) or AB (home* N3 handl*) or AB (home* N3 interven*) or AB (home* N3 care*) or AB (home* N3 caring) TI (home* N3 activ*) or TI (home* N3 handl*) or TI (home* N3 interven*) or TI (home* N3 therap*) or TI (home* N3 care*) or TI (home* N3 caring) MH HOME REHABILITATION+ TI (FES) or AB (FES) TI (functional electric* stimulation or electric* stimulation therap* or neuromuscular electric* stimulation) or AB (functional electric* stimulation or electric* stimulation) MH ELECTRIC STIMULATION+ AB (water N3 therap*) or AB (swim* N3 therap*) or AB (aquatic N3 therap*) TI (water N3 therap*) or TI (swim* N3 therap*) or TI (aquatic N3 therap*) TI (hydrotherap* or aquatherap*) or AB (hydrotherap* or aquatherap*) MH HYDROTHERAPY+ AB (stand* N3 fram*) or AB (stand* N3 practi*) TI (stand* N3 fram*) or TI (stand* N3 practi*) TI (sleep* N3 system*) or AB (sleep* N3 system*) TI (knee* N3 block*) or AB (knee* N3 block*) TI (speciali?ed seat* or adapt* seat* or seat* solution*

seat* or seat* solution* or mo#ld* seat*) S118 TI (functional sitting position* or FSP) or AB (functional sitting position* or FSP) S117 AB (postur* N3 care*) or AB (postur* N3 caring) or AB (postur* N3 manag*) S116 (postur* N3 care*) or TI (postur* N3 caring) or TI (postur* N3 manag*) S116 TI (postur* N3 care*) or TI (postur* N3 caring) or TI (postur* N3 manag*) S117 MH POSTURE+ Search modes - Boolean/Phrase S118 AB (serial N3 cast*) or AB (series N3 cast*) Search modes - Boolean/Phrase S119 TI (serial N3 cast*) or TI (series N3 cast*) Search modes - Boolean/Phrase S110 AB (activ* N3 mov*) or AB (passiv* N3 mov*) or AB (static* N3 mov*) or AB (static* N3 mov*) or AB (ballistic* N3 mov*) or TI (musc* N3 mov*) or TI (dynamic* N3 mov*) or TI (static* N3 mov*) or TI (static* N3 mov*) or TI (dynamic* N3 mov*) or TI (static* N3
sitting position* or FSP) Boolean/Phrase S117 AB (postur* N3 care*) or AB (postur* N3 caring) or AB (postur* N3 manag*) S116 TI (postur* N3 care*) or TI (postur* N3 caring) or TI Search modes - Boolean/Phrase S116 TI (postur* N3 manag*) S117 MH POSTURE+ Search modes - Boolean/Phrase S118 AB (serial N3 cast*) or AB (series N3 cast*) Search modes - Boolean/Phrase S119 TI (serial N3 cast*) or TI (series N3 cast*) Search modes - Boolean/Phrase S110 MH CASTS Search modes - Boolean/Phrase S111 AB (activ* N3 mov*) or AB (passiv* N3 mov*) or AB (musc* N3 mov*) or AB (static* N3 mov*) or AB (ballistic* N3 mov*) or TI (musc* N3 mov*) or TI (dynamic* N3 mov*) or TI (static* N3 mov*) or TI (ballistic* N3 mov*) AB (activ* N3 stretch*) or AB (passiv* N3 stretch*) or
S117 (postur* N3 manag*) S116 TI (postur* N3 care*) or TI (postur* N3 caring) or TI (postur* N3 manag*) Search modes - Boolean/Phrase S115 MH POSTURE+ Search modes - Boolean/Phrase S114 AB (serial N3 cast*) or AB (series N3 cast*) Search modes - Boolean/Phrase S115 TI (serial N3 cast*) or TI (series N3 cast*) Search modes - Boolean/Phrase TI (activ* N3 mov*) or AB (passiv* N3 mov*) or AB (musc* N3 mov*) or AB (sometric* N3 mov*) or AB (relax* N3 mov*) or AB (ballistic* N3 mov*) or TI (musc* N3 mov*) or TI (dynamic* N3 mov*) or TI (static* N3 mov*) or TI (sometric* N3 mov*) or TI (static* N3 mov*) or TI (ballistic* N3 mov*) AB (activ* N3 stretch*) or AB (passiv* N3 stretch*) or
S116 (postur* N3 manag*) S115 MH POSTURE+ Search modes - Boolean/Phrase S114 AB (serial N3 cast*) or AB (series N3 cast*) Search modes - Boolean/Phrase S113 TI (serial N3 cast*) or TI (series N3 cast*) Search modes - Boolean/Phrase S112 MH CASTS Search modes - Boolean/Phrase Search modes - Boolean/Phrase S111 AB (activ* N3 mov*) or AB (passiv* N3 mov*) or AB (musc* N3 mov*) or AB (dynamic* N3 mov*) or AB (static* N3 mov*) or AB (static* N3 mov*) or AB (ballistic* N3 mov*) or AB (relax* N3 mov*) or TI (passiv* N3 mov*) or TI (musc* N3 mov*) or TI (dynamic* N3 mov*) or TI (static* N3 mov*) or TI (static* N3 mov*) or TI (static* N3 mov*) or TI (ballistic* N3 mov*) AB (activ* N3 stretch*) or AB (passiv* N3 stretch*) or
S115 MH POSTORE+ Boolean/Phrase S114 AB (serial N3 cast*) or AB (series N3 cast*) Search modes - Boolean/Phrase S113 TI (serial N3 cast*) or TI (series N3 cast*) Search modes - Boolean/Phrase S112 MH CASTS AB (activ* N3 mov*) or AB (passiv* N3 mov*) or AB (musc* N3 mov*) or AB (dynamic* N3 mov*) or AB (static* N3 mov*) or AB (isometric* N3 mov*) or AB (relax* N3 mov*) or AB (ballistic* N3 mov*) or TI (musc* N3 mov*) or TI (dynamic* N3 mov*) or TI (static* N3 mov*) or TI (isometric* N3 mov*) or TI (relax* N3 mov*) or TI (ballistic* N3 mov*) or TI (ballistic* N3 mov*) AB (activ* N3 stretch*) or AB (passiv* N3 stretch*) or
S114 AB (serial N3 cast*) or AB (series N3 cast*) Boolean/Phrase S113 TI (serial N3 cast*) or TI (series N3 cast*) Search modes - Boolean/Phrase S112 MH CASTS AB (activ* N3 mov*) or AB (passiv* N3 mov*) or AB (musc* N3 mov*) or AB (dynamic* N3 mov*) or AB (static* N3 mov*) or AB (isometric* N3 mov*) or AB (relax* N3 mov*) or AB (ballistic* N3 mov*) TI (activ* N3 mov*) or TI (passiv* N3 mov*) or TI (musc* N3 mov*) or TI (dynamic* N3 mov*) or TI (static* N3 mov*) or TI (isometric* N3 mov*) or TI (relax* N3 mov*) or TI (ballistic* N3 mov*) AB (activ* N3 stretch*) or AB (passiv* N3 stretch*) or
S113 IT (serial N3 cast*) or TT (series N3 cast*) Boolean/Phrase Search modes - Boolean/Phrase AB (activ* N3 mov*) or AB (passiv* N3 mov*) or AB (musc* N3 mov*) or AB (dynamic* N3 mov*) or AB (static* N3 mov*) or AB (isometric* N3 mov*) or AB (relax* N3 mov*) or AB (ballistic* N3 mov*) TI (activ* N3 mov*) or TI (passiv* N3 mov*) or TI (musc* N3 mov*) or TI (dynamic* N3 mov*) or TI (static* N3 mov*) or TI (isometric* N3 mov*) or TI (relax* N3 mov*) or TI (ballistic* N3 mov*) AB (activ* N3 stretch*) or AB (passiv* N3 stretch*) or
AB (activ* N3 mov*) or AB (passiv* N3 mov*) or AB (musc* N3 mov*) or AB (static* N3 mov*) or AB (isometric* N3 mov*) or AB (relax* N3 mov*) or AB (ballistic* N3 mov*) TI (activ* N3 mov*) or TI (passiv* N3 mov*) or TI (musc* N3 mov*) or TI (dynamic* N3 mov*) or TI (static* N3 mov*) or TI (isometric* N3 mov*) or TI (relax* N3 mov*) or TI (ballistic* N3 mov*) AB (activ* N3 stretch*) or AB (passiv* N3 stretch*) or
S111 (musc* N3 mov*) or AB (dynamic* N3 mov*) or AB (static* N3 mov*) or AB (isometric* N3 mov*) or AB (relax* N3 mov*) or AB (ballistic* N3 mov*) TI (activ* N3 mov*) or TI (passiv* N3 mov*) or TI (musc* N3 mov*) or TI (dynamic* N3 mov*) or TI (static* N3 mov*) or TI (isometric* N3 mov*) or TI (relax* N3 mov*) or TI (ballistic* N3 mov*) AB (activ* N3 stretch*) or AB (passiv* N3 stretch*) or
S110 (musc* N3 mov*) or TI (dynamic* N3 mov*) or TI (static* N3 mov*) or TI (isometric* N3 mov*) or TI (relax* N3 mov*) or TI (ballistic* N3 mov*) AB (activ* N3 stretch*) or AB (passiv* N3 stretch*) or
, , ,
AB (musc* N3 stretch*) or AB (dynamic* N3 stretch*) or AB (static* N3 stretch*) or AB (isometric* N3 stretch*) or AB (relax* N3 stretch*) or AB (ballistic* N3 stretch*)
TI (activ* N3 stretch*) or TI (passiv* N3 stretch*) or TI (musc* N3 stretch*) or TI (dynamic* N3 stretch*) or TI (static* N3 stretch*) or TI (isometric* N3 stretch*) or TI (relax* N3 stretch*) or TI (ballistic* N3 stretch*)
S107 MH STRETCHING Search modes - Boolean/Phrase
S106 TI (CIMT or MCIMT or "forced use") or AB (CIMT or MCIMT or "forced use") Search modes - Boolean/Phrase
S105 TI (constraint* N3 therap*) or AB (constraint* N3 therap*) Search modes - Boolean/Phrase
S104 MH CONSTRAINT-INDUCED THERAPY Search modes - Boolean/Phrase
S103 TI (normal movement* or abnormal movement*) or AB (normal movement* or abnormal movement*) Search modes - Boolean/Phrase
S102 TI (system* approach*) or AB (system* approach*) Search modes -

		Boolean/Phrase
S101	AB (key point N3 treatment*) or AB (key point N3 train*) or AB (key point N3 facilitat*) or AB (key point N3 therap*)	Search modes - Boolean/Phrase
S100	TI (key point N3 treatment*) or TI (key point N3 train*) or TI (key point N3 facilitat*) or TI (key point N3 therap*)	Search modes - Boolean/Phrase
S99	AB (neuromuscular N3 treatment*) or AB (neuromuscular N3 train*) or AB (neuromuscular N3 facilitat*) or AB (neuromuscular N3 therap*)	Search modes - Boolean/Phrase
S98	TI (neuromuscular N3 treatment*) or TI (neuromuscular N3 train*) or TI (neuromuscular N3 facilitat*) or TI (neuromuscular N3 therap*)	Search modes - Boolean/Phrase
S97	AB (neurodevelopment* N3 treatment*) or AB (neurodevelopment* N3 train*) or AB (neurodevelopment* N3 facilitat*) or AB (neurodevelopment* N3 therap*)	Search modes - Boolean/Phrase
S96	TI (neurodevelopment* N3 treatment*) or TI (neurodevelopment* N3 train*) or TI (neurodevelopment* N3 facilitat*) or TI (neurodevelopment* N3 therap*)	Search modes - Boolean/Phrase
S95	TI (bobath or NDT) or AB (bobath or NDT)	Search modes - Boolean/Phrase
S94	MH NEUROMUSCULAR FACILITATION	Search modes - Boolean/Phrase
S93	TI (ADL) or AB (ADL)	Search modes - Boolean/Phrase
S92	AB (activit* N3 daily living) or AB (activit* N3 daily life)	Search modes - Boolean/Phrase
S91	TI (activit* N3 daily living) or TI (activit* N3 daily life)	Search modes - Boolean/Phrase
S90	MH ACTIVITIES OF DAILY LIVING+	Search modes - Boolean/Phrase
S89	TI (dynamic system*) or AB (dynamic system*)	Search modes - Boolean/Phrase
S88	AB (task* N3 therap*) or AB (environment* N3 therap*) or AB (context* N3 therap*) or AB (participat* N3 therap*) or AB (function* N3 therap*) or AB (activit* N3 therap*)	Search modes - Boolean/Phrase
S87	TI (task* N3 therap*) or TI (environment* N3 therap*) or TI (context* N3 therap*) or TI (participat* N3 therap*) or TI (function* N3 therap*) or TI (activit* N3 therap*)	Search modes - Boolean/Phrase

S86	AB (task* N3 approach*) or AB (environment* N3 approach*) or AB (context* N3 approach*) or AB (participat* N3 approach*) or AB (function* N3 approach*) or AB (activit* N3 approach*)	Search modes - Boolean/Phrase
S85	TI (task* N3 approach*) or TI (environment* N3 approach*) or TI (context* N3 approach*) or TI (participat* N3 approach*) or TI (function* N3 approach*) or TI (activit* N3 approach*)	Search modes - Boolean/Phrase
S84	TI (MRP) or AB (MRP)	Search modes - Boolean/Phrase
S83	AB (motor N3 learn*) or AB (motor N3 train*) or AB (motor N3 re-learn*) or AB (motor N3 relearn*) or AB (motor N3 perform*)	Search modes - Boolean/Phrase
S82	TI (motor N3 learn*) or TI (motor N3 train*) or TI (motor N3 re-learn*) or TI (motor N3 relearn*) or TI (motor N3 perform*)	Search modes - Boolean/Phrase
S81	MH MOTOR SKILLS	Search modes - Boolean/Phrase
S80	MH PSYCHOMOTOR PERFORMANCE+	Search modes - Boolean/Phrase
S79	TI (proprioceptive neuromuscular facilitation or PNF) or AB (proprioceptive neuromuscular facilitation or PNF)	Search modes - Boolean/Phrase
S78	AB (rebound N3 therap8) or AB (trampolin* N3 therap*)	Search modes - Boolean/Phrase
S77	TI (rebound N3 therap8) or TI (trampolin* N3 therap*)	Search modes - Boolean/Phrase
S76	TI (cycle* or bicycle* or bike* or tricycle* or trike* or hand-cycle* or handcycle*) or AB (cycle* or bicycle* or bike* or tricycle* or trike* or hand-cycle* or handcycle*)	Search modes - Boolean/Phrase
S75	MH BICYCLES	Search modes - Boolean/Phrase
S74	TI (multi-gym* or multigym*) or AB (multi-gym* or multigym*)	Search modes - Boolean/Phrase
S73	TI (treadmill*) or AB (treadmill*)	Search modes - Boolean/Phrase
S72	MH TREADMILLS	Search modes - Boolean/Phrase
S71	TI (locomot* N3 musc*) or AB (locomot* N3 musc*)	Search modes - Boolean/Phrase
S70	TI (function* N3 musc*) or AB (function* N3 musc*)	Search modes - Boolean/Phrase
S69	TI (weight* N3 bear*) or AB (weight N3 bear*)	Search modes -

		Boolean/Phrase
S68	AB (function* N3 exercis*) or AB (locomot* N3 exercis*) or AB (e?centric* N3 exercis*) or AB (concentric* N3 exercis*) or AB (target* N3 exercis*)	Search modes - Boolean/Phrase
S67	TI (function* N3 exercis*) or TI (locomot* N3 exercis*) or TI (e?centric* N3 exercis*) or TI (concentric* N3 exercis*) or TI (target* N3 exercis*)	Search modes - Boolean/Phrase
S66	AB (resist* N3 exercis*) or AB (strength* N3 exercis*) or AB (weight* N3 exercis*) or AB (agonist* N3 exercis*) or AB (circuit* N3 exercis*)	Search modes - Boolean/Phrase
S65	TI (resist* N3 exercis*) or TI (strength* N3 exercis*) or TI (weight* N3 exercis*) or TI (agonist* N3 exercis*) or TI (circuit* N3 exercis*)	Search modes - Boolean/Phrase
S64	AB (function* N3 train*) or AB (locomot* N3 train*) or AB (e?centric* N3 train*) or AB (concentric* N3 train*) or AB (target* N3 train*)	Search modes - Boolean/Phrase
S63	TI (function* N3 train*) or TI (locomot* N3 train*) or TI (e?centric* N3 train*) or TI (concentric* N3 train*) or TI (target* N3 train*)	Search modes - Boolean/Phrase
S62	AB (resist* N3 train*) or AB (strength* N3 train*) or AB (weight* N3 train*) or AB (agonist* N3 train*) or AB (circuit* N3 train*)	Search modes - Boolean/Phrase
S61	TI (resist* N3 train*) or TI (strength* N3 train*) or TI (weight* N3 train*) or TI (agonist* N3 train*) or TI (circuit* N3 train*)	Search modes - Boolean/Phrase
S60	TI (kinesi#therap*) or AB (kinesi#therap*)	Search modes - Boolean/Phrase
S59	AB (exercis* N3 therap*) or AB (mov* N3 therap*)	Search modes - Boolean/Phrase
S58	TI (exercis* N3 therap*) or TI (mov* N3 therap*)	Search modes - Boolean/Phrase
S57	TI (musc* N3 str?ng*) or AB (musc* N3 str?ng*)	Search modes - Boolean/Phrase
S56	MH MUSCLE STRENGTH+	Search modes - Boolean/Phrase
S55	MH UPPER EXTREMITY EXERCISES+	Search modes - Boolean/Phrase
S54	MH MUSCLE STRENGTHENING+	Search modes - Boolean/Phrase
S53	MH AEROBIC EXERCISES+	Search modes - Boolean/Phrase
S52	MH THERAPEUTIC EXERCISE+	Search modes - Boolean/Phrase

S51	TI (rehab* or habilitat*) or AB (rehab* or habilitat*)	Search modes - Boolean/Phrase
S50	TI (physiotherap*) or AB (physiotherap*)	Search modes - Boolean/Phrase
S49	AB (physical N3 therap*) or AB (occupational N3 therap*)	Search modes - Boolean/Phrase
S48	TI (physical N3 therap*) or TI (occupational N3 therap*)	Search modes - Boolean/Phrase
S47	MH REHABILITATION+	Search modes - Boolean/Phrase
S46	MH OCCUPATIONAL THERAPY+	Search modes - Boolean/Phrase
S45	MH PHYSICAL THERAPY+	Search modes - Boolean/Phrase
S44	S6 and S43	Search modes - Boolean/Phrase
S43	S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 or S18 or S19 or S20 or S21 or S22 or S23 or S24 or S25 or S26 or S27 or S28 or S29 or S30 or S31 or S32 or S33 or S34 or S35 or S36 or S37 or S38 or S39 or S40 or S41 or S42	Search modes - Boolean/Phrase
S42	AB (shak* N3 injur*) or AB (shak* N3 syndrome*)	Search modes - Boolean/Phrase
S41	TI (shak* N3 injur*) or TI (shak* N3 syndrome*)	Search modes - Boolean/Phrase
S40	MH SHAKEN BABY SYNDROME	Search modes - Boolean/Phrase
S39	TI (hydrocephal*) or AB (hydrocephal*)	Search modes - Boolean/Phrase
S38	MH HYDROCEPHALUS+	Search modes - Boolean/Phrase
S37	AB (cerebrovascular N2 disorder*) or AB (cerebrovascular N2 disease*) or AB (cerebrovascular N2 insufficien*) or AB (cerebrovascular N2 occlusion*) or AB (cerebrovascular N2 damage*) or AB (cerebrovascular N2 disturb*) or AB (cerebrovascular N2 insult*)	Search modes - Boolean/Phrase
S36	TI (cerebrovascular N2 disorder*) or TI (cerebrovascular N2 disease*) or TI (cerebrovascular N2 insufficien*) or TI (cerebrovascular N2 occlusion*) or TI (cerebrovascular N2 damage*) or TI (cerebrovascular N2 disturb*) or TI (cerebrovascular N2 insult*)	Search modes - Boolean/Phrase

S35	AB (intracranial vascular N2 disorder*) or AB (intracranial vascular N2 disease*) or AB (intracranial vascular N2 insufficien*) or AB (intracranial vascular N2 oclusion*) or AB (intracranial vascular N2 damage*) or AB (intracranial vascular N2 disturb*) or AB (intracranial vascular N2 insult*)	Search modes - Boolean/Phrase
S34	TI (intracranial vascular N2 disorder*) or TI (intracranial vascular N2 disease*) or TI (intracranial vascular N2 insufficien*) or TI (intracranial vascular N2 oclusion*) or TI (intracranial vascular N2 damage*) or TI (intracranial vascular N2 disturb*) or TI (intracranial vascular N2 insult*)	Search modes - Boolean/Phrase
S33	AB (intra-cranial vascular N2 disorder*) or AB (intra- cranial vascular N2 disease*) or AB (intra-cranial vascular N2 insufficien*) or AB (intra-cranial vascular N2 occlusion*) or AB (intra-cranial vascular N2 damage*) or AB (intra-cranial vascular N2 disturb*) or AB (intra-cranial vascular N2 insult*)	Search modes - Boolean/Phrase
S32	TI (intra-cranial vascular N2 disorder*) or TI (intra- cranial vascular N2 disease*) or TI (intra-cranial vascular N2 insufficien*) or TI (intra-cranial vascular N2 occlusion*) or TI (intra-cranial vascular N2 damage*) or TI (intra-cranial vascular N2 disturb*) or TI (intra-cranial vascular N2 insult*)	Search modes - Boolean/Phrase
S31	AB (brain vascular N2 disorder*) or AB (brain vascular N2 disease*) or AB (brain vascular N2 insufficien*) or AB (brain vascular N2 occlusion*) or AB (brain vascular N2 damage*) or AB (brain vascular N2 disturb*) or AB (brain vascular N2 insult*)	Search modes - Boolean/Phrase
S30	TI (brain vascular N2 disorder*) or TI (brain vascular N2 disease*) or TI (brain vascular N2 insufficien*) or TI (brain vascular N2 occlusion*) or TI (brain vascular N2 damage*) or TI (brain vascular N2 disturb*) or TI (brain vascular N2 insult*)	Search modes - Boolean/Phrase
S29	MH CEREBROVASCULAR DISORDERS+	Search modes - Boolean/Phrase
S28	TI (encephaliti*) or AB (encephaliti*)	Search modes - Boolean/Phrase
S27	MH ENCEPHALITIS+	Search modes - Boolean/Phrase
S26	AB (craniocerebral N3 injur*) or AB (craniocerebral N3 trauma*) or AB (craniocerebral N3 damage*) or AB (craniocerebral N3 disturb*) or AB (craniocerebral N3 insult*)	Search modes - Boolean/Phrase
S25	TI (craniocerebral N3 injur*) or TI (craniocerebral N3 trauma*) or TI (craniocerebral N3 damage*) or TI	Search modes - Boolean/Phrase

	(craniocerebral N3 disturb*) or TI (craniocerebral N3 insult*)	
S24	AB (cerebral N3 injur*) or AB (cerebral N3 trauma*) or AB (cerebral N3 damage*) or AB (cerebral N3 disturb*) or AB (cerebral N3 insult*)	Search modes - Boolean/Phrase
S23	TI (cerebral N3 injur*) or TI (cerebral N3 trauma*) or TI (cerebral N3 damage*) or TI (cerebral N3 disturb*) or TI (cerebral N3 insult*)	Search modes - Boolean/Phrase
S22	AB (skull N3 injur*) or AB (skull N3 trauma*) or AB (skull N3 damage*) or AB (skull N3 disturb*) or AB (skull N3 insult*)	Search modes - Boolean/Phrase
S21	TI (skull N3 injur*) or TI (skull N3 trauma*) or TI (skull N3 damage*) or TI (skull N3 disturb*) or TI (skull N3 insult*)	Search modes - Boolean/Phrase
S20	AB (brain N3 injur*) or AB (brain N3 trauma*) or AB (brain N3 damage*) or AB (brain N3 disturb*) or AB (brain N3 insult*)	Search modes - Boolean/Phrase
S19	TI (brain N3 injur*) or TI (brain N3 trauma*) or TI (brain N3 damage*) or TI (brain N3 disturb*) or TI (brain N3 insult*)	Search modes - Boolean/Phrase
S18	AB (head N3 injur*) or AB (head N3 trauma*) or AB (head N3 damage*) or AB (head N3 disturb*) or AB (head N3 insult*)	Search modes - Boolean/Phrase
S17	TI (head N3 injur*) or TI (head N3 trauma*) or TI (head N3 damage*) or TI (head N3 disturb*) or TI (head N3 insult*)	Search modes - Boolean/Phrase
S16	MH HEAD INJURIES+	Search modes - Boolean/Phrase
S15	TI (meningitis or meningococcal) or AB (meningitis or meningococcal)	Search modes - Boolean/Phrase
S14	MH MENINGITIS+	Search modes - Boolean/Phrase
S13	TI (cerebral N3 pals*) or AB (cerebral N3 pals*)	Search modes - Boolean/Phrase
S12	MH CEREBRAL PALSY	Search modes - Boolean/Phrase
S11	TI (static encephalopath*) or AB (static encephalopath*)	Search modes - Boolean/Phrase
S10	TI (ABI) or AB (ABI)	Search modes - Boolean/Phrase
S9	AB (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) or AB (acquired N2 brain injur*)	Search modes - Boolean/Phrase

S8	TI (non-progressive N2 brain injur*) or TI (nonprogressive N2 brain injur*) or TI (acquired N2 brain injur*)	Search modes - Boolean/Phrase
S7	MH BRAIN INJURIES+	Search modes - Boolean/Phrase
S6	S1 or S2 or S3 or S4 or S5	Search modes - Boolean/Phrase
S5	TI (hyperton*) or AB (hyperton*)	Search modes - Boolean/Phrase
S4	TI (spastic* or spasm*) or AB (spastic* or spasm*)	Search modes - Boolean/Phrase
S3	MH MUSCLE HYPERTONIA+	Search modes - Boolean/Phrase
S2	MH SPASM+	Search modes - Boolean/Phrase
S1	MH MUSCLE SPASTICITY	Search modes - Boolean/Phrase

PsycINFO 1967+

SPAST_Q1_physio_psycinfo_060910

#	Searches
1	exp SPASMS/
2	MUSCLE SPASMS/
3	(spastic\$ or spasm\$).ti,ab,id.
4	hyperton\$.ti,ab,id.
5	or/1-4
6	exp TRAUMATIC BRAIN INJURY/
7	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab,id.
8	ABI.ti,ab,id.
9	static encephalopath\$.ti,ab,id.
10	CEREBRAL PALSY/
11	(cerebral adj3 pals\$).ti,ab,id.
12	exp MENINGITIS/
13	(meningitis or meningococcal).ti,ab,id.
14	exp HEAD INJURIES/
15	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab,id.
16	exp ENCEPHALITIS/
17	encephaliti\$.ti,ab,id.

18	exp CEREBROVASCULAR DISORDERS/
	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab,id.
20	HYDROCEPHALUS/
21	hydrocephal\$.ti,ab,id.
22	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab,id.
23	or/6-22
24	and/5,23
25	PHYSICAL THERAPY/
26	NEUROREHABILITATION/
27	OCCUPATIONAL THERAPY/
28	((physical or occupational) adj3 therap\$).ti,ab,id.
29	physiotherap\$.ti,ab,id.
30	(rehab\$ or habilitat\$).ti,ab,id.
31	exp EXERCISE/ or MOVEMENT THERAPY/
32	MUSCLE TONE/ or PHYSICAL STRENGTH/
33	(musc\$ adj3 (strength\$ or strong\$)).ti,ab,id.
34	((exercis\$ or mov\$) adj3 therap\$).ti,ab,id.
35	kinesi?therap\$.ti,ab,id.
	((resist\$ or strength\$ or weight\$ or agonist\$ or circuit\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab,id.
37	((function\$ or locomot\$ or e#centric or concentric or target\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab,id.
38	treadmill\$.ti,ab,id.
39	(multi?gym\$ or multi gym\$).ti,ab,id.
40	(cycle\$ or bicycle\$ or bike\$ or tricycle\$ or trike\$ or hand cycle\$ or hand?cycle\$).ti,ab,id.
41	((rebound or trampolin\$) adj3 therap\$).ti,ab,id.
42	(proprioceptive neuromuscular facilitation or PNF).ti,ab,id.
43	PERCEPTUAL MOTOR LEARNING/ or MOTOR SKILLS/
44	(motor adj3 (learn\$ or train\$ or re learn\$ or re?learn\$ or perform\$)).ti,ab,id.
45	MRP.ti,ab,id.
46	((task\$ or environment\$ or context\$ or occupat\$ or participat\$ or function\$ or activit\$) adj3 (manipulat\$ or approach\$ or train\$ or therap\$)).ti,ab,id.
47	dynamic system\$.ti,ab,id.
48	ACTIVITIES OF DAILY LIVING/
49	(activ\$ adj3 (daily living or daily life)).ti,ab,id.
50	ADL.ti,ab,id.
51	exp NEUROPSYCHOLOGICAL REHABILITATION/

52	(bobath or NDT).ti,ab,id.
53	((neuro?development\$ or neuro development\$ or neuromuscular or key point\$) adj3 (train\$ or treatment\$ or therap\$ or facilitat\$ or approach\$ or control\$)).ti,ab,id.
54	system\$ approach\$.ti,ab,id.
55	(normal adj2 mov\$ adj2 (pattern\$ or facilitat\$)).ti,ab,id.
56	(abnormal adj2 mov\$ adj2 (inhibit\$ or control\$)).ti,ab,id.
57	PHYSICAL RESTRAINT/
58	(constraint\$ adj3 therap\$).ti,ab,id.
	(CIMT or MCIMT or "forced use").ti,ab,id.
60	((activ\$ or passiv\$ or musc\$ or dynamic\$ or static\$ or isometric\$ or relax\$ or ballistic\$) adj3 (stretch\$ or mov\$)).ti,ab,id.
61	((serial or series) adj3 cast\$).ti,ab,id.
62	(postur\$ adj3 (care\$ or caring or manag\$)).ti,ab,id.
63	(functional sitting position\$ or FSP).ti,ab,id.
64	((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab,id.
65	(knee\$ adj3 block\$).ti,ab,id.
66	(sleep\$ adj3 system\$).ti,ab,id.
67	(stand\$ adj3 (fram\$ or practi\$)).ti,ab,id.
68	(hydrotherap\$ or aquatherap\$).ti,ab,id.
69	((water or swim\$ or aquatic) adj3 therap\$).ti,ab,id.
70	exp ELECTRICAL STIMULATION/
71	(electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab,id.
72	FES.ti,ab,id.
73	HOME CARE/
74	(home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab,id.
75	exp BIOFEEDBACK/ or BIOFEEDBACK TRAINING/
76	(bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab,id.
77	COMPUTER ASSISTED THERAPY/
78	(virtual realit\$ or VR).ti,ab,id.
79	(balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab,id.
80	wii fit.ti,ab,id.

81 (computer\$ adj3 (therap\$ or game\$)).ti,ab,id.

84 limit 83 to yr="1970 -Current"

82 or/25-81 83 and/24,82

AMED (Allied and Complementary Medicine) 1985+

SPAST_Q1_physio_amed_060910

#	Searches
1	MUSCLE SPASTICITY/
2	SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab,et.
5	hyperton\$.ti,ab,et.
6	or/1-5
7	exp BRAIN INJURIES/
8	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab,et.
9	ABI.ti,ab,et.
10	static encephalopath\$.ti,ab,et.
11	CEREBRAL PALSY/
12	(cerebral adj3 pals\$).ti,ab,et.
13	exp MENINGITIS/
14	(meningitis or meningococcal).ti,ab,et.
15	exp HEAD INJURIES/
16	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab,et.
17	exp ENCEPHALITIS/
18	encephaliti\$.ti,ab,et.
19	exp CEREBROVASCULAR DISORDERS/
	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab,et.
21	HYDROCEPHALUS/
22	hydrocephal\$.ti,ab,et.
23	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab,et.
24	or/7-23
25	and/6,24
26	PHYSIOTHERAPY/ or exp PHYSICAL THERAPY MODALITIES/
27	REHABILITATION/ or exp REHABILITATION MODALITIES/
28	OCCUPATIONAL THERAPY/ or exp OCCUPATIONAL THERAPY MODALITIES/
	((physical or occupational) adj3 therap\$).ti,ab,et.
	physiotherap\$.ti,ab,et.
	(rehab\$ or habilitat\$).ti,ab,et.
32	exp EXERCISE THERAPY/

- 33 exp MUSCLE STRENGTH/
- 34 (musc\$ adj3 (strength\$ or strong\$)).ti,ab,et.
- 35 ((exercis\$ or mov\$) adj3 therap\$).ti,ab,et.
- 36 kinesi?therap\$.ti,ab,et.
- ((resist\$ or strength\$ or weight\$ or agonist\$ or circuit\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab,et.
- ((function\$ or locomot\$ or e#centric or concentric or target\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab,et.
- 39 treadmill\$.ti,ab,et.
- 40 (multi?gym\$ or multi gym\$).ti,ab,et.
- (cycle\$ or bicycle\$ or bike\$ or tricycle\$ or trike\$ or hand cycle\$ or hand?cycle\$).ti,ab,et.
- 42 ((rebound or trampolin\$) adj3 therap\$).ti,ab,et.
- 43 (proprioceptive neuromuscular facilitation or PNF).ti,ab,et.
- 44 exp PSYCHOMOTOR PERFORMANCE/
- 45 (motor adj3 (learn\$ or train\$ or re learn\$ or re?learn\$ or perform\$)).ti,ab,et.
- 46 MRP.ti,ab,et.
- ((task\$ or environment\$ or context\$ or occupat\$ or participat\$ or function\$ or activit\$) adj3 (manipulat\$ or approach\$ or train\$ or therap\$)).ti,ab,et.
- 48 dynamic system\$.ti,ab,et.
- 49 ACTIVITIES OF DAILY LIVING
- 50 (activ\$ adj3 (daily living or daily life)).ti,ab,et.
- 51 ADL.ti,ab,et.
- 52 NEURODEVELOPMENTAL THERAPY/
- 53 (bobath or NDT).ti,ab,et.
- ((neuro?development\$ or neuro development\$ or neuromuscular or key point\$) adj3 (train\$ or treatment\$ or therap\$ or facilitat\$ or approach\$ or control\$)).ti,ab,et.
- 55 system\$ approach\$.ti,ab,et.
- 56 (normal adj2 mov\$ adj2 (pattern\$ or facilitat\$)).ti,ab,et.
- 57 (abnormal adj2 mov\$ adj2 (inhibit\$ or control\$)).ti,ab,et.
- 58||RESTRAINT PHYSICAL/ or exp IMMOBILIZATION/
- 59||(constraint\$ adj3 therap\$).ti,ab,et.
- 60 (CIMT or MCIMT or "forced use").ti,ab,et.
- 61 ((activ\$ or passiv\$ or musc\$ or dynamic\$ or static\$ or isometric\$ or relax\$ or ballistic\$) adj3 (stretch\$ or mov\$)).ti,ab,et.
- 62 CASTING/
- 63 ((serial or series) adj3 cast\$).ti,ab,et.
- 64 exp POSTURE/
- 65 (postur adj3 (care or caring or manag)).ti,ab,et.

66	SEATING/
67	(functional sitting position\$ or FSP).ti,ab,et.
68	((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab,et.
69	(knee\$ adj3 block\$).ti,ab,et.
70	(sleep\$ adj3 system\$).ti,ab,et.
71	(stand\$ adj3 (fram\$ or practi\$)).ti,ab,et.
72	exp HYDROTHERAPY/
73	(hydrotherap\$ or aquatherap\$).ti,ab,et.
74	((water or swim\$ or aquatic) adj3 therap\$).ti,ab,et.
75	exp ELECTROTHERAPY/
76	(electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab,et.
77	FES.ti,ab,et.
78	HOME CARE/
79	(home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab,et.
80	BIOFEEDBACK/
81	(bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab,et.
82	VIRTUAL REALITY/
83	(virtual realit\$ or VR).ti,ab,et.
84	(balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab,et.
85	wii fit.ti,ab,et.
86	(computer\$ adj3 (therap\$ or game\$)).ti,ab,et.
87	or/26-86
88	and/25,87

Question 1 Health economics searches

Ovid MEDLINE(R) 1950+

$SPAST_Q1_physio_economic_medline_070910$

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	MUSCLE SPASTICITY/
9	exp SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
12	hyperton\$.ti,ab.
13	or/8-12
14	exp BRAIN INJURIES/
15	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
16	ABI.ti,ab.
17	static encephalopath\$.ti,ab.
18	CEREBRAL PALSY/
19	(cerebral adj3 pals\$).ti,ab.
20	exp MENINGITIS/
21	(meningitis or meningococcal).ti,ab.
22	exp CRANIOCEREBRAL TRAUMA/
23	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
24	exp ENCEPHALITIS/
25	encephaliti\$.ti,ab.
26	exp CEREBROVASCULAR DISORDERS/
27	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
28	exp HYDROCEPHALUS/
29	hydrocephal\$.ti,ab.
30	SHAKEN BABY SYNDROME/

31	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
32	or/14-31
33	and/13,32
34	exp PHYSICAL THERAPY MODALITIES/
35	exp REHABILITATION/
36	OCCUPATIONAL THERAPY/
37	((physical or occupational) adj3 therap\$).ti,ab.
38	physiotherap\$.ti,ab.
39	(rehab\$ or habilitat\$).ti,ab.
40	exp EXERCISE THERAPY/
41	exp EXERCISE MOVEMENT TECHNIQUES/
42	RESISTANCE TRAINING/
43	exp MUSCLE STRENGTH/
44	(musc\$ adj3 (strength\$ or strong\$)).ti,ab.
45	((exercis\$ or mov\$) adj3 therap\$).ti,ab.
46	kinesi?therap\$.ti,ab.
47	((resist\$ or strength\$ or weight\$ or agonist\$ or circuit\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab.
48	((function\$ or locomot\$ or e#centric or concentric or target\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab.
49	treadmill\$.ti,ab.
50	(multi?gym\$ or multi gym\$).ti,ab.
51	(cycle\$ or bicycle\$ or bike\$ or tricycle\$ or trike\$ or hand cycle\$ or hand?cycle\$).ti,ab.
52	((rebound or trampolin\$) adj3 therap\$).ti,ab.
53	(proprioceptive neuromuscular facilitation or PNF).ti,ab.
54	(motor adj3 (learn\$ or train\$ or re learn\$ or re?learn\$ or perform\$)).ti,ab.
55	MRP.ti,ab.
56	((task\$ or environment\$ or context\$ or occupat\$ or participat\$ or function\$ or activit\$) adj3 (manipulat\$ or approach\$ or train\$ or therap\$)).ti,ab.
57	dynamic system\$.ti,ab.
58	ACTIVITIES OF DAILY LIVING/
59	(activ\$ adj3 (daily living or daily life)).ti,ab.
60	ADL.ti,ab.
61	(bobath or NDT).ti,ab.
62	((neuro?development\$ or neuro development\$ or neuromuscular or key point\$) adj3 (train\$ or treatment\$ or therap\$ or facilitat\$ or approach\$ or control\$)).ti,ab.
63	system\$ approach\$.ti,ab.
64	(normal adj2 mov\$ adj2 (pattern\$ or facilitat\$)).ti,ab.
65	(abnormal adj2 mov\$ adj2 (inhibit\$ or control\$)).ti,ab.

67 (constraint\$ adj3 therap\$).ti,ab. 68 (CIMT or MCIMT or "forced use").ti,ab. 69 MUSCLE STRETCHING EXERCISES/ 70 ((activ\$ or passiv\$ or musc\$ or dynamic\$ or static\$ or isometric\$ or relax\$ or ballistic\$) adj3 (stretch\$ or mov\$)).ti,ab. 71 CASTS, SURGICAL/ 72 ((serial or series) adj3 cast\$).ti,ab. 73 exp POSTURE/ 74 (postur\$ adj3 (care\$ or caring or manag\$)).ti,ab. 75 (functional sitting position\$ or FSP).ti,ab. 76 ((speciali#ed or adapt\$ or solution\$ or mo?Id\$) adj3 seat\$).ti,ab. 77 (knee\$ adj3 block\$).ti,ab. 78 (sleep\$ adj3 system\$).ti,ab. 79 (stand\$ adj3 (fram\$ or practi\$)).ti,ab. 80 HYDROTHERAPY/ 81 (hydrotherap\$ or aquatherap\$).ti,ab. 82 ((water or swim\$ or aquatic) adj3 therap\$).ti,ab. 83 exp ELECTRIC STIMULATION THERAPY/ 84 (electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab. 85 FES.ti,ab. 86 (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab. 87 BIOFEEDBACK, PSYCHOLOGY/ 88 (bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab. 89 THERAPY, COMPUTER-ASSISTED/ 90 (virtual realit\$ or VR).ti,ab. 91 (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. 92 wii fit.ti,ab. 93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 (imit 95 to english language) 97 (limit 96 to animals) 98 (imit 96 to (animals and humans) 99 97 not 98 100 96 not 99 1101 (imit 100 to yr="1970 -Current") 102 and/7,101	66	RESTRAINT, PHYSICAL/
69 MUSCLE STRETCHING EXERCISES/ 70 ((activ\$ or passiv\$ or musc\$ or dynamic\$ or static\$ or isometric\$ or relax\$ or ballistic\$) adj3 (stretch\$ or mov\$)).ti,ab. 71 CASTS, SURGICAL/ 72 ((serial or series) adj3 cast\$).ti,ab. 73 exp POSTURE/ 74 (postu*\$ adj3 (care\$ or caring or manag\$)).ti,ab. 75 ((functional sitting position\$ or FSP).ti,ab. 76 (((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. 77 (knee\$ adj3 block\$).ti,ab. 78 (sleep\$ adj3 system\$).ti,ab. 79 (stand\$ adj3 (fram\$ or practi\$)).ti,ab. 80 HYDROTHERAPY/ 81 (hydrotherap\$ or aquatherap\$).ti,ab. 82 ((water or swim\$ or aquatic) adj3 therap\$).ti,ab. 83 exp ELECTRIC STIMULATION THERAPY/ 84 (electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab. 85 FES.ti,ab. 86 (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab. 87 BIOFEEDBACK, PSYCHOLOGY/ 88 (bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab. 89 THERAPY, COMPUTER-ASSISTED/ 90 (virtual realit\$ or VR).ti,ab. 91 (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. 92 wii fit.ti,ab. 93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 limit 95 to english language 97 limit 96 to animals 98 limit 96 to (animals and humans) 99 97 not 98 100 96 not 99 101 limit 100 to yr="1970 -Current"	67	(constraint\$ adj3 therap\$).ti,ab.
[(activ\$ or passiv\$ or musc\$ or dynamic\$ or static\$ or isometric\$ or relax\$ or ballistic\$) adj3 (stretch\$ or mov\$)).ti,ab. [(serial or series) adj3 cast\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. [(speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$ or solution\$	68	(CIMT or MCIMT or "forced use").ti,ab.
ballistic\$) adj3 (stretch\$ or mov\$)).ti,ab. 71 CASTS, SURGICAL/ 72 ((serial or series) adj3 cast\$).ti,ab. 73 exp POSTURE/ 74 ((postur\$ adj3 (care\$ or caring or manag\$)).ti,ab. 75 (functional sitting position\$ or FSP).ti,ab. 76 ((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. 77 (knee\$ adj3 block\$).ti,ab. 78 (sleep\$ adj3 system\$).ti,ab. 79 (stand\$ adj3 (fram\$ or practi\$)).ti,ab. 80 HYDROTHERAPY/ 81 ((water or swim\$ or aquatherap\$).ti,ab. 82 ((water or swim\$ or aquatherap\$).ti,ab. 83 exp ELECTRIC STIMULATION THERAPY/ 84 (electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab. 85 FES.ti,ab. 86 (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)),ti,ab. 87 BIOFEEDBACK, PSYCHOLOGY/ 88 (bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab. 89 THERAPY, COMPUTER-ASSISTED/ 90 (virtual realit\$ or VR).ti,ab. 91 (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. 92 wii fit.ti,ab. 93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 (iimit 96 to animals 98 (iimit 96 to (animals and humans) 99 97 not 98 100 66 not 99 101 (limit 100 to yr="1970 -Current"	69	MUSCLE STRETCHING EXERCISES/
72 ((serial or series) adj3 cast\$).ti,ab. 73 exp POSTURE/ 74 ((postur\$ adj3 (care\$ or caring or manag\$)).ti,ab. 75 (functional sitting position\$ or FSP).ti,ab. 76 ((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. 77 (knee\$ adj3 block\$).ti,ab. 78 (sleep\$ adj3 system\$).ti,ab. 79 (stand\$ adj3 (fram\$ or practi\$)).ti,ab. HYDROTHERAPY/ 81 (hydrotherap\$ or aquatherap\$).ti,ab. 82 ((water or swim\$ or aquatic) adj3 therap\$).ti,ab. 83 exp ELECTRIC STIMULATION THERAPY/ 84 (electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab. 85 FES.ti,ab. 86 (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab. 87 BIOFEEDBACK, PSYCHOLOGY/ 88 (bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab. 89 THERAPY, COMPUTER-ASSISTED/ 90 (virtual realit\$ or VR).ti,ab. 91 (balance adj3 (therap\$ or game\$)).ti,ab. 92 wii fit.ti,ab. 93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 limit 95 to english language 97 limit 96 to (animals and humans) 99 97 not 98 100 96 not 99 101 limit 100 to yr="1970 -Current"	70	
73 exp POSTURE/ 74 (postur\$ adj3 (care\$ or caring or manag\$)).ti,ab. 75 (functional sitting position\$ or FSP).ti,ab. 76 ((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. 77 (knee\$ adj3 block\$).ti,ab. 78 (sleep\$ adj3 system\$).ti,ab. 79 (stand\$ adj3 (fram\$ or practi\$)).ti,ab. 80 HYDROTHERAPY/ 81 (hydrotherap\$ or aquatherap\$).ti,ab. 82 ((water or swim\$ or aquatic) adj3 therap\$).ti,ab. 83 exp ELECTRIC STIMULATION THERAPY/ 84 (electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab. 85 FES.ti,ab. 86 (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab. 87 BIOFEDBACK, PSYCHOLOGY/ 88 (bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab. 89 THERAPY, COMPUTER-ASSISTED/ 90 (virtual realit\$ or VR).ti,ab. 91 (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. 92 wii fit.ti,ab. 93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 [imit 95 to english language 97 [imit 96 to (animals and humans) 99 97 not 98 100 96 not 99 101 [imit 100 to yr="1970 -Current"	71	CASTS, SURGICAL/
74 (postur\$ adj3 (care\$ or caring or manag\$)).ti,ab. 75 (functional sitting position\$ or FSP).ti,ab. 76 ((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. 77 (knee\$ adj3 block\$).ti,ab. 78 (sleep\$ adj3 system\$).ti,ab. 79 (stand\$ adj3 (fram\$ or practi\$)).ti,ab. 80 HYDROTHERAPY/ 81 (hydrotherap\$ or aquatherap\$).ti,ab. 82 ((water or swim\$ or aquatic) adj3 therap\$).ti,ab. 83 exp ELECTRIC STIMULATION THERAPY/ 84 (electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab. 85 FES.ti,ab. 86 (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab. 87 BIOFEEDBACK, PSYCHOLOGY/ 88 (bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab. 89 THERAPY, COMPUTER-ASSISTED/ 90 (virtual realit\$ or VR).ti,ab. 91 (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. 92 wii fit.ti,ab. 93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 limit 95 to english language 97 limit 96 to (animals and humans) 98 97 not 98 100 96 not 99 101 limit 100 to yr="1970 -Current"	72	((serial or series) adj3 cast\$).ti,ab.
f(tunctional sitting position\$ or FSP).ti,ab.	73	exp POSTURE/
76 (((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab. 77 ((knee\$ adj3 block\$).ti,ab. 78 (sleep\$ adj3 system\$).ti,ab. 79 (stand\$ adj3 (fram\$ or practi\$)).ti,ab. 80 HYDROTHERAPY/ 81 ((hydrotherap\$ or aquatherap\$).ti,ab. 82 (((water or swim\$ or aquatic) adj3 therap\$).ti,ab. 83 exp ELECTRIC STIMULATION THERAPY/ 84 (electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab. 85 FES.ti,ab. 86 (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab. 87 BIOFEEDBACK, PSYCHOLOGY/ 88 (bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab. 89 THERAPY, COMPUTER-ASSISTED/ 90 (virtual realit\$ or VR).ti,ab. 91 (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. 92 wii fit.ti,ab. 93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 [limit 95 to english language] 97 [limit 96 to animals] 98 [limit 96 to (animals and humans)] 99 97 not 98 100 96 not 99 101 [limit 100 to yr="1970 -Current"]	74	(postur\$ adj3 (care\$ or caring or manag\$)).ti,ab.
77 (knee\$ adj3 block\$).ti,ab. 78 (sleep\$ adj3 system\$).ti,ab. 79 (stand\$ adj3 (fram\$ or practi\$)).ti,ab. 80 HYDROTHERAPY/ 81 (hydrotherap\$ or aquatherap\$).ti,ab. 82 ((water or swim\$ or aquatic) adj3 therap\$).ti,ab. 83 exp ELECTRIC STIMULATION THERAPY/ 84 (electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab. 85 FES.ti,ab. 86 (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab. 87 BIOFEEDBACK, PSYCHOLOGY/ 88 (bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab. 89 THERAPY, COMPUTER-ASSISTED/ 90 (virtual realit\$ or VR).ti,ab. 91 (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. 92 wii fit.ti,ab. 93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 limit 95 to english language 97 limit 96 to animals 98 limit 96 to (animals and humans) 99 97 not 98 100 96 not 99 101 limit 100 to yr="1970 -Current"	75	(functional sitting position\$ or FSP).ti,ab.
78 (sleep\$ adj3 system\$).ti,ab. 79 (stand\$ adj3 (fram\$ or practi\$)).ti,ab. 80 HYDROTHERAPY/ 81 (hydrotherap\$ or aquatherap\$).ti,ab. 82 ((water or swim\$ or aquatic) adj3 therap\$).ti,ab. 83 exp ELECTRIC STIMULATION THERAPY/ 84 (electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab. 85 FES.ti,ab. 86 (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab. 87 BIOFEEDBACK, PSYCHOLOGY/ 88 (bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab. 89 THERAPY, COMPUTER-ASSISTED/ 90 (virtual realit\$ or VR).ti,ab. 91 (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. 92 wii fit.ti,ab. 93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 [limit 95 to english language 97 [limit 96 to animals 98 [limit 96 to (animals and humans) 99 97 not 98 100 96 not 99 101 [limit 100 to yr="1970 -Current"]	76	((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab.
Fig. (stand\$ adj3 (fram\$ or practi\$)).ti,ab.	77	(knee\$ adj3 block\$).ti,ab.
BO HYDROTHERAPY/ B1 (hydrotherap\$ or aquatherap\$).ti,ab. B2 ((water or swim\$ or aquatic) adj3 therap\$).ti,ab. B3 exp ELECTRIC STIMULATION THERAPY/ B4 (electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab. B5 FES.ti,ab. B6 (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab. B7 BIOFEEDBACK, PSYCHOLOGY/ B8 (bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab. B9 THERAPY, COMPUTER-ASSISTED/ CVirtual realit\$ or VR).ti,ab. B1 (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. B2 wii fit.ti,ab. B3 (computer\$ adj3 (therap\$ or game\$)).ti,ab. B4 or/34-93 B5 and/33,94 B6 limit 95 to english language B7 limit 96 to animals B8 limit 96 to (animals and humans) B9 97 not 98 B100 96 not 99 B101 limit 100 to yr="1970 -Current"	78	(sleep\$ adj3 system\$).ti,ab.
(hydrotherap\$ or aquatherap\$).ti,ab.	79	(stand\$ adj3 (fram\$ or practi\$)).ti,ab.
82 [((water or swim\$ or aquatic) adj3 therap\$).ti,ab. 83 exp ELECTRIC STIMULATION THERAPY/ 84 (electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab. 85 FES.ti,ab. 86 (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab. 87 BIOFEEDBACK, PSYCHOLOGY/ 88 (bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab. 89 THERAPY, COMPUTER-ASSISTED/ 90 (virtual realit\$ or VR).ti,ab. 91 (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. 92 wii fit.ti,ab. 93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 [limit 95 to english language] 97 [limit 96 to animals] 98 [limit 96 to (animals and humans)] 99 97 not 98 100 96 not 99 101 [limit 100 to yr="1970 -Current"]	80	HYDROTHERAPY/
83 exp ELECTRIC STIMULATION THERAPY/ 84 [clectric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab. 85 FES.ti,ab. 86 (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab. 87 BIOFEEDBACK, PSYCHOLOGY/ 88 (bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab. 89 THERAPY, COMPUTER-ASSISTED/ 90 (virtual realit\$ or VR).ti,ab. 91 [balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. 92 wii fit.ti,ab. 93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 [limit 95 to english language 97 [limit 96 to animals 98 [limit 96 to (animals and humans)) 99 97 not 98 100 96 not 99 101 [limit 100 to yr="1970 -Current"	81	(hydrotherap\$ or aquatherap\$).ti,ab.
Electrics stimulation adj3 (theraps or functions or neuromuscular)).ti,ab.	82	((water or swim\$ or aquatic) adj3 therap\$).ti,ab.
FES.ti,ab. (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab. BIOFEEDBACK, PSYCHOLOGY/	83	exp ELECTRIC STIMULATION THERAPY/
(home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab. BIOFEEDBACK, PSYCHOLOGY/ (bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab. THERAPY, COMPUTER-ASSISTED/ (virtual realit\$ or VR).ti,ab. (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. wii fit.ti,ab. wii fit.ti,ab. (computer\$ adj3 (therap\$ or game\$)).ti,ab. or/34-93 fimit 95 to english language limit 95 to animals limit 96 to (animals and humans) ye of not 99 100 limit 100 to yr="1970 -Current"	84	(electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab.
Caring)).ti,ab.	85	FES.ti,ab.
(bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab.	86	
THERAPY, COMPUTER-ASSISTED/ (virtual realit\$ or VR).ti,ab. (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. wii fit.ti,ab. (computer\$ adj3 (therap\$ or game\$)).ti,ab. // or/34-93 fimit 95 to english language limit 96 to animals limit 96 to (animals and humans) // or/ or/ or/ or/ or/ or/ or/ or/ or/ o	87	BIOFEEDBACK, PSYCHOLOGY/
90 (virtual realit\$ or VR).ti,ab. 91 (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. 92 wii fit.ti,ab. 93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 limit 95 to english language 97 limit 96 to animals 98 limit 96 to (animals and humans) 99 97 not 98 100 96 not 99 101 limit 100 to yr="1970 -Current"	88	(bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab.
(balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. 92 wii fit.ti,ab. 93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 limit 95 to english language 97 limit 96 to animals 98 limit 96 to (animals and humans) 99 97 not 98 100 96 not 99 101 limit 100 to yr="1970 -Current"	89	THERAPY, COMPUTER-ASSISTED/
(balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab. 92 wii fit.ti,ab. 93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 limit 95 to english language 97 limit 96 to animals 98 limit 96 to (animals and humans) 99 97 not 98 100 96 not 99 101 limit 100 to yr="1970 -Current"	90	(virtual realit\$ or VR).ti,ab.
93 (computer\$ adj3 (therap\$ or game\$)).ti,ab. 94 or/34-93 95 and/33,94 96 limit 95 to english language 97 limit 96 to animals 98 limit 96 to (animals and humans) 99 97 not 98 100 96 not 99 101 limit 100 to yr="1970 -Current"	=	(balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab.
94 or/34-93 95 and/33,94 96 limit 95 to english language 97 limit 96 to animals 98 limit 96 to (animals and humans) 99 97 not 98 100 96 not 99 101 limit 100 to yr="1970 -Current"	92	wii fit.ti,ab.
95 and/33,94 96 limit 95 to english language 97 limit 96 to animals 98 limit 96 to (animals and humans) 99 97 not 98 100 96 not 99 101 limit 100 to yr="1970 -Current"	93	(computer\$ adj3 (therap\$ or game\$)).ti,ab.
96	94	or/34-93
97 limit 96 to animals 98 limit 96 to (animals and humans) 99 97 not 98 100 96 not 99 101 limit 100 to yr="1970 -Current"	95	and/33,94
98 limit 96 to (animals and humans) 99 97 not 98 100 96 not 99 101 limit 100 to yr="1970 -Current"	96	limit 95 to english language
99 97 not 98 100 96 not 99 101 limit 100 to yr="1970 -Current"	97	limit 96 to animals
100 96 not 99 101 limit 100 to yr="1970 -Current"	98	limit 96 to (animals and humans)
101 limit 100 to yr="1970 -Current"	99	97 not 98
	100	96 not 99
102 and/7,101	101	limit 100 to yr="1970 -Current"
II II :	102	and/7,101

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 $SPAST_Q1_physio_economic_cctr_070910$

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	MUSCLE SPASTICITY/
9	exp SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
12	hyperton\$.ti,ab.
13	or/8-12
14	exp BRAIN INJURIES/
15	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
16	ABI.ti,ab.
17	static encephalopath\$.ti,ab.
18	CEREBRAL PALSY/
19	(cerebral adj3 pals\$).ti,ab.
20	exp MENINGITIS/
21	(meningitis or meningococcal).ti,ab.
22	exp CRANIOCEREBRAL TRAUMA/
23	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
24	exp ENCEPHALITIS/
25	encephaliti\$.ti,ab.
26	exp CEREBROVASCULAR DISORDERS/
	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
28	exp HYDROCEPHALUS/
	hydrocephal\$.ti,ab.
30	SHAKEN BABY SYNDROME/
31	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
32	or/14-31

- 33 and/13.32
- 34 exp PHYSICAL THERAPY MODALITIES/
- 35 exp REHABILITATION/
- 36 OCCUPATIONAL THERAPY/
- 37 ((physical or occupational) adj3 therap\$).ti,ab.
- 38 physiotherap\$.ti,ab.
- 39 (rehab\$ or habilitat\$).ti,ab.
- 40 exp EXERCISE THERAPY/
- 41 exp EXERCISE MOVEMENT TECHNIQUES/
- 42 RESISTANCE TRAINING/
- 43 exp MUSCLE STRENGTH/
- 44 (musc\$ adj3 (strength\$ or strong\$)).ti,ab.
- 45 ((exercis\$ or mov\$) adj3 therap\$).ti,ab.
- 46 kinesi?therap\$.ti,ab.
- ((resist\$ or strength\$ or weight\$ or agonist\$ or circuit\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab.
- ((function\$ or locomot\$ or e#centric or concentric or target\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab.
- 49 treadmill\$.ti,ab.
- 50 (multi?gym\$ or multi gym\$).ti,ab.
- (cycle\$ or bicycle\$ or bike\$ or tricycle\$ or trike\$ or hand cycle\$ or hand?cycle\$).ti,ab.
- 52 ((rebound or trampolin\$) adj3 therap\$).ti,ab.
- 53 (proprioceptive neuromuscular facilitation or PNF).ti,ab.
- 54 (motor adj3 (learn\$ or train\$ or re learn\$ or re?learn\$ or perform\$)).ti,ab.
- 55 MRP.ti,ab.
- ((task\$ or environment\$ or context\$ or occupat\$ or participat\$ or function\$ or activit\$) adj3 (manipulat\$ or approach\$ or train\$ or therap\$)).ti,ab.
- 57 dynamic system\$.ti,ab.
- 58 ACTIVITIES OF DAILY LIVING/
- 59 (activ\$ adj3 (daily living or daily life)).ti,ab.
- 60 ADL.ti,ab.
- 61 (bobath or NDT).ti,ab.
- ((neuro?development\$ or neuro development\$ or neuromuscular or key point\$) adj3 (train\$ or treatment\$ or therap\$ or facilitat\$ or approach\$ or control\$)).ti,ab.
- 63 system\$ approach\$.ti,ab.
- 64 (normal adj2 mov\$ adj2 (pattern\$ or facilitat\$)).ti,ab.
- 65 (abnormal adj2 mov\$ adj2 (inhibit\$ or control\$)).ti,ab.
- 66||RESTRAINT, PHYSICAL/
- 67 (constraint adj3 therap).ti,ab.

68	(CIMT or MCIMT or "forced use").ti,ab.
69	MUSCLE STRETCHING EXERCISES/
70	((activ\$ or passiv\$ or musc\$ or dynamic\$ or static\$ or isometric\$ or relax\$ or ballistic\$) adj3 (stretch\$ or mov\$)).ti,ab.
71	CASTS, SURGICAL/
72	((serial or series) adj3 cast\$).ti,ab.
73	exp POSTURE/
74	(postur\$ adj3 (care\$ or caring or manag\$)).ti,ab.
75	(functional sitting position\$ or FSP).ti,ab.
76	((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab.
77	(knee\$ adj3 block\$).ti,ab.
78	(sleep\$ adj3 system\$).ti,ab.
79	(stand\$ adj3 (fram\$ or practi\$)).ti,ab.
80	HYDROTHERAPY/
81	(hydrotherap\$ or aquatherap\$).ti,ab.
82	((water or swim\$ or aquatic) adj3 therap\$).ti,ab.
83	exp ELECTRIC STIMULATION THERAPY/
84	(electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab.
85	FES.ti,ab.
86	(home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab.
87	BIOFEEDBACK, PSYCHOLOGY/
88	(bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab.
89	THERAPY, COMPUTER-ASSISTED/
90	(virtual realit\$ or VR).ti,ab.
91	(balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab.
92	wii fit.ti,ab.
93	(computer\$ adj3 (therap\$ or game\$)).ti,ab.
94	or/34-93
95	and/33,94
96	and/7,95

EBM Reviews - Health Technology Assessment

 $SPAST_Q1_physio_economic_hta_070910$

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/

4 (spastics or spasms).tw. 5 hypertons.tw. 6 or/1-5 7 exp BRAIN INJURIES/ 8 ((non progressive or non?progressive or acquired) adj2 brain injur\$).tw. 9 ABI.tw. 10 static encephalopaths.tw. 11 CEREBRAL PALSY/ 12 (cerebral adj3 palss).tw. 13 exp MENINGITIS/ 14 (meningitis or meningococcal).tw. 15 exp CRANIOCEREBRAL TRAUMA/ 16 ((thead or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 17 exp ENCEPHALITIS/ 18 encephaliti\$.tw. 19 exp CEREBROVASCULAR DISORDERS/ ((torain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 21 exp HYDROCEPHALUS/ hydrocephals.tw. 23 SHAKEN BABY SYNDROME/ 24 (shak\$ adj3 (injur\$ or syndrome\$)).tw. 25 or/7-24 26 and/6,25 27 exp PHYSICAL THERAPY MODALITIES/ 28 exp REHABILITATION/ 29 OCCUPATIONAL THERAPY/ 30 ((physical or occupational) adj3 therap\$).tw. 31 physiotherap\$.tw. 32 (rehab\$ or habilitat\$).tw. 33 exp EXERCISE THERAPY/ 34 exp EXERCISE THERAPY/ 35 RESISTANCE TRAINING/ 36 exp MUSCLE STRENGTH/ 37 (musc\$ adj3 (strength\$ or strong\$)).tw. 38 kinesi?therap\$.tw. 39 kinesi?therap\$.tw.		
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31 physiotherap\$.tw. 32 (rehab\$ or habilitat\$).tw. 33 exp EXERCISE THERAPY/ 34 exp EXERCISE MOVEMENT TECHNIQUES/ 35 RESISTANCE TRAINING/ 36 exp MUSCLE STRENGTH/ 37 (musc\$ adj3 (strength\$ or strong\$)).tw. 38 ((exercis\$ or mov\$) adj3 therap\$).tw.	29	OCCUPATIONAL THERAPY/
32 (rehab\$ or habilitat\$).tw. 33 exp EXERCISE THERAPY/ 34 exp EXERCISE MOVEMENT TECHNIQUES/ 35 RESISTANCE TRAINING/ 36 exp MUSCLE STRENGTH/ 37 (musc\$ adj3 (strength\$ or strong\$)).tw. 38 ((exercis\$ or mov\$) adj3 therap\$).tw.	30	((physical or occupational) adj3 therap\$).tw.
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36 exp MUSCLE STRENGTH/ 37 (musc\$ adj3 (strength\$ or strong\$)).tw. 38 ((exercis\$ or mov\$) adj3 therap\$).tw.	34	exp EXERCISE MOVEMENT TECHNIQUES/
37 (musc\$ adj3 (strength\$ or strong\$)).tw. 38 ((exercis\$ or mov\$) adj3 therap\$).tw.	35	RESISTANCE TRAINING/
38 ((exercis\$ or mov\$) adj3 therap\$).tw.	36	exp MUSCLE STRENGTH/
	37	(musc\$ adj3 (strength\$ or strong\$)).tw.
39 kinesi?therap\$.tw.	38	((exercis\$ or mov\$) adj3 therap\$).tw.
	39	kinesi?therap\$.tw.

- ((resist\$ or strength\$ or weight\$ or agonist\$ or circuit\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).tw.
- ((function\$ or locomot\$ or e#centric or concentric or target\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).tw.
- 42 treadmill\$.tw.
- 43 (multi?gym\$ or multi gym\$).tw.
- (cycle\$ or bicycle\$ or bike\$ or tricycle\$ or trike\$ or hand cycle\$ or hand?cycle\$).tw.
- 45 ((rebound or trampolin\$) adj3 therap\$).tw.
- 46 (proprioceptive neuromuscular facilitation or PNF).tw.
- 47 (motor adj3 (learn\$ or train\$ or re learn\$ or re?learn\$ or perform\$)).tw.
- 48 MRP.tw.
- ((task\$ or environment\$ or context\$ or occupat\$ or participat\$ or function\$ or activit\$) adj3 (manipulat\$ or approach\$ or train\$ or therap\$)).tw.
- 50 dynamic system\$.tw.
- 51 ACTIVITIES OF DAILY LIVING/
- 52 (activ\$ adj3 (daily living or daily life)).tw.
- 53 ADL.tw.
- 54 (bobath or NDT).tw.
- ((neuro?development\$ or neuro development\$ or neuromuscular or key point\$) adj3 (train\$ or treatment\$ or therap\$ or facilitat\$ or approach\$ or control\$)).tw.
- 56 system\$ approach\$.tw.
- 57 (normal adj2 mov\$ adj2 (pattern\$ or facilitat\$)).tw.
- 58 (abnormal adj2 mov\$ adj2 (inhibit\$ or control\$)).tw.
- 59 RESTRAINT, PHYSICAL/
- 60 (constraint adj3 therap).tw.
- 61 (CIMT or MCIMT or "forced use").tw.
- 62 MUSCLE STRETCHING EXERCISES/
- ((activ\$ or passiv\$ or musc\$ or dynamic\$ or static\$ or isometric\$ or relax\$ or ballistic\$) adj3 (stretch\$ or mov\$)).tw.
- 64 CASTS, SURGICAL/
- 65 ((serial or series) adj3 cast\$).tw.
- 66 exp POSTURE/
- 67 (postur\$ adj3 (care\$ or caring or manag\$)).tw.
- 68 (functional sitting position\$ or FSP).tw.
- 69 ((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).tw.
- 70 (knee\$ adj3 block\$).tw.
- 71 (sleep\$ adj3 system\$).tw.
- 72 (stand\$ adj3 (fram\$ or practi\$)).tw.
- 73 HYDROTHERAPY/

74	(hydrotherap\$ or aquatherap\$).tw.
75	((water or swim\$ or aquatic) adj3 therap\$).tw.
76	exp ELECTRIC STIMULATION THERAPY/
77	(electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).tw.
78	FES.tw.
79	(home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).tw.
80	BIOFEEDBACK, PSYCHOLOGY/
81	(bio feedback\$ or bio?feedback\$ or feedback\$).tw.
82	THERAPY, COMPUTER-ASSISTED/
83	(virtual realit\$ or VR).tw.
84	(balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).tw.
85	wii fit.tw.
86	(computer\$ adj3 (therap\$ or game\$)).tw.
87	or/27-86
88	and/26,87

EBM Reviews - NHS Economic Evaluation Database

 ${\tt SPAST_Q1_physio_economic_nhseed_070910}$

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).tw.
5	hyperton\$.tw.
6	or/1-5
7	exp BRAIN INJURIES/
8	((non progressive or non?progressive or acquired) adj2 brain injur\$).tw.
9	ABI.tw.
10	static encephalopath\$.tw.
11	CEREBRAL PALSY/
12	(cerebral adj3 pals\$).tw.
13	exp MENINGITIS/
14	(meningitis or meningococcal).tw.
15	exp CRANIOCEREBRAL TRAUMA/
16	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw.
17	exp ENCEPHALITIS/

18 encephaliti\$.tw. 19 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or 20 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 21 exp HYDROCEPHALUS/ 22 hydrocephal\$.tw. 23 SHAKEN BABY SYNDROME/ 24 (shak\$ adj3 (injur\$ or syndrome\$)).tw. 25 or/7-24 26 and 6.25 27 exp PHYSICAL THERAPY MODALITIES/ 28 exp REHABILITATION/ 29 OCCUPATIONAL THERAPY/ 30 ((physical or occupational) adj3 therap\$).tw. 31 physiotherap\$.tw. 32 (rehab\$ or habilitat\$).tw. 33 exp EXERCISE THERAPY/ 34 exp EXERCISE MOVEMENT TECHNIQUES/ 35 RESISTANCE TRAINING/ 36 exp MUSCLE STRENGTH/ 37 (musc\$ adj3 (strength\$ or strong\$)).tw. 38 ((exercis\$ or mov\$) adj3 therap\$).tw. 39 kinesi?therap\$.tw. ((resist\$ or strength\$ or weight\$ or agonist\$ or circuit\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).tw. ((function\$ or locomot\$ or e#centric or concentric or target\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).tw. 42 treadmill \$.tw. 43 (multi?gym\$ or multi gym\$).tw. (cycle\$ or bicycle\$ or bike\$ or tricycle\$ or trike\$ or hand cycle\$ or hand?cycle\$).tw. 45 ((rebound or trampolin\$) adj3 therap\$).tw. 46 (proprioceptive neuromuscular facilitation or PNF).tw. 47 (motor adj3 (learn\$ or train\$ or re learn\$ or re?learn\$ or perform\$)).tw. 48 MRP.tw. ((task\$ or environment\$ or context\$ or occupat\$ or participat\$ or function\$ or activit\$) adj3 (manipulat\$ or approach\$ or train\$ or therap\$)).tw. 50 dynamic system\$.tw. 51 ACTIVITIES OF DAILY LIVING/

- 52 (activ\$ adj3 (daily living or daily life)).tw.
- 53 ADL.tw.
- 54 (bobath or NDT).tw.
- ((neuro?development\$ or neuro development\$ or neuromuscular or key point\$) adj3 (train\$ or treatment\$ or therap\$ or facilitat\$ or approach\$ or control\$)).tw.
- 56 system\$ approach\$.tw.
- 57 (normal adj2 mov\$ adj2 (pattern\$ or facilitat\$)).tw.
- 58 (abnormal adj2 mov\$ adj2 (inhibit\$ or control\$)).tw.
- 59 RESTRAINT, PHYSICAL/
- 60 (constraint\$ adj3 therap\$).tw.
- 61 (CIMT or MCIMT or "forced use").tw.
- 62 MUSCLE STRETCHING EXERCISES/
- 63 ((activ\$ or passiv\$ or musc\$ or dynamic\$ or static\$ or isometric\$ or relax\$ or ballistic\$) adj3 (stretch\$ or mov\$)).tw.
- 64 CASTS, SURGICAL
- 65 ((serial or series) adj3 cast\$).tw.
- 66 exp POSTURE/
- 67 (postur\$ adj3 (care\$ or caring or manag\$)).tw.
- 68 (functional sitting position\$ or FSP).tw.
- 69 ((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).tw.
- 70||(knee\$ adj3 block\$).tw.
- 71 (sleep\$ adj3 system\$).tw.
- 72 (stand\$ adj3 (fram\$ or practi\$)).tw.
- 73 HYDROTHERAPY/
- 74 (hydrotherap\$ or aquatherap\$).tw.
- 75||((water or swim\$ or aquatic) adj3 therap\$).tw.
- 76 exp ELECTRIC STIMULATION THERAPY/
- 77 (electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).tw.
- 78 FES.tw.
- (home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).tw.
- 80 BIOFEEDBACK, PSYCHOLOGY/
- 81 (bio feedback or bio?feedback or feedback).tw.
- 82||THERAPY, COMPUTER-ASSISTED/
- 83 (virtual realit\$ or VR).tw.
- 84 (balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).tw.
- 85 wii fit.tw.
- 86 (computer\$ adj3 (therap\$ or game\$)).tw.
- 87 or/27-86

88 and/26,87

EMBASE 1980+

 ${\tt SPAST_Q1_physio_economic_embase_070910}$

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	SPASTICITY/
9	exp MUSCLE SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
12	hyperton\$.ti,ab.
13	or/8-12
14	exp BRAIN INJURY/
15	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
16	ABI.ti,ab.
17	static encephalopath\$.ti,ab.
18	CEREBRAL PALSY/
19	(cerebral adj3 pals\$).ti,ab.
20	exp MENINGITIS/
21	(meningitis or meningococcal).ti,ab.
22	exp HEAD INJURY/
23	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
24	exp ENCEPHALITIS/
25	encephaliti\$.ti,ab.
26	exp CEREBROVASCULAR DISEASE/
27	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
28	exp HYDROCEPHALUS/
29	hydrocephal\$.ti,ab.
30	SHAKEN BABY SYNDROME/
31	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.

32	or/14-31
33	and/13,32
34	exp PHYSIOTHERAPY/ or PEDIATRIC PHYSIOTHERAPY/
35	exp REHABILITATION/ or PEDIATRIC REHABILITATION/
36	OCCUPATIONAL THERAPY/
37	((physical or occupational) adj3 therap\$).ti,ab.
38	physiotherap\$.ti,ab.
39	(rehab\$ or habilitat\$).ti,ab.
40	exp KINESIOTHERAPY/
41	MOVEMENT THERAPY/
42	MUSCLE TRAINING/
43	RESISTANCE TRAINING/
44	MUSCLE STRENGTH/
45	(musc\$ adj3 (strength\$ or strong\$)).ti,ab.
46	((exercis\$ or mov\$) adj3 therap\$).ti,ab.
47	kinesi?therap\$.ti,ab.
48	((resist\$ or strength\$ or weight\$ or agonist\$ or circuit) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab.
49	((function\$ or locomot\$ or e#centric or concentric or target\$) adj3 (musc\$ or train\$ or bear\$ or exercis\$ or agonist\$)).ti,ab.
50	TREADMILL/ or TREADMILL EXERCISE/
51	treadmill\$.ti,ab.
52	(multi?gym\$ or multi gym\$).ti,ab.
53	BICYCLE/
54	(cycle\$ or bicycle\$ or bike\$ or tricycle\$ or trike\$ or hand cycle\$ or hand?cycle\$).ti,ab.
55	((rebound or trampolin\$) adj3 therap\$).ti,ab.
56	(proprioceptive neuromuscular facilitation or PNF).ti,ab.
57	MOTOR PERFORMANCE/
58	(motor adj3 (learn\$ or train\$ or re learn\$ or re?learn\$ or perform\$)).ti,ab.
59	MRP.ti,ab.
60	((task\$ or environment\$ or context\$ or occupat\$ or participat\$ or function\$ or activit\$) adj3 (manipulat\$ or approach\$ or train\$ or therap\$)).ti,ab.
61	dynamic system\$.ti,ab.
62	DAILY LIFE ACTIVITY/
63	(activ\$ adj3 (daily living or daily life)).ti,ab.
64	ADL.ti,ab.
65	NEUROMUSCULAR FACILITATION/
66	(bobath or NDT).ti,ab.
67	((neuro?development\$ or neuro development\$ or neuromuscular or key point\$)

	adia (trainf) or trantmantf or thoront or tabilitate or approache or control() ti ab
	adj3 (train\$ or treatment\$ or therap\$ or facilitat\$ or approach\$ or control\$)).ti,ab.
68	system\$ approach\$.ti,ab.
69	(normal adj2 mov\$ adj2 (pattern\$ or facilitat\$)).ti,ab.
70	(abnormal adj2 mov\$ adj2 (inhibit\$ or control\$)).ti,ab.
71	CONSTRAINT INDUCED THERAPY/
72	(constraint\$ adj3 therap\$).ti,ab.
73	(CIMT or MCIMT or "forced use").ti,ab.
74	STRETCHING EXERCISE/
75	((activ\$ or passiv\$ or musc\$ or dynamic\$ or static\$ or isometric\$ or relax\$ or ballistic\$) adj3 (stretch\$ or mov\$)).ti,ab.
76	PLASTER CAST/
77	((serial or series) adj3 cast\$).ti,ab.
78	BODY POSTURE/
79	(postur\$ adj3 (care\$ or caring or manag\$)).ti,ab.
80	SITTING/
81	(functional sitting position\$ or FSP).ti,ab.
82	((speciali#ed or adapt\$ or solution\$ or mo?ld\$) adj3 seat\$).ti,ab.
83	(knee\$ adj3 block\$).ti,ab.
84	(sleep\$ adj3 system\$).ti,ab.
85	(stand\$ adj3 (fram\$ or practi\$)).ti,ab.
86	HYDROTHERAPY/
87	(hydrotherap\$ or aquatherap\$).ti,ab.
88	((water or swim\$ or aquatic) adj3 therap\$).ti,ab.
89	FUNCTIONAL ELECTRICAL STIMULATION/
90	(electric\$ stimulation adj3 (therap\$ or function\$ or neuromuscular)).ti,ab.
91	FES.ti,ab.
92	exp HOME CARE/
93	HOME REHABILITATION/ or HOME PHYSIOTHERAPY/
94	(home\$ adj3 (activ\$ or handl\$ or interven\$ or therap\$ or program\$ or care\$ or caring)).ti,ab.
95	exp FEEDBACK SYSTEM/
96	(bio feedback\$ or bio?feedback\$ or feedback\$).ti,ab.
97	exp COMPUTER ASSISTED THERAPY/
98	VIRTUAL REALITY/
99	(virtual realit\$ or VR).ti,ab.
100	(balance adj3 (train\$ or practi\$ or exercis\$ or game\$)).ti,ab.
101	wii fit.ti,ab.
102	(computer\$ adj3 (therap\$ or game\$)).ti,ab.
103	or/34-102

104	and/33,103
105	limit 104 to english language
106	limit 105 to yr="1970 -Current"
107	and/7,106

Question 2 What is the effectiveness of orthotic interventions (for example, ankle-foot orthoses, knee splints, and upper limb orthoses) as compared to no orthoses to optimise movement and function, to prevent or treat contractures in children with spasticity and with or without other motor disorders caused by a non-progressive brain disorder?

Ovid MEDLINE(R) 1950+

SPAST_Q2_orthoses_stem_medline_080910

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.
6	exp DYSKINESIAS/
7	dyskinesi\$.ti,ab.
8	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
9	exp DYSTONIA/
10	dystoni\$.ti,ab.
11	exp CHOREA/
12	(chorea\$ or choreic\$ or choreo\$).ti,ab.
13	exp ATHETOSIS/
14	(athetos\$ or athetoid).ti,ab.
15	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).ti,ab.
17	exp ATAXIA/
18	atax\$.ti,ab.
19	upper motor neuron? lesion\$.ti,ab.
20	or/1-19
21	exp BRAIN INJURIES/
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
23	ABI.ti,ab.
24	static encephalopath\$.ti,ab.
25	CEREBRAL PALSY/
26	(cerebral adj3 pals\$).ti,ab.
27	exp MENINGITIS/
28	(meningitis or meningococcal).ti,ab.
29	exp CRANIOCEREBRAL TRAUMA/
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.

31 exp ENCEPHALITIS/ 32 encephalitis.ti,ab. 33 exp STROKE/ 34 stroke\$.ti,ab. 35 ((Ibrain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)),ti,ab. 36 exp CERBROVASCULAR DISORDERS/ ((Ibrain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)),ti,ab. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.ti,ab. 40 SHAKEN BABY SYNDROME/ 41 (shak\$ adj3 (injur\$ or syndrome\$)),ti,ab. 42 or/21-41 43 exp PARALYSIS/ 44 HEMIPLEGIA/ 45 exp PARAPLEGIA/ 46 QUADRIPLEGIA/ 47 exp PARESIS/ ((monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$),ti,ab. 49 ((monoplegi\$ or bilateral\$),ti,ab. 50 ((unilateral\$ or bilateral\$),ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$),ti,ab. 62 ((splint\$ or brace\$ or bracing or cuff\$),ti,ab. 63 AFO.ti,ab. 66 ((TLSO or CTLSO),ti,ab.	I I - 	
Stroke\$.ti,ab.	31	exp ENCEPHALITIS/
Stroke\$.ti,ab.	32	encephaliti\$.ti,ab.
((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab. ((brain vascular or intra cranial vascular or intra?cranial vascular or or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. ((brain vascular or intra cranial vascular or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. ((brain vascular or or syndrome\$)).ti,ab. ((brain vascular or syndrome\$).ti,ab. ((brain vascular or syndrome\$).ti,ab. ((brain vascular or syndrome\$).ti,ab. ((brain vascular or syndrome\$).ti,ab. ((brain vascular or syndrome\$).ti,ab	33	exp STROKE/
or iscn?emis).it,ab. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or occlusion\$ or derebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 38 exp HYDROCEPHALUS/ 39 hydrocephals.ti,ab. 40 SHAKEN BABY SYNDROME/ 41 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 42 or/21-41 43 exp PARALYSIS/ 44 HEMIPLEGIA/ 45 exp PARAPLEGIA/ 46 QUADRIPLEGIA/ 47 exp PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 50 (unilateral\$ or bilateral\$).ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab.		
((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insulf\$)).ti,ab. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.ti,ab. 40 SHAKEN BABY SYNDROME/ 41 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 42 or/21-41 43 exp PARALYSIS/ 44 HEMIPLEGIA/ 45 exp PARAPLEGIA/ 46 QUADRIPLEGIA/ 47 exp PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 50 (unilateral\$ or bilateral\$).ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab.	35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insulf\$).ti,ab.	36	exp CEREBROVASCULAR DISORDERS/
39 hydrocephal\$.ti,ab. 40 SHAKEN BABY SYNDROME/ 41 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 42 or/21-41 43 exp PARALYSIS/ 44 HEMIPLEGIA/ 45 exp PARAPLEGIA/ 46 QUADRIPLEGIA/ 47 exp PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 50 (unilateral\$ or bilateral\$).ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.		cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or
40 SHAKEN BABY SYNDROME/ 41 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 42 or/21-41 43 exp PARALYSIS/ 44 HEMIPLEGIA/ 45 exp PARAPLEGIA/ 46 QUADRIPLEGIA/ 47 exp PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 50 (unilateral\$ or bilateral\$).ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	38	exp HYDROCEPHALUS/
41 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 42 or/21-41 43 exp PARALYSIS/ 44 HEMIPLEGIA/ 45 exp PARAPLEGIA/ 46 QUADRIPLEGIA/ 47 exp PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 50 (unilateral\$ or bilateral\$).ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	39	hydrocephal\$.ti,ab.
42 or/21-41 43 exp PARALYSIS/ 44 HEMIPLEGIA/ 45 exp PARAPLEGIA/ 46 QUADRIPLEGIA/ 47 exp PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares\$ or dipares\$ or hemiplegi\$ or quadripares\$ or tetrapares\$).ti,ab. 50 (unilateral\$ or bilateral\$).ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO) ti,ab.	40	SHAKEN BABY SYNDROME/
43 exp PARALYSIS/ 44 HEMIPLEGIA/ 45 exp PARAPLEGIA/ 46 QUADRIPLEGIA/ 47 exp PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 50 (unilateral\$ or bilateral\$).ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	41	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
44 HEMIPLEGIA/ 45 exp PARAPLEGIA/ 46 QUADRIPLEGIA/ 47 exp PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 50 (unilateral\$ or bilateral\$).ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	42	or/21-41
45 exp PARAPLEGIA/ 46 QUADRIPLEGIA/ 47 exp PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 50 (unilateral\$ or bilateral\$).ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	43	exp PARALYSIS/
46 QUADRIPLEGIA/ 47 exp PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 50 (unilateral\$ or bilateral\$).ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	44	HEMIPLEGIA/
47 exp PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 50 (unilateral\$ or bilateral\$).ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	45	exp PARAPLEGIA/
48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 50 (unilateral\$ or bilateral\$).ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO).ti,ab.	46	QUADRIPLEGIA/
49 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 50 (unilateral\$ or bilateral\$).ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO).ti,ab.	47	exp PARESIS/
50 (unilateral\$ or bilateral\$).ti,ab. 51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
51 or/43-50 52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
52 and/20,51 53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	50	(unilateral\$ or bilateral\$).ti,ab.
53 and/42,51 54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	51	or/43-50
54 and/20,42 55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	52	and/20,51
55 or/52-54 56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	53	and/42,51
56 exp ORTHOTIC DEVICES/ 57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	54	and/20,42
57 BRACES/ 58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	55	or/52-54
58 SPLINTS/ 59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	56	exp ORTHOTIC DEVICES/
59 exp CLOTHING/ 60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	57	BRACES/
60 SHOES/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	58	SPLINTS/
61 (orthos\$ or orthotic\$).ti,ab. 62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	59	exp CLOTHING/
62 (splint\$ or brace\$ or bracing or cuff\$).ti,ab. 63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	60	SHOES/
63 AFO.ti,ab. 64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	61	(orthos\$ or orthotic\$).ti,ab.
64 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.	62	(splint\$ or brace\$ or bracing or cuff\$).ti,ab.
65 (KAFO or HKAFO or THKAFO).ti,ab.	63	AFO.ti,ab.
	64	(GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab.
66 (TLSO or CTLSO).ti,ab.	65	(KAFO or HKAFO or THKAFO).ti,ab.
	66	(TLSO or CTLSO).ti,ab.

	(insole\$ or shoe\$ or boot\$ or footwear\$ or insert\$).ti,ab.
	(heel adj3 (cup\$ or cushion\$ or flare\$ or wedge\$ or elevat\$ or lift\$ or extend\$ or thomas\$ or counter\$ or relief\$)).ti,ab.
	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (rocker\$ or metatarsal or wedge\$ or flare\$)).ti,ab.
70	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (steel or elevat\$ or excavat\$ or scaphoid or crest\$)).ti,ab.
71	((flare\$ or wedge\$) adj3 (medial\$ or lateral\$)).ti,ab.
72	(contracture correction device\$ or CCD).ti,ab.
73	(lycra or spandex or elastane).ti,ab.
74	(body suit\$ or body?suit\$).ti,ab.
75	(sleeved vest\$ or glove\$).ti,ab.
76	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).ti,ab.
77	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or shorts or leggings or suit\$ or brace\$ or cuff\$)).ti,ab.
78	((toeoff or benik or matrix) adj3 (splint\$ or support\$ or brace\$ or cuff\$)).ti,ab.
79	piedro\$.ti,ab.
80	or/56-79
81	and/55,80
82	limit 81 to english language
83	limit 82 to animals
84	limit 82 to (animals and humans)
85	83 not 84
86	82 not 85

Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations

 $SPAST_Q2_orthoses_medIne_in\text{-}process_080910$

#	Searches
1	(spastic\$ or spasm\$).ti,ab.
2	hyperton\$.ti,ab.
3	dyskinesi\$.ti,ab.
4	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
5	dystoni\$.ti,ab.
6	(chorea\$ or choreic\$ or choreo\$).ti,ab.
7	(athetos\$ or athetoid).ti,ab.
8	(musc\$ adj3 weak\$).ti,ab.
9	atax\$.ti,ab.
10	upper motor neuron? lesion\$.ti,ab.

- 11 or/1-10
- 12 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
- 13 ABI.ti,ab.
- 14 static encephalopath\$.ti,ab.
- 15 (cerebral adj3 pals\$).ti,ab.
- 16 (meningitis or meningococcal).ti,ab.
- ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
- 18 encephaliti\$.ti,ab.
- 19 stroke\$.ti,ab.
- ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
- ((brain vascular or intra cranial vascular or intra?cranial vascular or
- cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
- 22 hydrocephal\$.ti,ab.
- 23 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
- 24 or/12-23
- 25 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
- 26 (monopares or dipares or hemipares or quadripares or tetrapares).ti,ab.
- 27 (unilateral\$ or bilateral\$).ti,ab.
- 28 or/25-27
- 29 and/11,24
- 30 and/11,28
- 31 and/24,28
- 32 or/29-31
- 33 (orthos\$ or orthotic\$).ti,ab.
- 34 (splint or brace or bracing or cuff).ti,ab.
- 35 AFO.ti,ab.
- 36 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab.
- 37 (KAFO or HKAFO or THKAFO).ti.ab.
- 38||(TLSO or CTLSO).ti,ab.
- 39||(insole\$ or shoe\$ or boot\$ or footwear\$ or insert\$).ti,ab.
- (heel adj3 (cup\$ or cushion\$ or flare\$ or wedge\$ or elevat\$ or lift\$ or extend\$ or thomas\$ or counter\$ or relief\$)).ti,ab.
- ((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (rocker\$ or metatarsal or wedge\$ or flare\$)).ti,ab.
- ((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (steel or elevat\$ or excavat\$ or scaphoid or crest\$)).ti,ab.
- 43 ((flare or wedge) adj3 (medial or lateral)).ti,ab.

44	(contracture correction device\$ or CCD).ti,ab.
45	(lycra or spandex or elastane).ti,ab.
46	(body suit\$ or body?suit\$).ti,ab.
47	(sleeved vest\$ or glove\$).ti,ab.
48	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).ti,ab.
49	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or shorts or leggings or suit\$ or brace\$ or cuff\$)).ti,ab.
50	((toeoff or benik or matrix) adj3 (splint\$ or support\$ or brace\$ or cuff\$)).ti,ab.
51	piedro\$.ti,ab.
52	or/33-51
53	and/32,52

EBM Reviews - Cochrane Central Register of Controlled Trials

SPAST_Q2_orthoses_cctr_080910

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.
6	exp DYSKINESIAS/
7	dyskinesi\$.ti,ab.
8	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
9	exp DYSTONIA/
10	dystoni\$.ti,ab.
11	exp CHOREA/
12	(chorea\$ or choreic\$ or choreo\$).ti,ab.
13	exp ATHETOSIS/
14	(athetos\$ or athetoid).ti,ab.
15	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).ti,ab.
17	exp ATAXIA/
18	atax\$.ti,ab.
19	upper motor neuron? lesion\$.ti,ab.
20	or/1-19
21	exp BRAIN INJURIES/
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.

23	ABI.ti,ab.
24	static encephalopath\$.ti,ab.
25	CEREBRAL PALSY/
26	(cerebral adj3 pals\$).ti,ab.
27	exp MENINGITIS/
28	(meningitis or meningococcal).ti,ab.
	exp CRANIOCEREBRAL TRAUMA/
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
31	exp ENCEPHALITIS/
32	encephaliti\$.ti,ab.
33	exp STROKE/
	stroke\$.ti,ab.
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
36	exp CEREBROVASCULAR DISORDERS/
37	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
38	exp HYDROCEPHALUS/
39	hydrocephal\$.ti,ab.
40	SHAKEN BABY SYNDROME/
41	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
42	or/21-41
43	exp PARALYSIS/
44	HEMIPLEGIA/
45	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
50	(unilateral\$ or bilateral\$).ti,ab.
51	or/43-50
52	and/20,51
53	and/42,51
54	and/20,42
55	or/52-54
56	exp ORTHOTIC DEVICES/
57	BRACES/
58	SPLINTS/

F 0	CLOTHING/
=	exp CLOTHING/
=	SHOES/
61	(orthos\$ or orthotic\$).ti,ab.
62	(splint\$ or brace\$ or bracing or cuff\$).ti,ab.
63	AFO.ti,ab.
64	(GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab.
65	(KAFO or HKAFO or THKAFO).ti,ab.
66	(TLSO or CTLSO).ti,ab.
	(insole\$ or shoe\$ or boot\$ or footwear\$ or insert\$).ti,ab.
	(heel adj3 (cup\$ or cushion\$ or flare\$ or wedge\$ or elevat\$ or lift\$ or extend\$ or thomas\$ or counter\$ or relief\$)).ti,ab.
	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (rocker\$ or metatarsal or wedge\$ or flare\$)).ti,ab.
70	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (steel or elevat\$ or excavat\$ or scaphoid or crest\$)).ti,ab.
71	((flare\$ or wedge\$) adj3 (medial\$ or lateral\$)).ti,ab.
72	(contracture correction device\$ or CCD).ti,ab.
73	(lycra or spandex or elastane).ti,ab.
74	(body suit\$ or body?suit\$).ti,ab.
	(sleeved vest\$ or glove\$).ti,ab.
	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).ti,ab.
77	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or shorts or leggings or suit\$ or brace\$ or cuff\$)).ti,ab.
78	((toeoff or benik or matrix) adj3 (splint\$ or support\$ or brace\$ or cuff\$)).ti,ab.
79	piedro\$.ti,ab.
80	or/56-79
81	and/55,80

EBM Reviews - Cochrane Database of Systematic Reviews 2005+, EBM Reviews - Database of Abstracts of Reviews of Effects

SPAST_Q2_orthoses_cdsrdare_080910

#	Searches
1	MUSCLE SPASTICITY.kw.
2	SPASM.kw.
3	MUSCLE HYPERTONIA.kw.
4	(spastic\$ or spasm\$).tw,tx.
5	hyperton\$.tw,tx.
6	DYSKINESIAS.kw.

7	dyskinesi\$.tw,tx.		
8	((abnormal\$ or involuntar\$) adj2 mov\$).tw,tx.		
9	DYSTONIA.kw.		
10	dystoni\$.tw,tx.		
11	CHOREA.kw.		
12	(chorea\$ or choreic\$ or choreo\$).tw,tx.		
13	ATHETOSIS.kw.		
14	(athetos\$ or athetoid).tw,tx.		
15	MUSCLE WEAKNESS.kw.		
16	(musc\$ adj3 weak\$).tw,tx.		
17	ATAXIA.kw.		
18	atax\$.tw,tx.		
19	upper motor neuron? lesion\$.tw,tx.		
20	or/1-19		
21	BRAIN INJURIES.kw.		
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).tw,tx.		
23	ABI.tw,tx.		
24	static encephalopath\$.tw,tx.		
25	CEREBRAL PALSY.kw.		
26	(cerebral adj3 pals\$).tw,tx.		
27	MENINGITIS.kw.		
28	(meningitis or meningococcal).tw,tx.		
29	CRANIOCEREBRAL TRAUMA.kw.		
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw,tx.		
31	ENCEPHALITIS.kw.		
32	encephaliti\$.tw,tx.		
33	STROKE.kw.		
	stroke\$.tw,tx.		
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw,tx.		
36	CEREBROVASCULAR DISORDERS.kw.		
37	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw,tx.		
38	HYDROCEPHALUS.kw.		
39	hydrocephal\$.tw,tx.		
40	SHAKEN BABY SYNDROME.kw.		
41	(shak\$ adj3 (injur\$ or syndrome\$)).tw,tx.		
42	or/21-41		

- 43 PARALYSIS.kw.

 44 HEMIPLEGIA.kw.

 45 PARAPLEGIA.kw.

 46 QUADRIPLEGIA.kw.
- 47 PARESIS.kw.
- 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw,tx.
- 49 (monopares or dipares or hemipares or quadripares or tetrapares).tw,tx.
- 50 (unilateral\$ or bilateral\$).tw,tx.
- 51 or/43-50
- 52 and/20,51
- 53 and/42,51
- 54 and/20,42
- 55 or/52-54
- 56 ORTHOTIC DEVICES.kw.
- 57 BRACES.kw.
- 58 SPLINTS.kw.
- 59 CLOTHING.kw.
- 60 SHOES.kw.
- 61 (orthos\$ or orthotic\$).tw,tx.
- 62 (splint or brace or bracing or cuff).tw,tx.
- 63 AFO.tw,tx.
- 64 GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).tw,tx.
- 65 (KAFO or HKAFO or THKAFO).tw,tx.
- 66 (TLSO or CTLSO).tw,tx.
- 67 (insole\$ or shoe\$ or boot\$ or footwear\$ or insert\$).tw,tx.
- (heel adj3 (cup\$ or cushion\$ or flare\$ or wedge\$ or elevat\$ or lift\$ or extend\$ or thomas\$ or counter\$ or relief\$)).tw,tx.
- ((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (rocker\$ or metatarsal or wedge\$ or flare\$)).tw,tx.
- ((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (steel or elevat\$ or excavat\$ or scaphoid or crest\$)).tw,tx.
- 71 ((flare\$ or wedge\$) adj3 (medial\$ or lateral\$)).tw,tx.
- 72 (contracture correction device or CCD).tw,tx.
- 73 (lycra or spandex or elastane).tw,tx.
- 74 (body suit\$ or body?suit\$).tw,tx.
- 75 (sleeved vest\$ or glove\$).tw,tx.
- ((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).tw,tx.
- ((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or shorts or leggings or suit\$ or brace\$ or cuff\$)).tw,tx.

78	((toeoff or benik or matrix) adj3 (splint\$ or support\$ or brace\$ or cuff\$)).tw,tx.
79	piedro\$.tw,tx.
80	or/56-79
81	and/55,80

EMBASE 1980+

 ${\bf SPAST_Q2_orthoses_stem_embase_080910}$

#	Searches
1	SPASTICITY/
2	exp MUSCLE SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.
6	DYSKINESIA/
7	dyskinesi\$.ti,ab.
8	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
9	DYSTONIA/
10	dystoni\$.ti,ab.
	exp CHOREA/
\vdash	CHOREOATHETOSIS/
	ATHETOSIS/
14	(chorea\$ or choreic\$ or choreo\$).ti,ab.
-	(athetos\$ or athetoid).ti,ab.
	exp MUSCLE WEAKNESS/
	(musc\$ adj3 weak\$).ti,ab.
\vdash	exp ATAXIA/
	atax\$.ti,ab.
	upper motor neuron? lesion\$.ti,ab.
4	or/1-20
=	exp BRAIN INJURY/
	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
	ABI.ti,ab.
	static encephalopath\$.ti,ab.
26	CEREBRAL PALSY/
27	(cerebral adj3 pals\$).ti,ab.
	exp MENINGITIS/
	(meningitis or meningococcal).ti,ab.
30	exp HEAD INJURY/

((head or brain or skull or cerebral or craniocerebral) adi3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 32 exp ENCEPHALITIS/ 33 encephaliti\$.ti,ab. 34 STROKE/ 35 stroke\$.ti,ab. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab. 37 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or 38 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 39 exp HYDROCEPHALUS/ 40 hydrocephal\$.ti,ab. 41 SHAKEN BABY SYNDROME/ 42 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 43 or/22-42 exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/ 45||SPASTIC PARAPLEGIA/ 46 PARESIS/ or MONOPARESIS/ or HEMIPARESIS/ 47 SPASTIC PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares or dipares or hemipares or quadripares or tetrapares).ti,ab. 50 (unilateral\$ or bilateral\$).ti,ab. 51||or/44-50 52 and/21,51 53 and/43,51 54 and/21,43 55 or/52-54 56 ORTHOTICS/ 57 ORTHOSIS/ 58||FOOT ORTHOSIS/ 59 BRACE/ or ORTHOPEDIC SHOE/ or SPLINT/ 60 exp CLOTHING/ 61 (orthos\$ or orthotic\$).ti,ab. 62 (splint or brace or bracing or cuff).ti,ab. 63 AFO.ti,ab. 64||(GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 65 (KAFO or HKAFO or THKAFO).ti,ab.

66	(TLSO or CTLSO).ti,ab.		
67	(insole\$ or shoe\$ or boot\$ or footwear\$ or insert\$).ti,ab.		
Øδ	tnomas\$ or counter\$ or relief\$)).ti,ab.		
	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (rocker\$ or metatarsal or wedge\$ or flare\$)).ti,ab.		
70	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (steel or elevat\$ or excavat\$ or scaphoid or crest\$)).ti,ab.		
71	((flare\$ or wedge\$) adj3 (medial\$ or lateral\$)).ti,ab.		
72	(contracture correction device\$ or CCD).ti,ab.		
73	(lycra or spandex or elastane).ti,ab.		
74	(body suit\$ or body?suit\$).ti,ab.		
75	(sleeved vest\$ or glove\$).ti,ab.		
76	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).ti,ab.		
77	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or shorts or leggings or suit\$ or brace\$ or cuff\$)).ti,ab.		
78	((toeoff or benik or matrix) adj3 (splint\$ or support\$ or brace\$ or cuff\$)).ti,ab.		
79	piedro\$.ti,ab.		
80	or/56-79		
81	and/55,80		
82	limit 81 to english language		

CINAHL 1981+

SPAST_Q2_orthoses_cinahl_090910

#	Query	Limiters/Expanders
S148	S147	Limiters - Exclude MEDLINE records Search modes - Boolean/Phrase
S147	S118 and S146	Search modes - Boolean/Phrase
S146	S119 or S120 or S121 or S122 or S123 or S124 or S125 or S126 or S127 or S128 or S129 or S130 or S131 or S132 or S133 or S134 or S135 or S136 or S137 or S138 or S139 or S140 or S141 or S142 or S143 or S144 or S145	Search modes - Boolean/Phrase
S145	AB (matrix N3 splint*) or AB (matrix N3 support*) or AB (matrix N3 brace*) or AB (matrix N3 cuff*)	Search modes - Boolean/Phrase
S144	TI (matrix N3 splint*) or TI (matrix N3 support*) or TI	Search modes -

		,
	(matrix N3 brace*) or TI (matrix N3 cuff*)	Boolean/Phrase
S143	TI (toeoff or benik or piedro) or AB (toeoff or benik or piedro)	Search modes - Boolean/Phrase
S142	TI (garment* or sleeve* or sling* or sock* or stocking* or shorts or leggings or suit* or vest*) or AB (garment* or sleeve* or sling* or sock* or stocking* or shorts or leggings or suit* or vest*)	Search modes - Boolean/Phrase
S141	TI (support* or pressure or dynamic or stretch* or compress*) or AB (support* or pressure or dynamic or stretch* or compress*)	Search modes - Boolean/Phrase
S140	TI (body-suit* or bodysuit* or sleeved vest* or glove*) or AB (body-suit* or bodysuit* or sleeved vest* or glove*)	Search modes - Boolean/Phrase
S139	TI (lycra or spandex or elastane) or AB (lycra or spandex or elastane)	Search modes - Boolean/Phrase
S138	TI (contracture correction device* or CCD) or AB (contracture correction device* or CCD)	Search modes - Boolean/Phrase
S137	TI (lateral* N3 flare*) or TI (lateral* N3 wedge*) or AB (lateral* N3 flare*) or AB (lateral* N3 wedge*)	Search modes - Boolean/Phrase
S136	TI (medial* N3 flare*) or TI (medial* N3 wedge*) or AB (medial* N3 flare*) or AB (medial* N3 wedge*)	Search modes - Boolean/Phrase
S135	TI (sole flare* or sole elevat* or metatarsal pad* or sole excavat* or scaphoid pad* or toe crest*) or AB (sole flare* or sole elevat* or metatarsal pad* or sole excavat* or scaphoid pad* or toe crest*)	Search modes - Boolean/Phrase
S134	TI (rocker bar* or rocker shoe* or metatarsal bar* or steel bar* or sole wedge*) or AB (rocker bar* or rocker shoe* or metatarsal bar* or steel bar* or sole wedge*)	Search modes - Boolean/Phrase
S133	TI (heel life* or heel extend* or thomas* heel or heel counter* or heel relief*) or AB (heel life* or heel extend* or thomas* heel or heel counter* or heel relief*)	Search modes - Boolean/Phrase
S132	TI (heel cup* or heel cushion* or heel flare* or heel wedge* or heel elevat*) or AB (heel cup* or heel cushion* or heel flare* or heel wedge* or heel elevat*)	Search modes - Boolean/Phrase
S131	TI (insole* or shoe* or boot* or footwear* or insert*) or AB (insole* or shoe* or boot* or footwear* or insert*)	Search modes - Boolean/Phrase
S130	TI (KAFO or HKAFO or THKAFO or TLSO or CTLSO) or AB (KAFO or HKAFO or THKAFO or TLSO or CTLSO)	Search modes - Boolean/Phrase
S129	TI (AFO or GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS) or AB (AFO or GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS)	Search modes - Boolean/Phrase
	,	

S128	TI (splint* or brace* or bracing or cuff*) or AB (splint* or brace* or bracing or cuff*)	Search modes - Boolean/Phrase
S127	TI (orthos* or orthotic*) or AB (orthos* or orthotic*)	Search modes - Boolean/Phrase
S126	MH SHOES+	Search modes - Boolean/Phrase
S125	MH COMPRESSION GARMENTS	Search modes - Boolean/Phrase
S124	MH ORTHOPEDIC FOOTWEAR	Search modes - Boolean/Phrase
S123	MH CLOTHING+	Search modes - Boolean/Phrase
S122	MH SPLINTS	Search modes - Boolean/Phrase
S121	MH RECIPROCATING GAIT ORTHOSES	Search modes - Boolean/Phrase
S120	MH FOOT ORTHOSES	Search modes - Boolean/Phrase
S119	MH ORTHOSES+	Search modes - Boolean/Phrase
S118	S115 or S116 or S117	Search modes - Boolean/Phrase
S117	S105 and S114	Search modes - Boolean/Phrase
S116	S18 and S114	Search modes - Boolean/Phrase
S115	S18 and S105	Search modes - Boolean/Phrase
S114	S106 or S107 or S108 or S109 or S110 or S111 or S112 or S113	Search modes - Boolean/Phrase
S113	AB (monopares* or dipares* or hemipares* or quadripares* or tetrapares*)	Search modes - Boolean/Phrase
S112	TI (monopares* or dipares* or hemipares* or quadripares* or tetrapares*)	Search modes - Boolean/Phrase
S111	AB (monoplegi* or diplegi* or hemiplegi* or quadriplegi* or tetraplegi* or unilateral* or bilateral*)	Search modes - Boolean/Phrase
S110	TI (monoplegi* or diplegi* or hemiplegi* or quadriplegi* or tetraplegi* or unilateral* or bilateral*)	Search modes - Boolean/Phrase
S109	MH QUADRIPLEGIA	Search modes - Boolean/Phrase
S108	MH PARAPLEGIA	Search modes - Boolean/Phrase

HEMIPLEGIA	Search modes - Boolean/Phrase
PARALYSIS+	Search modes - Boolean/Phrase
or S20 or S21 or S22 or S23 or S24 or S25 or S0 or S27 or S28 or S29 or S30 or S31 or S32 or S0 or S34 or S35 or S36 or S37 or S38 or S39 or S34 or S42 or S43 or S44 or S45 or S46 or S48 or S49 or S50 or S51 or S52 or S53 or S55 or S56 or S57 or S58 or S59 or S60 or Or S62 or S63 or S64 or S65 or S66 or S67 or S69 or S70 or S71 or S72 or S73 or S74 or S76 or S76 or S77 or S78 or S79 or S80 or S81 or S75 or S83 or S84 or S85 or S86 or S87 or S88 or S90 or S91 or S92 or S93 or S94 or S95 or S97 or S98 or S99 or S100 or S101 or S102 or S103 or S104	Search modes - Boolean/Phrase
shak* N3 syndrome*) or AB (shak* N3 syndrome*)	Search modes - Boolean/Phrase
shak* N3 injur*) or AB (shak* N3 injur*)	Search modes - Boolean/Phrase
SHAKEN BABY SYNDROME	Search modes - Boolean/Phrase
hydrocephal*) or AB (hydrocephal*)	Search modes - Boolean/Phrase
HYDROCEPHALUS+	Search modes - Boolean/Phrase
cerebrovascular N2 insult*) or AB (cerebrovascular insult*)	Search modes - Boolean/Phrase
cerebrovascular N2 disturb*) or AB rebrovascular N2 disturb*)	Search modes - Boolean/Phrase
cerebrovascular N2 damage*) or AB rebrovascular N2 damage*)	Search modes - Boolean/Phrase
cerebrovascular N2 occlusion*) or AB rebrovascular N2 occlusion*)	Search modes - Boolean/Phrase
cerebrovascular N2 insufficien*) or AB rebrovascular N2 insufficien*)	Search modes - Boolean/Phrase
cerebrovascular N2 disease*) or AB rebrovascular N2 disease*)	Search modes - Boolean/Phrase
cerebrovascular N2 disorder*) or AB rebrovascular N2 disorder*)	Search modes - Boolean/Phrase
intracranial vascular N2 insult*) or AB (intracranial cular N2 insult*)	Search modes - Boolean/Phrase
	or S20 or S21 or S22 or S23 or S24 or S25 or or S27 or S28 or S29 or S30 or S31 or S32 or or S34 or S35 or S36 or S37 or S38 or S39 or or S41 or S42 or S43 or S44 or S45 or S46 or or S44 or S42 or S43 or S44 or S45 or S46 or or S48 or S49 or S50 or S51 or S52 or S53 or or S55 or S56 or S57 or S58 or S59 or S60 or or S55 or S66 or S67 or S58 or S69 or S60 or or S62 or S63 or S64 or S65 or S66 or S67 or or S69 or S70 or S71 or S72 or S73 or S74 or or S76 or S77 or S78 or S79 or S80 or S81 or or S90 or S91 or S92 or S93 or S94 or S95 or or S90 or S91 or S92 or S93 or S94 or S95 or or S97 or S98 or S99 or S100 or S101 or S102 or 3 or S104 shak* N3 syndrome*) or AB (shak* N3 syndrome*) Shak* N3 injur*) or AB (shak* N3 injur*) SHAKEN BABY SYNDROME HYDROCEPHALUS+ Derebrovascular N2 disturb*) or AB (cerebrovascular nsult*) Derebrovascular N2 damage*) or AB (ebrovascular N2 damage*) Derebrovascular N2 damage*) Derebrovascular N2 occlusion*) or AB (ebrovascular N2 insufficien*) or AB (ebrovascular N2 insufficien*) Derebrovascular N2 disease*) or AB (ebrovascular N2 disease*)

S91	TI (intracranial vascular N2 disturb*) or AB (intracranial vascular N2 disturb*)	Search modes - Boolean/Phrase
S90	TI (intracranial vascular N2 damage*) or AB (intracranial vascular N2 damage*)	Search modes - Boolean/Phrase
S89	TI (intracranial vascular N2 occlusion*) or AB (intracranial vascular N2 occlusion*)	Search modes - Boolean/Phrase
S88	TI (intracranial vascular N2 insufficien*) or AB (intracranial vascular N2 insufficien*)	Search modes - Boolean/Phrase
S87	TI (intracranial vascular N2 disease*) or AB (intracranial vascular N2 disease*)	Search modes - Boolean/Phrase
S86	TI (intracranial vascular N2 disorder*) or AB (intracranial vascular N2 disorder*)	Search modes - Boolean/Phrase
S85	TI (intra-cranial vascular N2 insult*) or AB (intra-cranial vascular N2 insult*)	Search modes - Boolean/Phrase
S84	TI (intra-cranial vascular N2 disturb*) or AB (intra-cranial vascular N2 disturb*)	Search modes - Boolean/Phrase
S83	TI (intra-cranial vascular N2 damage*) or AB (intra-cranial vascular N2 damage*)	Search modes - Boolean/Phrase
S82	TI (intra-cranial vascular N2 occlusion*) or AB (intra-cranial vascular N2 occlusion*)	Search modes - Boolean/Phrase
S81	TI (intra-cranial vascular N2 insufficien*) or AB (intra-cranial vascular N2 insufficien*)	Search modes - Boolean/Phrase
S80	TI (intra-cranial vascular N2 disease*) or AB (intra-cranial vascular N2 disease*)	Search modes - Boolean/Phrase
S79	TI (intra-cranial vascular N2 disorder*) or AB (intra-cranial vascular N2 disorder*)	Search modes - Boolean/Phrase
S78	TI (brain vascular N2 insult*) or AB (brain vascular N2 insult*)	Search modes - Boolean/Phrase
S77	TI (brain vascular N2 disturb*) or AB (brain vascular N2 disturb*)	Search modes - Boolean/Phrase
S76	TI (brain vascular N2 damage*) or AB (brain vascular N2 damage*)	Search modes - Boolean/Phrase
S75	TI (brain vascular N2 occlusion*) or AB (brain vascular N2 occlusion*)	Search modes - Boolean/Phrase
S74	TI (brain vascular N2 insufficien*) or AB (brain vascular N2 insufficien*)	Search modes - Boolean/Phrase
S73	TI (brain vascular N2 disease*) or AB (brain vascular N2 disease*)	Search modes - Boolean/Phrase
S72	TI (brain vascular N2 disorder*) or AB (brain vascular N2 disorder*)	Search modes - Boolean/Phrase
S71	MH CEREBROVASCULAR DISORDERS+	Search modes - Boolean/Phrase

		
S70	TI (intracranial N3 isch#emi*) or AB (intracranial N3 isch#emi*)	Search modes - Boolean/Phrase
S69	TI (intracranial N3 aneurysm*) or AB (intracranial N3 aneurysm*)	Search modes - Boolean/Phrase
S68	TI (intracranial N3 embolism) or AB (intracranial N3 embolism)	Search modes - Boolean/Phrase
S67	TI (intra-cranial N3 isch#emi*) or AB (intra-cranial N3 isch#emi*)	Search modes - Boolean/Phrase
S66	TI (intra-cranial N3 aneurysm*) or AB (intra-cranial N3 aneurysm*)	Search modes - Boolean/Phrase
S65	TI (intra-cranial N3 embolism) or AB (intra-cranial N3 embolism)	Search modes - Boolean/Phrase
S64	TI (cerebral N3 isch#emi*) or AB (cerebral N3 isch#emi*)	Search modes - Boolean/Phrase
S63	TI (cerebral N3 aneurysm*) or AB (cerebral N3 aneurysm*)	Search modes - Boolean/Phrase
S62	TI (cerebral N3 embolism) or AB (cerebral N3 embolism)	Search modes - Boolean/Phrase
S61	TI (brain N3 isch#emi*) or AB (brain N3 isch#emi*)	Search modes - Boolean/Phrase
S60	TI (brain N3 aneurysm*) or AB (brain N3 aneurysm*)	Search modes - Boolean/Phrase
S59	TI (brain N3 embolism) or AB (brain N3 embolism)	Search modes - Boolean/Phrase
S58	TI (stroke*) or AB (stroke*)	Search modes - Boolean/Phrase
S57	MH STROKE	Search modes - Boolean/Phrase
S56	TI (encephaliti*) or AB (encephaliti*)	Search modes - Boolean/Phrase
S55	MH ENCEPHALITIS+	Search modes - Boolean/Phrase
S54	TI (craniocerebral N3 insult*) or AB (craniocerebral N3 insult*)	Search modes - Boolean/Phrase
S53	TI (craniocerebral N3 disturb*) or AB (craniocerebral N3 disturb*)	Search modes - Boolean/Phrase
S52	TI (craniocerebral N3 damage*) or AB (craniocerebral N3 damage*)	Search modes - Boolean/Phrase
S51	TI (craniocerebral N3 trauma*) or AB (craniocerebral N3 trauma*)	Search modes - Boolean/Phrase
S50	TI (craniocerebral N3 injur*) or AB (craniocerebral N3 injur*)	Search modes - Boolean/Phrase

S49	TI (cerebral N3 insult*) or AB (cerebral N3 insult*)	Search modes - Boolean/Phrase
S48	TI (cerebral N3 disturb*) or AB (cerebral N3 disturb*)	Search modes - Boolean/Phrase
S47	TI (cerebral N3 damage*) or AB (cerebral N3 damage*)	Search modes - Boolean/Phrase
S46	TI (cerebral N3 trauma*) or AB (cerebral N3 trauma*)	Search modes - Boolean/Phrase
S45	TI (cerebral N3 injur*) or AB (cerebral N3 injur*)	Search modes - Boolean/Phrase
S44	TI (skull N3 insult*) or AB (skull N3 insult*)	Search modes - Boolean/Phrase
S43	TI (skull N3 disturb*) or AB (skull N3 disturb*)	Search modes - Boolean/Phrase
S42	TI (skull N3 damage*) or AB (skull N3 damage*)	Search modes - Boolean/Phrase
S41	TI (skull N3 trauma*) or AB (skull N3 trauma*)	Search modes - Boolean/Phrase
S40	TI (skull N3 injur*) or AB (skull N3 injur*)	Search modes - Boolean/Phrase
S39	TI (brain N3 insult*) or AB (brain N3 insult*)	Search modes - Boolean/Phrase
S38	TI (brain N3 disturb*) or AB (brain N3 disturb*)	Search modes - Boolean/Phrase
S37	TI (brain N3 damage*) or AB (brain N3 damage*)	Search modes - Boolean/Phrase
S36	TI (brain N3 trauma*) or AB (brain N3 trauma*)	Search modes - Boolean/Phrase
S35	TI (brain N3 injur*) or AB (brain N3 injur*)	Search modes - Boolean/Phrase
S34	TI (head N3 insult*) or AB (head N3 insult*)	Search modes - Boolean/Phrase
S33	TI (head N3 disturb*) or AB (head N3 disturb*)	Search modes - Boolean/Phrase
S32	TI (head N3 damage*) or AB (head N3 damage*)	Search modes - Boolean/Phrase
S31	TI (head N3 trauma*) or AB (head N3 trauma*)	Search modes - Boolean/Phrase
S30	TI (head N3 injur*) or AB (head N3 injur*)	Search modes - Boolean/Phrase
S29	MH HEAD INJURIES+	Search modes - Boolean/Phrase
-	•	·

S28	TI (meningitis or meningococcal) or AB (meningitis or meningococcal)	Search modes - Boolean/Phrase
S27	MH MENINGITIS+	Search modes - Boolean/Phrase
S26	TI (cerebral N3 pals*) or AB (cerebral N3 pals*)	Search modes - Boolean/Phrase
S25	MH CEREBRAL PALSY	Search modes - Boolean/Phrase
S24	TI (static encephalopath*) or AB (static encephalopath*)	Search modes - Boolean/Phrase
S23	TI (ABI) or AB (ABI)	Search modes - Boolean/Phrase
S22	TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*)	Search modes - Boolean/Phrase
S21	TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*)	Search modes - Boolean/Phrase
S20	TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*)	Search modes - Boolean/Phrase
S19	MH BRAIN INJURIES+	Search modes - Boolean/Phrase
S18	S1 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17	Search modes - Boolean/Phrase
S17	TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*)	Search modes - Boolean/Phrase
S16	TI (atax*) or AB (atax*)	Search modes - Boolean/Phrase
S15	MH ATAXIA	Search modes - Boolean/Phrase
S14	TI (musc* N3 weak*) or AB (musc* N3 weak*)	Search modes - Boolean/Phrase
S13	MH MUSCLE WEAKNESS	Search modes - Boolean/Phrase
S12	TI (athetos* or athetoid*) or AB (athetos* or athetoid*)	Search modes - Boolean/Phrase
S11	TI (chorea* or choreic* or choreo*) or AB (chorea* or choreic* or choreo*)	Search modes - Boolean/Phrase
S10	MH CHOREA+	Search modes - Boolean/Phrase
S9	TI (dystoni*) or AB (dystoni*)	Search modes - Boolean/Phrase
S8	MH DYSTONIA+	Search modes -

		Boolean/Phrase
S7	TI (involuntar* N2 mov*) or AB (involuntar* N2 mov*)	Search modes - Boolean/Phrase
S6	TI (abnormal N2 mov*) or AB (abnormal N2 mov*)	Search modes - Boolean/Phrase
S5	TI (dyskinesi*) or AB (dyskinesi*)	Search modes - Boolean/Phrase
S4	MH DYSKINESIAS+	Search modes - Boolean/Phrase
S3	TI (spastic* or spasm* or hyperton*) or AB (spastic* or spasm* or hyperton*)	Search modes - Boolean/Phrase
S2	MH SPASM+	Search modes - Boolean/Phrase
S1	MH MUSCLE SPASTICITY	Search modes - Boolean/Phrase

PsycINFO 1806+

SPAST_Q2_orthoses_psycinfo_100910

#	Searches
1	exp SPASMS/
2	MUSCLE SPASMS/
3	(spastic\$ or spasm\$).ti,ab,id.
4	hyperton\$.ti,ab,id.
5	exp DYSKINESIA/
6	dyskinesi\$.ti,ab,id.
7	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab,id.
8	MUSCULAR DISORDERS/
9	dystoni\$.ti,ab,id.
10	exp CHOREA/
11	(chorea\$ or choreic\$ or choreo\$).ti,ab,id.
12	ATHETOSIS/
13	(athetos\$ or athetoid\$).ti,ab,id.
14	MUSCLE TONE/
15	(musc\$ adj3 weak\$).ti,ab,id.
16	ATAXIA/
17	atax\$.ti,ab,id.
18	upper motor neuron? lesion\$.ti,ab,id.
19	or/1-18
20	exp TRAUMATIC BRAIN INJURY/

21 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab,id. 22 ABI.ti,ab,id. 23 static encephalopath\$.ti,ab,id. 24 CEREBRAL PALSY/ 25 (cerebral adj3 pals\$).ti,ab,id. 26 exp MENINGITIS/ 27 (meningitis or meningococcal).ti,ab,id. 28 exp HEAD INJURIES/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab,id. 30 exp ENCEPHALITIS/ 31 encephaliti\$.ti,ab,id. 32 CEREBROVASCULAR ACCIDENTS/ 33||stroke\$.ti,ab,id. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or ischemi\$ or ischaemi\$)).ti,ab,id. 35 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or 36 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab,id. 37 HYDROCEPHALUS/ 38 hydrocephal\$.ti,ab,id. 39 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab,id. 40 or/20-39 exp PARALYSIS/ or HEMIPLEGIA/ or HEMIPARESIS/ or PARAPLEGIA/ or QUADRIPLEGIA/ 42||(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab,id. 43||(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab,id. 44 (unilateral\$ or bilateral\$).ti,ab,id. 45 or/41-44 46 and/19,40 47 and/19,45 48 and/40,45 49||or/46-48 50 exp MEDICAL THERAPEUTIC DEVICES/ 51 MOBILITY AIDS/ 52 ASSISTIVE TECHNOLOGY/ 53 CLOTHING/ 54 (orthos\$ or orthotic\$).ti,ab,id. |55||(splint\$ or brace\$ or bracing or cuff\$).ti,ab,id.

56	AFO.ti,ab,id.
57	(GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab,id.
58	(KAFO or HKAFO or THKAFO).ti,ab,id.
59	(TLSO or CTLSO).ti,ab,id.
60	(insole\$ or shoe\$ or boot\$ or footwear\$ or insert\$).ti,ab,id.
01	(heel adj3 (cup\$ or cushion\$ or flare\$ or wedge\$ or elevat\$ or lift\$ or extend\$ or thomas\$ or counter\$ or relief\$)).ti,ab,id.
	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (rocker\$ or metatarsal or wedge\$ or flare\$)).ti,ab,id.
63	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (steel or elevat\$ or excavat\$ or scaphoid or crest\$)).ti,ab,id.
64	((flare\$ or wedge\$) adj3 (medial\$ or lateral\$)).ti,ab,id.
65	(contracture correction device\$ or CCD).ti,ab,id.
66	(lycra or spandex or elastane).ti,ab,id.
67	(body suit\$ or body?suit\$).ti,ab,id.
68	(sleeved vest\$ or glove\$).ti,ab,id.
68 69	(sleeved vest\$ or glove\$).ti,ab,id. ((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).ti,ab,id.
68 69	(sleeved vest\$ or glove\$).ti,ab,id. ((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or
68 69 70	(sleeved vest\$ or glove\$).ti,ab,id. ((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).ti,ab,id. ((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or
68 69 70 71	(sleeved vest\$ or glove\$).ti,ab,id. ((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).ti,ab,id. ((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or shorts or leggings or suit\$ or brace\$ or cuff\$)).ti,ab,id.
68 69 70 71 72	(sleeved vest\$ or glove\$).ti,ab,id. ((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).ti,ab,id. ((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or shorts or leggings or suit\$ or brace\$ or cuff\$)).ti,ab,id. ((toeoff or benik or matrix) adj3 (splint\$ or support\$ or brace\$ or cuff\$)).ti,ab,id.
68 69 70 71 72 73	(sleeved vest\$ or glove\$).ti,ab,id. ((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).ti,ab,id. ((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or shorts or leggings or suit\$ or brace\$ or cuff\$)).ti,ab,id. ((toeoff or benik or matrix) adj3 (splint\$ or support\$ or brace\$ or cuff\$)).ti,ab,id. piedro\$.ti,ab,id.

AMED (Allied and Complementary Medicine) 1985+

SPAST_Q2_orthoses_amed_080910

#	Searches
1	MUSCLE SPASTICITY/
2	SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.
6	exp DYSKINESIA/
7	dyskinesi\$.ti,ab.
8	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
9	DYSTONIA/
10	dystoni\$.ti,ab.

11 (chorea\$ or choreic\$ or choreo\$).ti,ab. 12 (athetos\$ or athetoid\$).ti,ab. 13 exp MUSCLE WEAKNESS/ 14 (musc\$ adj3 weak\$).ti,ab. 15 ATAXIA/ 16 atax\$.ti,ab. 17 upper motor neuron? lesion\$.ti,ab. 18||or/1-17 19 exp BRAIN INJURIES/ 20 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 21 ABI.ti,ab. 22 static encephalopath\$.ti,ab. 23 CEREBRAL PALSY/ 24 (cerebral adj3 pals\$).ti,ab. 25 exp MENINGITIS/ 26 (meningitis or meningococcal).ti,ab. 27 exp HEAD INJURIES/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 29 exp ENCEPHALITIS/ 30 encephaliti\$.ti,ab. 31 STROKE/ 32 stroke\$.ti.ab. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or ischemi\$ or ischaemi\$)).ti,ab. 34 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or 35 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 36 HYDROCEPHALUS/ 37 hydrocephal\$.ti,ab. 38||(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 39 or/19-38 40 exp PARALYSIS/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/ 41 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 42||(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 43 (unilateral\$ or bilateral\$).ti,ab. 44 or/40-43 45 and/18,39

46 and/18,44

47	and/39,44
48	or/45-47
49	exp ORTHOTIC DEVICES/
50	SPLINTS/
51	exp CLOTHING/
52	(orthos\$ or orthotic\$).ti,ab.
53	(splint\$ or brace\$ or bracing or cuff\$).ti,ab.
54	AFO.ti,ab.
55	(GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab.
56	(KAFO or HKAFO or THKAFO).ti,ab.
57	(TLSO or CTLSO).ti,ab.
	(insole\$ or shoe\$ or boot\$ or footwear\$ or insert\$).ti,ab.
	(heel adj3 (cup\$ or cushion\$ or flare\$ or wedge\$ or elevat\$ or lift\$ or extend\$ or thomas\$ or counter\$ or relief\$)).ti,ab.
60	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (rocker\$ or metatarsal or wedge\$ or flare\$)).ti,ab.
61	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (steel or elevat\$ or excavat\$ or scaphoid or crest\$)).ti,ab.
62	((flare\$ or wedge\$) adj3 (medial\$ or lateral\$)).ti,ab.
63	(contracture correction device\$ or CCD).ti,ab.
64	(lycra or spandex or elastane).ti,ab.
65	(body suit\$ or body?suit\$).ti,ab.
66	(sleeved vest\$ or glove\$).ti,ab.
67	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).ti,ab.
68	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or shorts or leggings or suit\$ or brace\$ or cuff\$)).ti,ab.
69	((toeoff or benik or matrix) adj3 (splint\$ or support\$ or brace\$ or cuff\$)).ti,ab.
70	piedro\$.ti,ab.
71	or/49-70

72 and/48,71

Question 2 Heath economics searches

Ovid MEDLINE(R) 1950+

 $SPAST_Q2_orthoses_economic_medline_130910$

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	MUSCLE SPASTICITY/
9	exp SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
12	hyperton\$.ti,ab.
13	exp DYSKINESIAS/
14	dyskinesi\$.ti,ab.
15	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
16	exp DYSTONIA/
17	dystoni\$.ti,ab.
18	exp CHOREA/
19	(chorea\$ or choreic\$ or choreo\$).ti,ab.
20	exp ATHETOSIS/
21	(athetos\$ or athetoid).ti,ab.
22	MUSCLE WEAKNESS/
23	(musc\$ adj3 weak\$).ti,ab.
24	exp ATAXIA/
25	atax\$.ti,ab.
26	upper motor neuron? lesion\$.ti,ab.
27	or/8-26
28	exp BRAIN INJURIES/
29	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
30	ABI.ti,ab.
31	static encephalopath\$.ti,ab.
32	CEREBRAL PALSY/

33 (cerebral adj3 pals\$).ti,ab. 34 exp MENINGITIS/ 35 (meningitis or meningococcal).ti,ab. 36 exp CRANIOCEREBRAL TRAUMA/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 38 exp ENCEPHALITIS/ 39 encephaliti\$.ti,ab. 40 exp STROKE/ 41 stroke\$.ti.ab. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab. 43 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or 44 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 45 exp HYDROCEPHALUS/ 46 hydrocephal ti, ab. 47 SHAKEN BABY SYNDROME/ 48||(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 49 or/28-48 50 exp PARALYSIS/ 51 HEMIPLEGIA/ 52 exp PARAPLEGIA/ 53 QUADRIPLEGIA/ 54 exp PARESIS/ 55 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 56 (monopares or dipares or hemipares or quadripares or tetrapares).ti,ab. 57 (unilateral\$ or bilateral\$).ti.ab. 58 or/50-57 59 and 27.58 60 and/49,58 61 and/27,49 62 or/59-61 63 exp ORTHOTIC DEVICES/ 64 BRACES/ 65 SPLINTS/ 66 exp CLOTHING/ 67 SHOES/ 68 (orthos\$ or orthotic\$).ti,ab.

69 (splint or brace or bracing or cuff).ti,ab. 70 AFO.ti,ab. 71 (GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab. 72||(KAFO or HKAFO or THKAFO).ti,ab. 73 (TLSO or CTLSO).ti,ab. 74 (insole\$ or shoe\$ or boot\$ or footwear\$ or insert\$).ti,ab. (heel adj3 (cup\$ or cushion\$ or flare\$ or wedge\$ or elevat\$ or lift\$ or extend\$ or thomas\$ or counter\$ or relief\$)).ti,ab. 76 ((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (rocker\$ or metatarsal or wedge\$ or flare\$)).ti,ab. ((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (steel or elevat\$ or excavat\$ or scaphoid or crest\$)).ti,ab. 78 ((flare\$ or wedge\$) adj3 (medial\$ or lateral\$)).ti,ab. 79 (contracture correction device\$ or CCD).ti,ab. 80 (lycra or spandex or elastane).ti,ab. 81 (body suit\$ or body?suit\$).ti,ab. 82 (sleeved vest\$ or glove\$).ti,ab. ((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).ti,ab. ((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or shorts or leggings or suit\$ or brace\$ or cuff\$)).ti,ab. 85 ((toeoff or benik or matrix) adj3 (splint\$ or support\$ or brace\$ or cuff\$)).ti,ab. 86 piedro\$.ti,ab. 87 or/63-86 88 and/62,87 89 limit 88 to english language 90 limit 89 to animals 91 limit 89 to (animals and humans) 92||90 not 91 93 89 not 92 94 and/7,93

EBM Reviews - Cochrane Central Register of Controlled Trials

SPAST_Q2_orthoses_economic_cctr_130910

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3

5	(metabolic adj cost).tw.
	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
	MUSCLE SPASTICITY/
-	exp SPASM/
	exp MUSCLE HYPERTONIA/
-	(spastic\$ or spasm\$).ti,ab.
	hyperton\$.ti,ab.
-	exp DYSKINESIAS/
	dyskinesi\$.ti,ab.
	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
	exp DYSTONIA/
17	dystoni\$.ti,ab.
18	exp CHOREA/
19	(chorea\$ or choreic\$ or choreo\$).ti,ab.
20	exp ATHETOSIS/
21	(athetos\$ or athetoid).ti,ab.
22	MUSCLE WEAKNESS/
23	(musc\$ adj3 weak\$).ti,ab.
24	exp ATAXIA/
25	atax\$.ti,ab.
26	upper motor neuron? lesion\$.ti,ab.
27	or/8-26
28	exp BRAIN INJURIES/
29	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
30	ABI.ti,ab.
31	static encephalopath\$.ti,ab.
32	CEREBRAL PALSY/
33	(cerebral adj3 pals\$).ti,ab.
34	exp MENINGITIS/
35	(meningitis or meningococcal).ti,ab.
36	exp CRANIOCEREBRAL TRAUMA/
37	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
38	exp ENCEPHALITIS/
39	encephaliti\$.ti,ab.
40	exp STROKE/
41	stroke\$.ti,ab.
42	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$

	or isch?emi\$)).ti,ab.
43	exp CEREBROVASCULAR DISORDERS/
	((brain vascular or intra cranial vascular or intra?cranial vascular or
44	cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or
45	damage\$ or disturb\$ or insult\$)).ti,ab.
=	exp HYDROCEPHALUS/
4	hydrocephal\$.ti,ab.
H	SHAKEN BABY SYNDROME/
	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
4	or/28-48
	exp PARALYSIS/
1	HEMIPLEGIA/
=	exp PARAPLEGIA/
H	QUADRIPLEGIA/
-	exp PARESIS/
-	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
-	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
57	(unilateral\$ or bilateral\$).ti,ab.
58	or/50-57
59	and/27,58
60	and/49,58
61	and/27,49
62	or/59-61
	exp ORTHOTIC DEVICES/
64	BRACES/
65	SPLINTS/
66	exp CLOTHING/
67	SHOES/
68	(orthos\$ or orthotic\$).ti,ab.
69	(splint\$ or brace\$ or bracing or cuff\$).ti,ab.
70	AFO.ti,ab.
71	(GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab.
72	(KAFO or HKAFO or THKAFO).ti,ab.
73	(TLSO or CTLSO).ti,ab.
74	(insole\$ or shoe\$ or boot\$ or footwear\$ or insert\$).ti,ab.
75	(heel adj3 (cup\$ or cushion\$ or flare\$ or wedge\$ or elevat\$ or lift\$ or extend\$ or thomas\$ or counter\$ or relief\$)).ti,ab.
76	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (rocker\$ or metatarsal or wedge\$ or flare\$)).ti,ab.
77	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (steel or elevat\$ or excavat\$ or

	scaphoid or crest\$)).ti,ab.
78	((flare\$ or wedge\$) adj3 (medial\$ or lateral\$)).ti,ab.
79	(contracture correction device\$ or CCD).ti,ab.
80	(lycra or spandex or elastane).ti,ab.
81	(body suit\$ or body?suit\$).ti,ab.
82	(sleeved vest\$ or glove\$).ti,ab.
83	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).ti,ab.
84	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or shorts or leggings or suit\$ or brace\$ or cuff\$)).ti,ab.
85	((toeoff or benik or matrix) adj3 (splint\$ or support\$ or brace\$ or cuff\$)).ti,ab.
86	piedro\$.ti,ab.
87	or/63-86
88	and/62,87
89	and/7,88

EBM Reviews - Health Technology Assessment

SPAST_Q2_orthoses_economic_hta_130910

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).tw.
5	hyperton\$.tw.
6	exp DYSKINESIAS/
7	dyskinesi\$.tw.
8	((abnormal\$ or involuntar\$) adj2 mov\$).tw.
9	exp DYSTONIA/
10	dystoni\$.tw.
11	exp CHOREA/
12	(chorea\$ or choreic\$ or choreo\$).tw.
13	exp ATHETOSIS/
14	(athetos\$ or athetoid).tw.
15	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).tw.
17	exp ATAXIA/
18	atax\$.tw.
19	upper motor neuron? lesion\$.tw.

20	or/1-19
21	exp BRAIN INJURIES/
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).tw.
23	ABI.tw.
24	static encephalopath\$.tw.
25	CEREBRAL PALSY/
26	(cerebral adj3 pals\$).tw.
27	exp MENINGITIS/
28	(meningitis or meningococcal).tw.
29	exp CRANIOCEREBRAL TRAUMA/
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw.
31	exp ENCEPHALITIS/
32	encephaliti\$.tw.
33	exp STROKE/
34	stroke\$.tw.
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw.
36	exp CEREBROVASCULAR DISORDERS/
	((brain vascular or intra cranial vascular or intra?cranial vascular or
37	cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw.
38	exp HYDROCEPHALUS/
39	hydrocephal\$.tw.
40	SHAKEN BABY SYNDROME/
41	(shak\$ adj3 (injur\$ or syndrome\$)).tw.
42	or/21-41
43	exp PARALYSIS/
44	HEMIPLEGIA/
45	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).tw.
50	(unilateral\$ or bilateral\$).tw.
51	or/43-50
52	and/20,51
53	and/42,51
54	and/20,42
55	or/52-54

56	exp ORTHOTIC DEVICES/
57	BRACES/
58	SPLINTS/
59	exp CLOTHING/
60	SHOES/
61	(orthos\$ or orthotic\$).tw.
62	(splint\$ or brace\$ or bracing or cuff\$).tw.
63	AFO.tw.
64	(GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).tw.
65	(KAFO or HKAFO or THKAFO).tw.
66	(TLSO or CTLSO).tw.
	(insole\$ or shoe\$ or boot\$ or footwear\$ or insert\$).tw.
	(heel adj3 (cup\$ or cushion\$ or flare\$ or wedge\$ or elevat\$ or lift\$ or extend\$ or thomas\$ or counter\$ or relief\$)).tw.
	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (rocker\$ or metatarsal or wedge\$ or flare\$)).tw.
70	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (steel or elevat\$ or excavat\$ or scaphoid or crest\$)).tw.
71	((flare\$ or wedge\$) adj3 (medial\$ or lateral\$)).tw.
72	(contracture correction device\$ or CCD).tw.
73	(lycra or spandex or elastane).tw.
74	(body suit\$ or body?suit\$).tw.
75	(sleeved vest\$ or glove\$).tw.
76	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).tw.
77	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or shorts or leggings or suit\$ or brace\$ or cuff\$)).tw.
78	((toeoff or benik or matrix) adj3 (splint\$ or support\$ or brace\$ or cuff\$)).tw.
79	piedro\$.tw.
80	or/56-79
81	and/55,80

EBM Reviews - NHS Economic Evaluation Database

 $SPAST_Q2_orthoses_economic_nhseed_130910$

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).tw.

5 hyperton\$.tw. 6 exp DYSKINESIAS/ dyskinesi\$.tw. 8 ((abnormal\$ or involuntar\$) adj2 mov\$).tw. 9 exp DYSTONIA/ 10 dystoni\$.tw. 11 exp CHOREA/ 12 (chorea\$ or choreic\$ or choreo\$).tw. 13 exp ATHETOSIS/ 14 (athetos\$ or athetoid).tw. 15 MUSCLE WEAKNESS/ 16 (musc\$ adj3 weak\$).tw. 17 exp ATAXIA/ 18 atax\$.tw. 19 upper motor neuron? lesion\$.tw. 20 or/1-19 21 exp BRAIN INJURIES/ 22||((non progressive or non?progressive or acquired) adj2 brain injur\$).tw. 23 ABI.tw. 24 static encephalopath\$.tw. 25 CEREBRAL PALSY/ 26 (cerebral adj3 pals\$).tw. 27 exp MENINGITIS/ 28 (meningitis or meningococcal).tw. 29 exp CRANIOCEREBRAL TRAUMA/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 31 exp ENCEPHALITIS/ 32 encephaliti\$.tw. 33 exp STROKE/ 34 stroke\$.tw. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or 37 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/

41	(shak\$ adj3 (injur\$ or syndrome\$)).tw.
42	or/21-41
43	exp PARALYSIS/
44	HEMIPLEGIA/
45	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).tw.
50	(unilateral\$ or bilateral\$).tw.
51	or/43-50
52	and/20,51
53	and/42,51
54	and/20,42
55	or/52-54
56	exp ORTHOTIC DEVICES/
57	BRACES/
58	SPLINTS/
59	exp CLOTHING/
60	SHOES/
61	(orthos\$ or orthotic\$).tw.
62	(splint\$ or brace\$ or bracing or cuff\$).tw.
63	AFO.tw.
64	(GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).tw.
65	(KAFO or HKAFO or THKAFO).tw.
66	(TLSO or CTLSO).tw.
67	(insole\$ or shoe\$ or boot\$ or footwear\$ or insert\$).tw.
68	(heel adj3 (cup\$ or cushion\$ or flare\$ or wedge\$ or elevat\$ or lift\$ or extend\$ or thomas\$ or counter\$ or relief\$)).tw.
69	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (rocker\$ or metatarsal or wedge\$ or flare\$)).tw.
70	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (steel or elevat\$ or excavat\$ or scaphoid or crest\$)).tw.
71	((flare\$ or wedge\$) adj3 (medial\$ or lateral\$)).tw.
72	(contracture correction device\$ or CCD).tw.
73	(lycra or spandex or elastane).tw.
74	(body suit\$ or body?suit\$).tw.
75	(sleeved vest\$ or glove\$).tw.
76	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).tw.

	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or shorts or leggings or suit\$ or brace\$ or cuff\$)).tw.
78	((toeoff or benik or matrix) adj3 (splint\$ or support\$ or brace\$ or cuff\$)).tw.
79	piedro\$.tw.
80	or/56-79
81	and/55,80

EMBASE 1980+

 $SPAST_Q2_or those s_economic_embase_130910$

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	SPASTICITY/
9	exp MUSCLE SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
12	hyperton\$.ti,ab.
13	DYSKINESIA/
14	dyskinesi\$.ti,ab.
\blacksquare	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
16	DYSTONIA/
17	dystoni\$.ti,ab.
	exp CHOREA/
=	CHOREOATHETOSIS/
	ATHETOSIS/
21	(chorea\$ or choreic\$ or choreo\$).ti,ab.
	(athetos\$ or athetoid).ti,ab.
23	exp MUSCLE WEAKNESS/
24	(musc\$ adj3 weak\$).ti,ab.
25	exp ATAXIA/
=	atax\$.ti,ab.
27	upper motor neuron? lesion\$.ti,ab.
28	or/8-27

29	exp BRAIN INJURY/
30	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
31	ABI.ti,ab.
32	static encephalopath\$.ti,ab.
33	CEREBRAL PALSY/
34	(cerebral adj3 pals\$).ti,ab.
35	exp MENINGITIS/
36	(meningitis or meningococcal).ti,ab.
	exp HEAD INJURY/
38	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
39	exp ENCEPHALITIS/
40	encephaliti\$.ti,ab.
41	STROKE/
	stroke\$.ti,ab.
43	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
44	exp CEREBROVASCULAR DISEASE/
	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
46	exp HYDROCEPHALUS/
47	hydrocephal\$.ti,ab.
48	SHAKEN BABY SYNDROME/
49	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
	or/29-49
51	exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/
52	SPASTIC PARAPLEGIA/
53	PARESIS/ or MONOPARESIS/ or HEMIPARESIS/
54	SPASTIC PARESIS/
	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
	(unilateral\$ or bilateral\$).ti,ab.
	or/51-57
-	and/28,58
	and/50,58
	and/28,50
	or/59-61
63	ORTHOTICS/

64	ORTHOSIS/
65	FOOT ORTHOSIS/
66	BRACE/ or ORTHOPEDIC SHOE/ or SPLINT/
67	exp CLOTHING/
68	(orthos\$ or orthotic\$).ti,ab.
69	(splint\$ or brace\$ or bracing or cuff\$).ti,ab.
70	AFO.ti,ab.
71	(GRAFO or DAFO or HAFO or SAFO or RAFO or SWASH or PLS).ti,ab.
72	(KAFO or HKAFO or THKAFO).ti,ab.
73	(TLSO or CTLSO).ti,ab.
74	(insole\$ or shoe\$ or boot\$ or footwear\$ or insert\$).ti,ab.
75	(heel adj3 (cup\$ or cushion\$ or flare\$ or wedge\$ or elevat\$ or lift\$ or extend\$ or thomas\$ or counter\$ or relief\$)).ti,ab.
76	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (rocker\$ or metatarsal or wedge\$ or flare\$)).ti,ab.
77	((sole\$ or bar\$ or shoe\$ or pad\$ or toe\$) adj3 (steel or elevat\$ or excavat\$ or scaphoid or crest\$)).ti,ab.
78	((flare\$ or wedge\$) adj3 (medial\$ or lateral\$)).ti,ab.
79	(contracture correction device\$ or CCD).ti,ab.
80	(lycra or spandex or elastane).ti,ab.
81	(body suit\$ or body?suit\$).ti,ab.
82	(sleeved vest\$ or glove\$).ti,ab.
	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (garment\$ or sleeve\$ or splint\$ or sling\$ or sock\$ or vest\$)).ti,ab.
84	((support\$ or pressure or dynamic or stretch\$ or compress\$) adj3 (stocking\$ or shorts or leggings or suit\$ or brace\$ or cuff\$)).ti,ab.
85	((toeoff or benik or matrix) adj3 (splint\$ or support\$ or brace\$ or cuff\$)).ti,ab.
86	piedro\$.ti,ab.
87	or/63-86
88	and/62,87
89	limit 88 to english language
	and/7,89

Question 3 What is the effectiveness of oral medications including baclofen, benzodiazepines (diazepam, nitrazepam, clonazepam), tizanidine, dantrolene, clonidine, trihexyphenidyl, tetrabenazine and levodopa in the treatment of spasticity and other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder in babies, children and young people?

Ovid MEDLINE(R) 1950+

SPAST_Q3_oral_drugs_medline_290610

#	Searches
1	randomized controlled trial.pt.
2	controlled clinical trial.pt.
3	DOUBLE BLIND METHOD/
4	SINGLE BLIND METHOD/
5	RANDOM ALLOCATION/
6	RANDOMIZED CONTROLLED TRIALS/
7	or/1-6
8	((single or double or triple or treble) adj5 (blind\$ or mask\$)).tw,sh.
9	clinical trial.pt.
10	exp CLINICAL TRIAL/
11	exp CLINICAL TRIALS AS TOPIC/
12	(clinic\$ adj5 trial\$).tw,sh.
13	PLACEBOS/
14	placebo\$.tw,sh.
15	random\$.tw,sh.
16	or/8-15
17	or/7,16
18	META ANALYSIS/
19	META ANALYSIS AS TOPIC/
20	meta analysis.pt.
21	(metaanaly\$ or meta-analy\$ or (meta adj analy\$)).tw,sh.
22	(systematic\$ adj5 (review\$ or overview\$)).tw,sh.
23	(methodologic\$ adj5 (review\$ or overview\$)).tw,sh.
24	or/18-23
25	review\$.pt.
11 /h	(medline or medlars or embase or cinahl or cochrane or psycinfo or psychinfo or psychlit or psyclit or "web of science" or "science citation" or scisearch).tw.
27	((hand or manual\$) adj2 search\$).tw.
28	(electronic database\$ or bibliographic database\$ or computeri?ed database\$ or online database\$).tw,sh.
29	(pooling or pooled or mantel haenszel).tw,sh.

30	(peto or dersimonian or der simonian or fixed effect).tw,sh.
31	or/26-30
	and/25,31
	or/24,32
	letter.pt.
35	case report.tw.
36	comment.pt.
37	editorial.pt.
38	historical article.pt.
39	or/34-38
40	17 not 39
41	33 not 39
42	or/40-41
43	MUSCLE SPASTICITY/
44	exp SPASM/
45	exp MUSCLE HYPERTONIA/
46	(spastic\$ or spasm\$).ti,ab.
47	hyperton\$.ti,ab.
48	exp DYSKINESIAS/
49	dyskinesi\$.ti,ab.
50	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
51	exp DYSTONIA/
52	dystoni\$.ti,ab.
53	exp CHOREA/
54	(chorea\$ or choreic\$ or choreo\$).ti,ab.
55	exp ATHETOSIS/
56	(athetos\$ or athetoid).ti,ab.
57	MUSCLE WEAKNESS/
58	(musc\$ adj3 weak\$).ti,ab.
59	exp ATAXIA/
60	atax\$.ti,ab.
61	upper motor neuron? lesion\$.ti,ab.
62	or/43-61
63	exp BRAIN INJURIES/
64	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
65	ABI.ti,ab.
66	static encephalopath\$.ti,ab.
67	CEREBRAL PALSY/
68	(cerebral adj3 pals\$).ti,ab.

69	exp MENINGITIS/
70	(meningitis or meningococcal).ti,ab.
71	exp CRANIOCEREBRAL TRAUMA/
	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or
72	damage\$ or disturb\$ or insult\$)).ti,ab.
73	exp ENCEPHALITIS/
74	encephaliti\$.ti,ab.
75	exp STROKE/
76	stroke\$.ti,ab.
77	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
78	exp CEREBROVASCULAR DISORDERS/
79	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
80	exp HYDROCEPHALUS/
81	hydrocephal\$.ti,ab.
82	SHAKEN BABY SYNDROME/
83	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
84	or/63-83
85	exp PARALYSIS/
86	HEMIPLEGIA/
87	exp PARAPLEGIA/
88	QUADRIPLEGIA/
89	exp PARESIS/
90	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
91	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
92	or/85-91
93	and/62,92
94	and/84,92
95	and/62,84
96	or/93-95
97	BACLOFEN/
98	(baclofen or baclophen or lioresal or spinax or lyflex).ti,ab.
99	exp BENZODIAZEPINES/
100	benzodiazepine\$.ti,ab.
101	exp BENZODIAZEPINONES/
102	exp MUSCLE RELAXANTS, CENTRAL/
103	exp DIAZEPAM/
104	(diazepam or valium or rimapam or dialar or diazemuls or stesolid or

	valclair).ti,ab.
105	(nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab.
106	(clonazepam or rivotril).ti,ab.
107	(tizanidine or zanaflex).ti,ab.
108	DANTROLENE/
109	(dantrolene or dantrium).ti,ab.
110	LEVODOPA/
111	(levodopa or I dopa or I?dopa).ti,ab.
112	(levopa or dopar or larodopa or dopaflex).ti,ab.
113	(co beneldopa or co?beneldopa or madopar).ti,ab.
	(co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).ti,ab.
115	TRIHEXYPHENIDYL/
116	(tr#hex#phen#d#l or THP or benzhexol or broflex or artane).ti,ab.
117	TETRABENAZINE/
118	(tetrabenazin\$ or xenazine or nitoman).ti,ab.
119	CLONIDINE/
120	(clonidine or catapres or dixarit).ti,ab.
121	or/97-120
122	and/96,121
123	limit 122 to english language
124	limit 123 to animals
125	limit 123 to (animals and humans)
126	124 not 125
127	123 not 126
128	and/42,127

Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations

SPAST_Q3_oral_drugs_medline_in-process_250610

#	Searches
1	(spastic\$ or spasm\$).ti,ab.
2	hyperton\$.ti,ab.
3	dyskinesi\$.ti,ab.
4	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
5	dystoni\$.ti,ab.
6	(chorea\$ or choreic\$ or choreo\$).ti,ab.
7	(athetos\$ or athetoid).ti,ab.
8	(musc\$ adj3 weak\$).ti,ab.

- 9 atax\$.ti,ab.
- 10 upper motor neuron? lesion\$.ti,ab.
- 11 or/1-10
- 12 ((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
- 13 ABI.ti,ab.
- 14 static encephalopath\$.ti,ab.
- 15 (cerebral adj3 pals\$).ti,ab.
- 16 (meningitis or meningococcal).ti,ab.
- ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
- 18 encephaliti\$.ti,ab.
- 19 stroke\$.ti,ab.
- ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
 - ((brain vascular or intra cranial vascular or intra?cranial vascular or
- 21 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
- 22 hydrocephal\$.ti,ab.
- 23 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
- 24 or/12-23
- 25 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
- 26 (monopares or dipares or hemipares or quadripares or tetrapares).ti,ab.
- 27 or/25-26
- 28 and/11,27
- 29 and/24,27
- 30 and/11.24
- 31 or/28-30
- 32 benzodiazepine\$.ti,ab.
- 33||(baclofen or baclophen or lioresal or spinax or lyflex).ti,ab.
- (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab.
- 35 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab.
- 36 (clonazepam or rivotril).ti,ab.
- 37 (tizanidine or zanaflex).ti,ab.
- 38 (dantrolene or dantrium).ti,ab.
- 39 (levodopa or I dopa or I?dopa).ti,ab.
- 40 (levopa or dopar or larodopa or dopaflex).ti,ab.
- 41 (co beneldopa or co?beneldopa or madopar).ti,ab.
- (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).ti,ab.

43	(tr#hex#phen#d#l or THP or benzhexol or broflex or artane).ti,ab.
44	(tetrabenazin\$ or xenazine or nitoman).ti,ab.
45	(clonidine or catapres or dixarit).ti,ab.
46	or/32-45
47	and/31,46

EBM Reviews - Cochrane Central Register of Controlled Trials

 $SPAST_Q3_oral_drugs_cctr_250610$

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.
6	exp DYSKINESIAS/
7	dyskinesi\$.ti,ab.
8	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
9	exp DYSTONIA/
10	dystoni\$.ti,ab.
11	exp CHOREA/
12	(chorea\$ or choreic\$ or choreo\$).ti,ab.
13	exp ATHETOSIS/
	(athetos\$ or athetoid).ti,ab.
15	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).ti,ab.
17	exp ATAXIA/
18	atax\$.ti,ab.
	upper motor neuron? lesion\$.ti,ab.
20	or/1-19
21	exp BRAIN INJURIES/
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
23	ABI.ti,ab.
24	static encephalopath\$.ti,ab.
25	CEREBRAL PALSY/
26	(cerebral adj3 pals\$).ti,ab.
27	exp MENINGITIS/
28	(meningitis or meningococcal).ti,ab.
29	exp CRANIOCEREBRAL TRAUMA/

((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 31 exp ENCEPHALITIS/ 32 encephaliti\$.ti,ab. 33 exp STROKE/ 34 stroke\$.ti,ab. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or 37 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.ti,ab. 40 SHAKEN BABY SYNDROME/ 41 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 42 or/21-41 43 exp PARALYSIS/ 44 HEMIPLEGIA/ 45 exp PARAPLEGIA/ 46 QUADRIPLEGIA/ 47 exp PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares or dipares or hemipares or quadripares or tetrapares).ti,ab. 50 or/43-49 51 and/20,50 52 and/42,50 53 and/20,42 54 or/51-53 55 BACLOFEN/ 56 (baclofen or baclophen or lioresal or spinax or lyflex).ti,ab. 57 exp BENZODIAZEPINES/ 58 benzodiazepine\$.ti,ab. 59 exp BENZODIAZEPINONES/ 60|exp MUSCLE RELAXANTS, CENTRAL/ 61 exp DIAZEPAM/ (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 63 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 64 (clonazepam or rivotril).ti,ab.

65	(tizanidine or zanaflex).ti,ab.
66	DANTROLENE/
67	(dantrolene or dantrium).ti,ab.
68	LEVODOPA/
69	(levodopa or I dopa or I?dopa).ti,ab.
70	(levopa or dopar or larodopa or dopaflex).ti,ab.
71	(co beneldopa or co?beneldopa or madopar).ti,ab.
72	(co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).ti,ab.
73	TRIHEXYPHENIDYL/
74	(tr#hex#phen#d#l or THP or benzhexol or broflex or artane).ti,ab.
75	TETRABENAZINE/
76	(tetrabenazin\$ or xenazine or nitoman).ti,ab.
77	CLONIDINE/
78	(clonidine or catapres or dixarit).ti,ab.
79	or/55-78
80	and/54,79

EBM Reviews - Cochrane Database of Systematic Reviews 2005+, EBM Reviews - Database of Abstracts of Reviews of Effects

 $SPAST_Q3_oral_drugs_cdsrdare_250610$

#	Searches
1	MUSCLE SPASTICITY.kw.
2	SPASM.kw.
3	MUSCLE HYPERTONIA.kw.
4	(spastic\$ or spasm\$).tw,tx.
5	hyperton\$.tw,tx.
6	DYSKINESIAS.kw.
7	dyskinesi\$.tw,tx.
8	((abnormal\$ or involuntar\$) adj2 mov\$).tw,tx.
9	DYSTONIA.kw.
10	dystoni\$.tw,tx.
11	CHOREA.kw.
12	(chorea\$ or choreic\$ or choreo\$).tw,tx.
13	ATHETOSIS.kw.
14	(athetos\$ or athetoid).tw,tx.
15	MUSCLE WEAKNESS.kw.
16	(musc\$ adj3 weak\$).tw,tx.

17 ATAXIA.kw. 18 atax\$.tw,tx. 19 upper motor neuron? lesion\$.tw,tx. 20 or/1-19 21 BRAIN INJURIES.kw. 22 ((non progressive or non?progressive or acquired) adj2 brain injur\$).tw,tx. 23 ABI.tw,tx. 24 static encephalopath\$.tw,tx. 25 CEREBRAL PALSY.kw. 26 (cerebral adj3 pals\$).tw,tx. 27 MENINGITIS.kw. 28 (meningitis or meningococcal).tw,tx. 29 CRANIOCEREBRAL TRAUMA.kw. ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw,tx. 31 ENCEPHALITIS.kw. 32 encephaliti\$.tw,tx. 33 STROKE.kw. 34 stroke\$.tw,tx. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw,tx. 36 CEREBROVASCULAR DISORDERS.kw. ((brain vascular or intra cranial vascular or intra?cranial vascular or 37 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw,tx. 38 HYDROCEPHALUS.kw. 39 hydrocephal s.tw,tx. 40 SHAKEN BABY SYNDROME.kw. 41||(shak\$ adj3 (injur\$ or syndrome\$)).tw,tx. 42 or/21-41 43 PARALYSIS.kw. 44||HEMIPLEGIA.kw. 45||PARAPLEGIA.kw. 46 QUADRIPLEGIA.kw. 47 PARESIS.kw. 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw,tx. 49 (monopares or dipares or hemipares or quadripares or tetrapares).tw,tx. 50 or/43-49 51 and/20,50

52 and/42,50

53	and/20,42
54	or/51-53
55	BACLOFEN.kw.
56	(baclofen or baclophen or lioresal or spinax or lyflex).tw,tx.
57	BENZODIAZEPINES.kw.
58	benzodiazepine\$.tw,tx.
59	BENZODIAZEPINONES.kw.
60	MUSCLE RELAXANTS, CENTRAL.kw.
61	DIAZEPAM.kw.
62	(diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw,tx.
63	(nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw,tx.
64	(clonazepam or rivotril).tw,tx.
65	(tizanidine or zanaflex).tw,tx.
66	DANTROLENE.kw.
67	(dantrolene or dantrium).tw,tx.
68	LEVODOPA.kw.
69	(levodopa or I dopa or I?dopa).tw,tx.
70	(levopa or dopar or larodopa or dopaflex).tw,tx.
71	(co beneldopa or co?beneldopa or madopar).tw,tx.
72	(co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw,tx.
73	TRIHEXYPHENIDYL.kw.
74	(tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw,tx.
75	TETRABENAZINE.kw.
76	(tetrabenazin\$ or xenazine or nitoman).tw,tx.
77	CLONIDINE.kw.
78	(clonidine or catapres or dixarit).tw,tx.
79	or/55-78
80	and/54,79

EMBASE 1980+

 $SPAST_Q3_oral_drugs_embase_290610$

#	Searches
1	CLINICAL TRIALS/
2	(clinic\$ adj5 trial\$).ti,ab,sh.
3	SINGLE BLIND PROCEDURE/
4	DOUBLE BLIND PROCEDURE/

5	RANDOM ALLOCATION/
6	CROSSOVER PROCEDURE/
7	PLACEBO/
8	placebo\$.ti,ab,sh.
9	random\$.ti,ab,sh.
10	RANDOMIZED CONTROLLED TRIALS/
11	((single or double or triple or treble) adj (blind\$ or mask\$)).ti,ab,sh.
12	randomi?ed control\$ trial\$.tw.
13	or/1-12
14	META ANALYSIS/
15	((meta adj analy\$) or metaanalys\$ or meta-analy\$).ti,ab,sh.
16	(systematic\$ adj5 (review\$ or overview\$)).ti,sh,ab.
17	(methodologic\$ adj5 (review\$ or overview\$)).ti,ab,sh.
18	or/14-17
19	review.pt.
20	(medline or medlars or embase).ab.
21	(scisearch or science citation index).ab.
22	(psychlit or psyclit or psychinfo or psycinfo or cinahl or cochrane).ab.
23	((hand or manual\$) adj2 search\$).tw.
24	(electronic database\$ or bibliographic database\$ or computeri?ed database\$ or online database\$).tw.
25	(pooling or pooled or mantel haenszel).tw.
26	(peto or dersimonian or "der simonian" or fixed effect).tw.
27	or/20-26
28	and/19,27
29	or/18,28
30	(book or conference paper or editorial or letter or note or proceeding or short survey).pt.
31	13 not 30
32	29 not 31
33	or/31-32
34	SPASTICITY/
35	exp MUSCLE SPASM/
36	exp MUSCLE HYPERTONIA/
37	(spastic\$ or spasm\$).ti,ab.
38	hyperton\$.ti,ab.
39	DYSKINESIA/
40	dyskinesi\$.ti,ab.
41	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.

42	DYSTONIA/
43	dystoni\$.ti,ab.
44	exp CHOREA/
45	CHOREOATHETOSIS/
46	ATHETOSIS/
47	(chorea\$ or choreic\$ or choreo\$).ti,ab.
48	(athetos\$ or athetoid).ti,ab.
49	exp MUSCLE WEAKNESS/
50	(musc\$ adj3 weak\$).ti,ab.
51	exp ATAXIA/
52	atax\$.ti,ab.
53	upper motor neuron? lesion\$.ti,ab.
54	or/34-53
55	exp BRAIN INJURY/
56	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
57	ABI.ti,ab.
58	static encephalopath\$.ti,ab.
59	CEREBRAL PALSY/
60	(cerebral adj3 pals\$).ti,ab.
61	exp MENINGITIS/
62	(meningitis or meningococcal).ti,ab.
63	exp HEAD INJURY/
64	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or
	damage\$ or disturb\$ or insult\$)).ti,ab.
65	exp ENCEPHALITIS/
66	encephaliti\$.ti,ab.
67	STROKE/
68	stroke\$.ti,ab.
69	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
70	exp CEREBROVASCULAR DISEASE/
71	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
72	exp HYDROCEPHALUS/
73	hydrocephal\$.ti,ab.
74	SHAKEN BABY SYNDROME/
75	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
76	or/55-75
77	exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or

	QUADRIPLEGIA/
78	SPASTIC PARAPLEGIA/
79	PARESIS/ or MONOPARESIS/ or HEMIPARESIS/
80	SPASTIC PARESIS/
81	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
82	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
83	or/77-82
84	and/54,83
85	and/76,83
86	and/54,76
87	or/84-86
88	BACLOFEN/
89	(baclofen or baclophen or lioresal or spinax or lyflex).ti,ab.
90	BENZODIAZEPINE/
91	benzodiazepine\$.ti,ab.
92	exp BENZODIAZEPINE DERIVATIVE/
93	exp CENTRAL MUSCLE RELAXANT/
94	DIAZEPAM/
95	(diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab.
96	NITRAZEPAM/
97	(nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab.
98	CLONAZEPAM/
99	(clonazepam or rivotril).ti,ab.
100	TIZANIDINE/
101	(tizanidine or zanaflex).ti,ab.
102	DANTROLENE/
103	(dantrolene or dantrium).ti,ab.
104	LEVODOPA/
105	BENSERAZIDE PLUS LEVODOPA/ or CO BENELDOPA/
106	CARBIDOPA PLUS LEVODOPA/ or CO CARELDOPA/
107	(levodopa or I dopa or I?dopa).ti,ab.
108	(levopa or dopar or larodopa or dopaflex).ti,ab.
109	(co beneldopa or co?beneldopa or madopar).ti,ab.
110	(co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).ti,ab.
111	TRIHEXYPHENIDYL/
112	(tr#hex#phen#d#l or THP or benzhexol or broflex or artane).ti,ab.
113	TETRABENAZINE/

114	(tetrabenazin\$ or xenazine or nitoman).ti,ab.
115	CLONIDINE/
116	(clonidine or catapres or dixarit).ti,ab.
117	or/88-116
118	and/87,117
119	limit 118 to english language
120	and/33,119

CINAHL 1981+

SPAST_Q3_oral_drugs_cinahl_280610

#	Query	Limiters/Expanders
S145	S144	Limiters - Exclude MEDLINE records Search modes - Boolean/Phrase
S144	S118 and S143	Search modes - Boolean/Phrase
S143	S119 or S120 or S121 or S122 or S123 or S124 or S125 or S126 or S127 or S128 or S129 or S130 or S131 or S132 or S133 or S134 or S135 or S136 or S137 or S138 or S139 or S140 or S141 or S142	Search modes - Boolean/Phrase
S142	TI (clonidine or catapres or dixarit) or AB (clonidine or catapres or dixarit)	Search modes - Boolean/Phrase
S141	MH CLONIDINE	Search modes - Boolean/Phrase
S140	TI (tetrabenazin* or xenazine or nitoman) or AB (tetrabenazin* or xenazine or nitoman)	Search modes - Boolean/Phrase
S139	TI (tr?hex?phen?d?l or THP or benzhexol or broflex or artane) or AB (tr?hex?phen?d?l or THP or benzhexol or broflex or artane)	Search modes - Boolean/Phrase
S138	TI (duodopa or caramet or stalevo or lecado) or AB (duodopa or caramet or stalevo or lecado)	Search modes - Boolean/Phrase
S137	TI (co-careldopa or cocareldopa or sinemet) or AB (co-careldopa or cocareldopa or sinemet)	Search modes - Boolean/Phrase
S136	TI (co-beneldopa or cobeneldopa or madopar) or AB (co-beneldopa or cobeneldopa or madopar)	Search modes - Boolean/Phrase
S135	TI (levopa or dopar or larodopa or dopaflex) or AB (levopa or dopar or larodopa or dopaflex)	Search modes - Boolean/Phrase
S134	TI (levodopa or I-dopa or Idopa) or AB (levodopa or I-dopa or Idopa)	Search modes - Boolean/Phrase
S133	MH LEVODOPA	Search modes -

		Boolean/Phrase
S132	TI (dantrolene or dantrium) or AB (dantrolene or dantrium)	Search modes - Boolean/Phrase
S131	MH DANTROLENE	Search modes - Boolean/Phrase
S130	TI (tizanidine or zanaflex) or AB (tizanidine or zanaflex)	Search modes - Boolean/Phrase
S129	TI (clonazepam or rivotril) or AB (clonazepam or rivotril)	Search modes - Boolean/Phrase
S128	MH CLONAZEPAM	Search modes - Boolean/Phrase
S127	TI (nitrazepam or nitrodiazepam or mogadon or somnite or remnos) or AB (nitrazepam or nitrodiazepam or mogadon or somnite or remnos)	Search modes - Boolean/Phrase
S126	TI (diazemuls or stesolid or valclair) or AB (diazemuls or stesolid or valclair)	Search modes - Boolean/Phrase
S125	TI (diazepam or valium or rimapam or dialar) or AB (diazepam or valium or rimapam or dialar)	Search modes - Boolean/Phrase
S124	MH DIAZEPAM	Search modes - Boolean/Phrase
S123	MH MUSCLE RELAXANTS, CENTRAL+	Search modes - Boolean/Phrase
S122	TI (benzodiazepine*) or AB (benzodiazepine*)	Search modes - Boolean/Phrase
S121	MH ANTIANXIETY AGENTS, BENZODIAZEPINE+	Search modes - Boolean/Phrase
S120	TI (baclofen or baclophen or lioresal or spinax or lyflex) or AB (baclofen or baclophen or lioresal or spinax or lyflex)	Search modes - Boolean/Phrase
S119	MH BACLOFEN	Search modes - Boolean/Phrase
S118	S115 or S116 or S117	Search modes - Boolean/Phrase
S117	S105 and S114	Search modes - Boolean/Phrase
S116	S18 and S114	Search modes - Boolean/Phrase
S115	S18 and S105	Search modes - Boolean/Phrase
S114	S106 or S107 or S108 or S109 or S110 or S111 or S112 or S113	Search modes - Boolean/Phrase
S113	AB (monopares* or dipares* or hemipares* or	Search modes -

	quadripares* or tetrapares*)	Boolean/Phrase
S112	TI (monopares* or dipares* or hemipares* or quadripares* or tetrapares*)	Search modes - Boolean/Phrase
S111	AB (monoplegi* or diplegi* or hemiplegi* or quadriplegi* or tetraplegi*)	Search modes - Boolean/Phrase
S110	TI (monoplegi* or diplegi* or hemiplegi* or quadriplegi* or tetraplegi*)	Search modes - Boolean/Phrase
S109	MH QUADRIPLEGIA	Search modes - Boolean/Phrase
S108	MH PARAPLEGIA	Search modes - Boolean/Phrase
S107	MH HEMIPLEGIA	Search modes - Boolean/Phrase
S106	MH PARALYSIS+	Search modes - Boolean/Phrase
S105	S19 or S20 or S21 or S22 or S23 or S24 or S25 or S26 or S27 or S28 or S29 or S30 or S31 or S32 or S33 or S34 or S35 or S36 or S37 or S38 or S39 or S40 or S41 or S42 or S43 or S44 or S45 or S46 or S47 or S48 or S49 or S50 or S51 or S52 or S53 or S54 or S55 or S56 or S57 or S58 or S59 or S60 or S61 or S62 or S63 or S64 or S65 or S66 or S67 or S68 or S69 or S70 or S71 or S72 or S73 or S74 or S75 or S76 or S77 or S78 or S79 or S80 or S81 or S82 or S83 or S84 or S85 or S86 or S87 or S88 or S89 or S90 or S91 or S92 or S93 or S94 or S95 or S96 or S97 or S98 or S99 or S100 or S101 or S102 or S103 or S104	Search modes - Boolean/Phrase
S104	TI (shak* N3 syndrome*) or AB (shak* N3 syndrome*)	Search modes - Boolean/Phrase
S103	TI (shak* N3 injur*) or AB (shak* N3 injur*)	Search modes - Boolean/Phrase
S102	MH SHAKEN BABY SYNDROME	Search modes - Boolean/Phrase
S101	TI (hydrocephal*) or AB (hydrocephal*)	Search modes - Boolean/Phrase
S100	MH HYDROCEPHALUS+	Search modes - Boolean/Phrase
S99	TI (cerebrovascular N2 insult*) or AB (cerebrovascular N2 insult*)	Search modes - Boolean/Phrase
S98	TI (cerebrovascular N2 disturb*) or AB (cerebrovascular N2 disturb*)	Search modes - Boolean/Phrase
S97	TI (cerebrovascular N2 damage*) or AB	Search modes -

	(cerebrovascular N2 damage*)	Boolean/Phrase
S96	TI (cerebrovascular N2 occlusion*) or AB (cerebrovascular N2 occlusion*)	Search modes - Boolean/Phrase
S95	TI (cerebrovascular N2 insufficien*) or AB (cerebrovascular N2 insufficien*)	Search modes - Boolean/Phrase
S94	TI (cerebrovascular N2 disease*) or AB (cerebrovascular N2 disease*)	Search modes - Boolean/Phrase
S93	TI (cerebrovascular N2 disorder*) or AB (cerebrovascular N2 disorder*)	Search modes - Boolean/Phrase
S92	TI (intracranial vascular N2 insult*) or AB (intracranial vascular N2 insult*)	Search modes - Boolean/Phrase
S91	TI (intracranial vascular N2 disturb*) or AB (intracranial vascular N2 disturb*)	Search modes - Boolean/Phrase
S90	TI (intracranial vascular N2 damage*) or AB (intracranial vascular N2 damage*)	Search modes - Boolean/Phrase
S89	TI (intracranial vascular N2 occlusion*) or AB (intracranial vascular N2 occlusion*)	Search modes - Boolean/Phrase
S88	TI (intracranial vascular N2 insufficien*) or AB (intracranial vascular N2 insufficien*)	Search modes - Boolean/Phrase
S87	TI (intracranial vascular N2 disease*) or AB (intracranial vascular N2 disease*)	Search modes - Boolean/Phrase
S86	TI (intracranial vascular N2 disorder*) or AB (intracranial vascular N2 disorder*)	Search modes - Boolean/Phrase
S85	TI (intra-cranial vascular N2 insult*) or AB (intra-cranial vascular N2 insult*)	Search modes - Boolean/Phrase
S84	TI (intra-cranial vascular N2 disturb*) or AB (intra-cranial vascular N2 disturb*)	Search modes - Boolean/Phrase
S83	TI (intra-cranial vascular N2 damage*) or AB (intra-cranial vascular N2 damage*)	Search modes - Boolean/Phrase
S82	TI (intra-cranial vascular N2 occlusion*) or AB (intra-cranial vascular N2 occlusion*)	Search modes - Boolean/Phrase
S81	TI (intra-cranial vascular N2 insufficien*) or AB (intra-cranial vascular N2 insufficien*)	Search modes - Boolean/Phrase
S80	TI (intra-cranial vascular N2 disease*) or AB (intra-cranial vascular N2 disease*)	Search modes - Boolean/Phrase
S79	TI (intra-cranial vascular N2 disorder*) or AB (intra-cranial vascular N2 disorder*)	Search modes - Boolean/Phrase
S78	TI (brain vascular N2 insult*) or AB (brain vascular N2 insult*)	Search modes - Boolean/Phrase
S77	TI (brain vascular N2 disturb*) or AB (brain vascular N2 disturb*)	Search modes - Boolean/Phrase
S78	cranial vascular N2 disorder*) TI (brain vascular N2 insult*) or AB (brain vascular N2 insult*) TI (brain vascular N2 disturb*) or AB (brain vascular	Boolean/Phrase Search modes - Boolean/Phrase Search modes -

S55	MH ENCEPHALITIS+	Search modes - Boolean/Phrase
S54	TI (craniocerebral N3 insult*) or AB (craniocerebral N3 insult*)	Search modes - Boolean/Phrase
S53	TI (craniocerebral N3 disturb*) or AB (craniocerebral N3 disturb*)	Search modes - Boolean/Phrase
S52	TI (craniocerebral N3 damage*) or AB (craniocerebral N3 damage*)	Search modes - Boolean/Phrase
S51	TI (craniocerebral N3 trauma*) or AB (craniocerebral N3 trauma*)	Search modes - Boolean/Phrase
S50	TI (craniocerebral N3 injur*) or AB (craniocerebral N3 injur*)	Search modes - Boolean/Phrase
S49	TI (cerebral N3 insult*) or AB (cerebral N3 insult*)	Search modes - Boolean/Phrase
S48	TI (cerebral N3 disturb*) or AB (cerebral N3 disturb*)	Search modes - Boolean/Phrase
S47	TI (cerebral N3 damage*) or AB (cerebral N3 damage*)	Search modes - Boolean/Phrase
S46	TI (cerebral N3 trauma*) or AB (cerebral N3 trauma*)	Search modes - Boolean/Phrase
S45	TI (cerebral N3 injur*) or AB (cerebral N3 injur*)	Search modes - Boolean/Phrase
S44	TI (skull N3 insult*) or AB (skull N3 insult*)	Search modes - Boolean/Phrase
S43	TI (skull N3 disturb*) or AB (skull N3 disturb*)	Search modes - Boolean/Phrase
S42	TI (skull N3 damage*) or AB (skull N3 damage*)	Search modes - Boolean/Phrase
S41	TI (skull N3 trauma*) or AB (skull N3 trauma*)	Search modes - Boolean/Phrase
S40	TI (skull N3 injur*) or AB (skull N3 injur*)	Search modes - Boolean/Phrase
S39	TI (brain N3 insult*) or AB (brain N3 insult*)	Search modes - Boolean/Phrase
S38	TI (brain N3 disturb*) or AB (brain N3 disturb*)	Search modes - Boolean/Phrase
S37	TI (brain N3 damage*) or AB (brain N3 damage*)	Search modes - Boolean/Phrase
S36	TI (brain N3 trauma*) or AB (brain N3 trauma*)	Search modes - Boolean/Phrase
S35	TI (brain N3 injur*) or AB (brain N3 injur*)	Search modes - Boolean/Phrase

S34 TI (head N3 insult*) or AB (head N3 insult*) Search modes - Boolean/Phrase S33 TI (head N3 disturb*) or AB (head N3 disturb*) Search modes - Boolean/Phrase S34 TI (head N3 damage*) or AB (head N3 damage*) Search modes - Boolean/Phrase S35 TI (head N3 trauma*) or AB (head N3 trauma*) Search modes - Boolean/Phrase S36 TI (head N3 injur*) or AB (head N3 trauma*) Search modes - Boolean/Phrase S37 TI (head N3 injur*) or AB (head N3 injur*) Search modes - Boolean/Phrase S28 MH HEAD INJURIES+ S28 TI (meningitis or meningococcal) or AB (meningitis or meningococcal) S29 MH MENINGITIS+ Search modes - Boolean/Phrase S20 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) Search modes - Boolean/Phrase S21 TI (cerebral N3 pals*) or AB (static Search modes - Boolean/Phrase S22 TI (static encephalopath*) or AB (static Search modes - Boolean/Phrase S23 TI (ABI) or AB (ABI) S24 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S25 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S26 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S27 TI (non-progressive N2 brain injur*) S28 TI (non-progressive N2 brain injur*) S29 TI (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) S21 TI (puper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase S23 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase S29 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase S20 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase S21 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase S21 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase S21 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase S22 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase S23 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - B			
S33 IT (nead N3 disturb*) or AB (nead N3 disturb*) Boolean/Phrase S32 TI (head N3 damage*) or AB (head N3 damage*) Search modes - Boolean/Phrase S33 TI (head N3 trauma*) or AB (head N3 trauma*) Search modes - Boolean/Phrase S34 TI (head N3 injur*) or AB (head N3 injur*) Search modes - Boolean/Phrase S25 MH HEAD INJURIES+ S26 TI (meningitis or meningococcal) or AB (meningitis or meningococcal) S27 MH MENINGITIS+ S28 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S29 MH CEREBRAL PALSY S20 TI (static encephalopath*) or AB (static encephalopath*) S21 TI (static encephalopath*) or AB (static encephalopath*) S22 TI (adquired N2 brain injur*) or AB (acquired N2 brain injur*) S23 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S21 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S23 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S29 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S20 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S21 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S22 Search modes - Boolean/Phrase S23 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S24 Search modes - Boolean/Phrase S25 Si or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S16 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S16 or Boolean/Phrase S26 TI (atax*) or AB (atax*) S27 TI (atax*) or AB (atax*) S28 Search modes - Boolean/Phrase S29 Search modes - Boolean/Phrase S20 Search modes - Boolean/Phrase S21 MH ATAXIA	S34	TI (head N3 insult*) or AB (head N3 insult*)	
Time	S33	TI (head N3 disturb*) or AB (head N3 disturb*)	
TI (head N3 triauma*) or AB (head N3 triauma*) Search modes - Boolean/Phrase Search modes - Boolean/Phrase Search modes - Boolean/Phrase Search modes - Boolean/Phrase TI (meningitis or meningococcal) or AB (meningitis or meningococcal) TI (meningitis or meningococcal) or AB (meningitis or meningococcal) TI (meningitis or meningococcal) or AB (meningitis or meningococcal) TI (meningitis or meningococcal) or AB (meningitis or meningococcal) Search modes - Boolean/Phrase Search modes - Boolean/Phrase TI (cerebral N3 pals*) or AB (cerebral N3 pals*) Search modes - Boolean/Phrase Search modes - Boolean/Phrase TI (static encephalopath*) or AB (static encephalopath*) Search modes - Boolean/Phrase TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) TI (nonprogressive N2 brain injur*) or AB (non-progressive N2 brain injur*) TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) Search modes - Boolean/Phrase TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) Search modes - Boolean/Phrase TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) TI (tatax*) or AB (atax*) Search modes - Boolean/Phrase Search modes - Boolean/Phrase	S32	TI (head N3 damage*) or AB (head N3 damage*)	
S30 IT (nead N3 Injur*) or AB (nead N3 Injur*) Boolean/Phrase S29 MH HEAD INJURIES+ Search modes - Boolean/Phrase S28 TI (meningitis or meningococcal) or AB (meningitis or meningococcal) S27 MH MENINGITIS+ S28 Search modes - Boolean/Phrase S29 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S29 Search modes - Boolean/Phrase S20 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S21 TI (static encephalopath*) or AB (static encephalopath*) S22 TI (static encephalopath*) or AB (static encephalopath*) S23 TI (ABI) or AB (ABI) S24 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S25 TI (non-progressive N2 brain injur*) or AB (acquired N2 brain injur*) S26 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S29 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S21 TI (ond-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S23 TI (prodes - Boolean/Phrase S24 TI (prodes - Boolean/Phrase S25 TI (prodes - Boolean/Phrase S26 TI (prodes - Boolean/Phrase S27 TI (prodes - Boolean/Phrase S28 TI (prodes - Boolean/Phrase S29 TI (prodes - Boolean/Phrase S20 TI (prodes - Boolean/Phrase S21 TI (prodes - Boolean/Phrase S22 TI (prodes - Boolean/Phrase S23 TI (prodes - Boolean/Phrase S24 TI (prodes - Boolean/Phrase S25 TI (prodes - Boolean/Phrase S26 TI (prodes - Boolean/Phrase S27 TI (prodes - Boolean/Phrase S28 TI (prodes - Boolean/Phrase S29 TI (prodes - Boolean/Phrase	S31	TI (head N3 trauma*) or AB (head N3 trauma*)	
S28 MH HEAD INJURIES+ S28 TI (meningitis or meningococcal) or AB (meningitis or meningococcal) S27 MH MENINGITIS+ S26 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S27 MH CEREBRAL PALSY S28 TI (static encephalopath*) or AB (static encephalopath*) S29 TI (static encephalopath*) or AB (static encephalopath*) S20 TI (ABI) or AB (ABI) S21 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S27 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S28 TI (non-progressive N2 brain injur*) S29 TI (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) S21 TI (non-progressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) S23 TI (non-progressive N2 brain injur*) S24 TI (non-progressive N2 brain injur*) S25 TI (non-progressive N2 brain injur*) S26 TI (non-progressive N2 brain injur*) S27 TI (non-progressive N2 brain injur*) S28 S1 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 S17 TI (upper motor neuron# lesion*) or AB (upper motor search modes - Boolean/Phrase S16 TI (atax*) or AB (atax*) S27 MH ATAXIA S28 Search modes - Boolean/Phrase S28 MH ATAXIA S29 Search modes - Boolean/Phrase S29 TI (atax*) or AB (atax*) S29 Search modes - Boolean/Phrase	S30	TI (head N3 injur*) or AB (head N3 injur*)	
meningococcal) MH MENINGITIS+ Search modes - Boolean/Phrase TI (ABI) or AB (ABI) Search modes - Boolean/Phrase Search modes - Boolean/Phrase TI (nonprogressive N2 brain injur*) or AB (acquired N2 brain Boolean/Phrase Boolean/Phrase TI (nonprogressive N2 brain injur*) or AB (non-progressive N2 brain injur*) TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) Search modes - Boolean/Phrase Search modes - Boolean/Phrase TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) TI (utax*) or AB (atax*) MH ATAXIA Search modes - Boolean/Phrase Search modes - Boolean/Phrase Search modes - Boolean/Phrase	S29	MH HEAD INJURIES+	
S27 MH MENINGITIS+ Boolean/Phrase S26 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) Search modes - Boolean/Phrase S25 MH CEREBRAL PALSY Search modes - Boolean/Phrase S24 TI (static encephalopath*) or AB (static encephalopath*) S25 TI (ABI) or AB (ABI) S26 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S27 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S28 TI (nonprogressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S29 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) S21 TI (non-progressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) S23 TI (non-progressive N2 brain injur*) S24 TI (non-progressive N2 brain injur*) S25 TI (non-progressive N2 brain injur*) S26 Search modes - Boolean/Phrase S27 TI (non-progressive N2 brain injur*) S28 Si or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or Boolean/Phrase S17 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S18 TI (atax*) or AB (atax*) S29 MH ATAXIA S20 MH ATAXIA S20 Dican/Phrase S21 TI (atax*) or AB (atax*) S22 Search modes - Boolean/Phrase S23 TI (atax*) or AB (atax*) S24 Cerch modes - Boolean/Phrase S25 MH ATAXIA	S28		
S26 IT (cerebral N3 pals*) or AB (cerebral N3 pals*) Boolean/Phrase S27 MH CEREBRAL PALSY Search modes - Boolean/Phrase S28 TI (static encephalopath*) or AB (static encephalopath*) S29 TI (ABI) or AB (ABI) S20 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S21 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S23 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S24 TI (non-progressive N2 brain injur*) S25 TI (non-progressive N2 brain injur*) S26 TI (non-progressive N2 brain injur*) S27 TI (non-progressive N2 brain injur*) S28 Search modes - Boolean/Phrase S29 MH BRAIN INJURIES+ S20 Search modes - Boolean/Phrase S21 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S21 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S21 TI (atax*) or AB (atax*) S22 Search modes - Boolean/Phrase S23 Search modes - Boolean/Phrase S24 TI (atax*) or AB (atax*) S25 MH ATAXIA S26 TI (atax*) or AB (atax*) S27 Search modes - Boolean/Phrase	S27	MH MENINGITIS+	
S25 MH CEREBRAL PALSY Boolean/Phrase S24 TI (static encephalopath*) or AB (static encephalopath*) S25 TI (ABI) or AB (ABI) S26 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S27 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S28 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S29 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) S21 MH BRAIN INJURIES+ S22 Search modes - Boolean/Phrase S23 TI (nonprogressive N2 brain injur*) S24 Search modes - Boolean/Phrase S25 Search modes - Boolean/Phrase S26 Search modes - Boolean/Phrase S27 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S28 Search modes - Boolean/Phrase S29 TI (atax*) or AB (atax*) S20 TI (atax*) or AB (atax*) S20 Search modes - Boolean/Phrase S21 Search modes - Boolean/Phrase S22 Search modes - Boolean/Phrase S23 TI (atax*) or AB (atax*) S24 Search modes - Boolean/Phrase S25 MH ATAXIA S25 Search modes - Boolean/Phrase	S26	TI (cerebral N3 pals*) or AB (cerebral N3 pals*)	
S24 encephalopath*) Boolean/Phrase S23 TI (ABI) or AB (ABI) Search modes - Boolean/Phrase S22 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S23 TI (nonprogressive N2 brain injur*) or AB (acquired N2 brain goolean/Phrase) S24 TI (nonprogressive N2 brain injur*) or AB (acquired N2 brain goolean/Phrase) S25 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S26 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S27 MH BRAIN INJURIES+ S28 S1 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S16 or S17 S17 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S28 Search modes - Boolean/Phrase S29 TI (atax*) or AB (atax*) S20 Search modes - Boolean/Phrase S21 Search modes - Boolean/Phrase S22 Search modes - Boolean/Phrase S23 Search modes - Boolean/Phrase S24 Search modes - Boolean/Phrase S25 MH ATAXIA S26 Search modes - Boolean/Phrase	S25	MH CEREBRAL PALSY	
S22 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S21 TI (nonprogressive N2 brain injur*) or AB (acquired N2 brain boolean/Phrase) S21 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S21 MH BRAIN INJURIES+ S22 Sarch modes - Boolean/Phrase S23 Sarch modes - Boolean/Phrase S24 Sarch modes - Boolean/Phrase S25 Sarch modes - Boolean/Phrase S26 Sarch modes - Boolean/Phrase S27 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S28 Sarch modes - Boolean/Phrase S29 Sarch modes - Boolean/Phrase S20 Sarch modes - Boolean/Phrase S21 TI (atax*) or AB (atax*) S21 Sarch modes - Boolean/Phrase S22 Sarch modes - Boolean/Phrase S23 Sarch modes - Boolean/Phrase S24 Sarch modes - Boolean/Phrase S25 MH ATAXIA	S24	1 ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	
injur*) Boolean/Phrase S1 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S20 MH BRAIN INJURIES+ S21 S1 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 S21 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S21 TI (atax*) or AB (atax*) S22 Search modes - Boolean/Phrase S23 Search modes - Boolean/Phrase S24 MH ATAXIA S25 MH ATAXIA S26 Boolean/Phrase S26 Boolean/Phrase S27 Search modes - Boolean/Phrase S28 Boolean/Phrase	S23	TI (ABI) or AB (ABI)	
S21 (nonprogressive N2 brain injur*) Boolean/Phrase	S22	, , , , , , , , , , , , , , , , , , ,	
progressive N2 brain injur*) Boolean/Phrase Search modes - Boolean/Phrase S19 MH BRAIN INJURIES+ S10 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S10 TI (atax*) or AB (atax*) S11 MH ATAXIA S12 MH ATAXIA Boolean/Phrase Search modes - Boolean/Phrase Search modes - Boolean/Phrase	S21	, , ,	
S19 MH BRAIN INJORIES+ S1 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S17 TI (atax*) or AB (atax*) S18 TI (atax*) or AB (atax*) S19 Boolean/Phrase Search modes - Boolean/Phrase Search modes - Boolean/Phrase S10 TI (atax*) or AB (atax*) S11 Search modes - Boolean/Phrase S12 Search modes - Boolean/Phrase	S20	, , , ,	
S18 S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S17 TI (atax*) or AB (atax*) S18 S10 or S11 or S12 or S13 or S14 or S15 or S16 or Boolean/Phrase S20 Search modes - Boolean/Phrase S217 Search modes - Boolean/Phrase S22 Search modes - Boolean/Phrase	S19	MH BRAIN INJURIES+	
neuron# lesion*) S17 neuron# lesion*) Boolean/Phrase Search modes - Boolean/Phrase S15 MH ATAXIA Search modes - Boolean/Phrase	S18	S10 or S11 or S12 or S13 or S14 or S15 or S16 or	
S16 IT (atax*) or AB (atax*) Boolean/Phrase S15 MH ATAXIA Search modes - Boolean/Phrase	S17	` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	
S15 MH ATAXIA Boolean/Phrase	S16	TI (atax*) or AB (atax*)	
S14 TI (musc* N3 weak*) or AB (musc* N3 weak*) Search modes -	S15	MH ATAXIA	
	S14	TI (musc* N3 weak*) or AB (musc* N3 weak*)	Search modes -

		Boolean/Phrase
S13	MH MUSCLE WEAKNESS	Search modes - Boolean/Phrase
S12	TI (athetos* or athetoid*) or AB (athetos* or athetoid*)	Search modes - Boolean/Phrase
S11	TI (chorea* or choreic* or choreo*) or AB (chorea* or choreic* or choreo*)	Search modes - Boolean/Phrase
S10	MH CHOREA+	Search modes - Boolean/Phrase
S9	TI (dystoni*) or AB (dystoni*)	Search modes - Boolean/Phrase
S8	MH DYSTONIA+	Search modes - Boolean/Phrase
S7	TI (involuntar* N2 mov*) or AB (involuntar* N2 mov*)	Search modes - Boolean/Phrase
S6	TI (abnormal N2 mov*) or AB (abnormal N2 mov*)	Search modes - Boolean/Phrase
S5	TI (dyskinesi*) or AB (dyskinesi*)	Search modes - Boolean/Phrase
S4	MH DYSKINESIAS+	Search modes - Boolean/Phrase
S3	TI (spastic* or spasm* or hyperton*) or AB (spastic* or spasm* or hyperton*)	Search modes - Boolean/Phrase
S2	MH SPASM+	Search modes - Boolean/Phrase
S1	MH MUSCLE SPASTICITY	Search modes - Boolean/Phrase

Question 3 Health economics searches

Ovid MEDLINE(R) 1950+

 $SPAST_Q3_oral_drugs_economic_medline_110810$

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	MUSCLE SPASTICITY/
9	exp SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
12	hyperton\$.ti,ab.
13	exp DYSKINESIAS/
14	dyskinesi\$.ti,ab.
15	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
16	exp DYSTONIA/
17	dystoni\$.ti,ab.
18	exp CHOREA/
19	(chorea\$ or choreic\$ or choreo\$).ti,ab.
20	exp ATHETOSIS/
21	(athetos\$ or athetoid).ti,ab.
22	MUSCLE WEAKNESS/
23	(musc\$ adj3 weak\$).ti,ab.
24	exp ATAXIA/
25	atax\$.ti,ab.
26	upper motor neuron? lesion\$.ti,ab.
27	or/8-26
28	exp BRAIN INJURIES/
29	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
30	ABI.ti,ab.
31	static encephalopath\$.ti,ab.
32	CEREBRAL PALSY/

33 (cerebral adj3 pals\$).ti,ab. 34 exp MENINGITIS/ 35 (meningitis or meningococcal).ti,ab. 36 exp CRANIOCEREBRAL TRAUMA/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 38 exp ENCEPHALITIS/ 39 encephaliti\$.ti,ab. 40 exp STROKE/ 41 stroke\$.ti.ab. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab. 43 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or 44 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 45 exp HYDROCEPHALUS/ 46 hydrocephal ti, ab. 47 SHAKEN BABY SYNDROME/ 48||(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 49 or/28-48 50 exp PARALYSIS/ 51 HEMIPLEGIA/ 52 exp PARAPLEGIA/ 53 QUADRIPLEGIA/ 54 exp PARESIS/ 55 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 56 (monopares or dipares or hemipares or quadripares or tetrapares).ti,ab. 57 or/50-56 58 and/27,57 59 and/49.57 60 and/27,49 61 or/58-60 62 BACLOFEN/ 63 (baclofen or baclophen or lioresal or spinax or lyflex).ti,ab. 64 exp BENZODIAZEPINES/ 65 benzodiazepine\$.ti,ab. 66 exp BENZODIAZEPINONES/ 67 exp MUSCLE RELAXANTS, CENTRAL/ 68 exp DIAZEPAM/

69	(diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab.
70	(nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab.
71	(clonazepam or rivotril).ti,ab.
72	(tizanidine or zanaflex).ti,ab.
73	DANTROLENE/
74	(dantrolene or dantrium).ti,ab.
75	LEVODOPA/
76	(levodopa or I dopa or I?dopa).ti,ab.
77	(levopa or dopar or larodopa or dopaflex).ti,ab.
78	(co beneldopa or co?beneldopa or madopar).ti,ab.
79	(co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).ti,ab.
80	TRIHEXYPHENIDYL/
81	(tr#hex#phen#d#l or THP or benzhexol or broflex or artane).ti,ab.
82	TETRABENAZINE/
83	(tetrabenazin\$ or xenazine or nitoman).ti,ab.
84	CLONIDINE/
85	(clonidine or catapres or dixarit).ti,ab.
86	or/62-85
87	and/61,86
88	limit 87 to english language
89	limit 88 to animals
90	limit 88 to (animals and humans)
91	89 not 90
92	88 not 91
93	and/7,92

EBM Reviews - Cochrane Central Register of Controlled Trials

 $SPAST_Q3_oral_drugs_economic_cctr_110810$

#	Searches	Results
1	costs.tw.	6200
2	cost effective\$.tw.	4915
3	economic.tw.	2752
4	or/1-3	10398
5	(metabolic adj cost).tw.	42
6	((energy or oxygen) adj cost).tw.	197
7	4 not (5 or 6)	10384

8	MUSCLE SPASTICITY/	338
	exp SPASM/	240
=	exp MUSCLE HYPERTONIA/	424
	(spastic\$ or spasm\$).ti,ab.	1865
=	hyperton\$.ti,ab.	955
	exp DYSKINESIAS/	1837
14	dyskinesi\$.ti,ab.	920
	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.	321
16	exp DYSTONIA/	123
17	dystoni\$.ti,ab.	336
18	exp CHOREA/	148
19	(chorea\$ or choreic\$ or choreo\$).ti,ab.	119
20	exp ATHETOSIS/	14
21	(athetos\$ or athetoid).ti,ab.	16
22	MUSCLE WEAKNESS/	155
23	(musc\$ adj3 weak\$).ti,ab.	321
24	exp ATAXIA/	95
25	atax\$.ti,ab.	239
26	upper motor neuron? lesion\$.ti,ab.	7
27	or/8-26	6341
28	exp BRAIN INJURIES/	630
29	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.	71
30	ABI.ti,ab.	110
31	static encephalopath\$.ti,ab.	1
32	CEREBRAL PALSY/	368
33	(cerebral adj3 pals\$).ti,ab.	561
34	exp MENINGITIS/	371
35	(meningitis or meningococcal).ti,ab.	751
36	exp CRANIOCEREBRAL TRAUMA/	1203
37	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.	2067
38	exp ENCEPHALITIS/	146
39	encephaliti\$.ti,ab.	197
40	exp STROKE/	2635
	stroke\$.ti,ab.	12493
42	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.	1172
43	exp CEREBROVASCULAR DISORDERS/	5788

(Irrain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insuft\$),ti,ab.	_		
45 EXP HYDROCEPHALUS	44	cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or	886
46 hydrocephal\$.ti,ab. 149 47 SHAKEN BABY SYNDROME/ 4 48 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 4 49 or/28-48 19829 50 exp PARALYSIS/ 834 51 HEMIPLEGIA/ 327 52 exp PARAPLEGIA/ 95 54 exp PARESIS/ 211 55 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 888 66 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 235 57 or/50-56 1776 58 and/27,57 319 59 and/49,57 844 60 and/27,49 651 61 or/58-60 1364 62 BACLOFEN/ 139 63 (baclofen or baclophen or lioresal or spinax or lyflex).ti,ab. 233 64 exp BENZODIAZEPINES/ 6895 5b benzodiazepine\$.ti,ab. 69 6e exp BENZODIAZEPINGNES/ 3949	45		96
47 SHAKEN BABY SYNDROME/ 4 48 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 4 49 or/28-48 19829 50 exp PARALYSIS/ 834 51 HEMIPLEGIA/ 327 52 exp PARAPLEGIA/ 95 54 exp PARESIS/ 211 55 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 888 66 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 235 57 or/50-56 1776 58 and/27,57 319 59 and/49,57 844 60 and/27,49 651 61 or/58-60 1364 62 BACLOFEN/ 139 63 (baclofen or baclophen or lioresal or spinax or lyflex).ti,ab. 233 64 exp BENZODIAZEPINOSE/ 6895 65 benzodiazepine\$.ti,ab. 2479 68 exp DIAZEPAW 1790 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valcial	$\vdash \vdash$		+
488 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 4 49 or/28-48 19829 50 exp PARALYSIS/ 834 51 HEMIPLEGIA/ 327 52 exp PARAPLEGIA/ 95 54 exp PARESIS/ 211 55 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 888 66 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 235 57 or/50-56 1776 58 and/27,57 319 59 and/49,57 844 60 and/27,49 651 61 or/58-60 1364 62 BACLOFEN/ 139 63 (baclofen or baclophen or lioresal or spinax or lyflex).ti,ab. 233 64 exp BENZODIAZEPINES/ 6895 65 benzodiazepine\$.ti,ab. 2441 66 exp BENZODIAZEPINONES/ 3949 67 exp MUSCLE RELAXANTS, CENTRAL/ 2479 68 exp DIAZEPAM/ 1790			-
19829 1982			+
S0 EXP PARALYSIS 834 14EMIPLEGIA 327 132 134 134 134 134 134 134 134 134 134 134 134 134 135 134 135	=		19829
52 exp PARAPLEGIA/ 134 53 QUADRIPLEGIA/ 95 54 exp PARESIS/ 211 55 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 888 56 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 235 57 or/50-56 1776 58 and/27,57 319 59 and/49,57 844 60 and/27,49 651 61 or/58-60 1364 62 BACLOFEN/ 139 63 (baclofen or baclophen or lioresal or spinax or lyflex).ti,ab. 233 64 exp BENZODIAZEPINES/ 6895 65 berzodiazepine\$.ti,ab. 2441 66 exp BENZODIAZEPINONES/ 3949 67 exp MUSCLE RELAXANTS, CENTRAL/ 2479 68 exp DIAZEPAW 1790 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valciar).ti,ab. 2796 70 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 209	\vdash		834
53 QUADRIPLEGIA/ 95 54 exp PARESIS/ 211 55 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 888 56 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 235 57 or/50-56 1776 58 and/27,57 319 59 and/49,57 844 60 and/27,49 651 61 or/58-60 1364 62 BACLOFEN/ 139 63 (baclofen or baclophen or lioresal or spinax or lyflex).ti,ab. 233 64 exp BENZODIAZEPINES/ 6895 65 benzodiazepine\$.ti,ab. 2441 66 exp BENZODIAZEPINONES/ 3949 67 exp MUSCLE RELAXANTS, CENTRAL/ 2479 68 exp DIAZEPAW 1790 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 2796 70 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 266 71 (clonazepam or rivotrii).ti,ab. 209 72 (tizanidine or zanaflex).ti,ab. 50 73 DANTROLENE/ 25 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/	51	HEMIPLEGIA/	327
54 exp PARESIS/ 211 55 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 888 56 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 235 57 or/50-56 1776 58 and/27,57 319 59 and/49,57 844 60 and/27,49 651 61 or/58-60 1364 62 BACLOFEN/ 139 63 (baclofen or baclophen or lioresal or spinax or lyflex).ti,ab. 233 64 exp BENZODIAZEPINES/ 6895 65 benzodiazepine\$.ti,ab. 2441 66 exp BENZODIAZEPINONES/ 3949 67 exp MUSCLE RELAXANTS, CENTRAL/ 2479 68 exp DIAZEPAM/ 1790 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 2796 70 (intrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 266 71 (clonazepam or rivotril).ti,ab. 299 72 (tizanidine or zanafle	52	exp PARAPLEGIA/	134
Common September Septemb	53	QUADRIPLEGIA/	95
tetraplegi\$).ti,ab. (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or dipares\$ or dipare	54	exp PARESIS/	211
Iterrapares\$, It, ab. 1776 1776 1776 1776 1776 1844 1776 1776 1844 1776 1844	၁၁	tetraplegi\$).ti,ab.	888
58 and/27,57 319 59 and/49,57 844 60 and/27,49 651 61 or/58-60 1364 62 BACLOFEN/ 139 63 (baclofen or baclophen or lioresal or spinax or lyflex).ti,ab. 233 64 exp BENZODIAZEPINES/ 6895 65 benzodiazepine\$.ti,ab. 2441 66 exp BENZODIAZEPINONES/ 3949 67 exp MUSCLE RELAXANTS, CENTRAL/ 2479 68 exp DIAZEPAM/ 1790 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 2796 70 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 266 71 (clonazepam or rivotril).ti,ab. 209 72 (tizanidine or zanaflex).ti,ab. 89 73 DANTROLENE/ 25 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/ 847 76 (levodopa or I dopa or I?dopa).ti,ab. 1450 77 (levopa or dopar or larodopa or dopaflex).ti,ab. 0	56	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.	235
59 and/49,57 844 60 and/27,49 651 61 or/58-60 1364 62 BACLOFEN/ 139 63 (baclofen or baclophen or lioresal or spinax or lyflex).ti,ab. 233 64 exp BENZODIAZEPINES/ 6895 65 benzodiazepine\$.ti,ab. 2441 66 exp BENZODIAZEPINONES/ 3949 67 exp MUSCLE RELAXANTS, CENTRAL/ 2479 68 exp DIAZEPAM/ 1790 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 2796 70 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 266 71 (clonazepam or rivotril).ti,ab. 209 72 (tizanidine or zanaflex).ti,ab. 89 73 DANTROLENE/ 25 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/ 847 76 (levodopa or I dopa or I?dopa).ti,ab. 1450 77 (levopa or dopar or larodopa or dopaflex).ti,ab. 0	57	or/50-56	1776
60 and/27,49 651 61 or/58-60 1364 62 BACLOFEN/ 139 63 (baclofen or baclophen or lioresal or spinax or lyflex).ti,ab. 233 64 exp BENZODIAZEPINES/ 6895 65 benzodiazepine\$.ti,ab. 2441 66 exp BENZODIAZEPINONES/ 3949 67 exp MUSCLE RELAXANTS, CENTRAL/ 2479 68 exp DIAZEPAM/ 1790 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 2796 70 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 266 71 (clonazepam or rivotril).ti,ab. 209 72 (tizanidine or zanaflex).ti,ab. 89 73 DANTROLENE/ 25 74 (dantrolene or dantrium).ti,ab. 50 75 [LEVODOPA/ 847 76 (levodopa or I dopa or I?dopa).ti,ab. 1450 77 (levopa or dopar or larodopa or dopaflex).ti,ab. 0	58	and/27,57	319
61 or/58-60 1364 62 BACLOFEN/ 139 63 (baclofen or baclophen or lioresal or spinax or lyflex).ti,ab. 233 64 exp BENZODIAZEPINES/ 6895 65 benzodiazepine\$.ti,ab. 2441 66 exp BENZODIAZEPINONES/ 3949 67 exp MUSCLE RELAXANTS, CENTRAL/ 2479 68 exp DIAZEPAM/ 1790 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 2796 70 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 266 71 (clonazepam or rivotril).ti,ab. 209 72 (tizanidine or zanaflex).ti,ab. 89 73 DANTROLENE/ 25 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/ 847 76 (levodopa or I dopa or I?dopa).ti,ab. 1450 77 (levopa or dopar or larodopa or dopaflex).ti,ab. 0	59	and/49,57	844
62 BACLOFEN/ 63 (baclofen or baclophen or lioresal or spinax or lyflex).ti,ab. 233 64 exp BENZODIAZEPINES/ 65 benzodiazepine\$.ti,ab. 2441 66 exp BENZODIAZEPINONES/ 3949 67 exp MUSCLE RELAXANTS, CENTRAL/ 2479 68 exp DIAZEPAM/ 1790 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 70 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 266 71 (clonazepam or rivotril).ti,ab. 209 72 (tizanidine or zanaflex).ti,ab. 89 73 DANTROLENE/ 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/ 76 (levodopa or l dopa or l?dopa).ti,ab. 77 (levopa or dopar or larodopa or dopaflex).ti,ab. 0	60	and/27,49	651
63 (baclofen or baclophen or lioresal or spinax or lyflex).ti,ab. 64 exp BENZODIAZEPINES/ 65 benzodiazepine\$.ti,ab. 66 exp BENZODIAZEPINONES/ 67 exp MUSCLE RELAXANTS, CENTRAL/ 68 exp DIAZEPAM/ 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 70 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 266 71 (clonazepam or rivotril).ti,ab. 72 (tizanidine or zanaflex).ti,ab. 89 73 DANTROLENE/ 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/ 76 (levodopa or I dopa or I?dopa).ti,ab. 77 (levopa or dopar or larodopa or dopaflex).ti,ab. 0	61	or/58-60	1364
64 exp BENZODIAZEPINES/ 65 benzodiazepine\$.ti,ab. 2441 66 exp BENZODIAZEPINONES/ 3949 67 exp MUSCLE RELAXANTS, CENTRAL/ 2479 68 exp DIAZEPAM/ 1790 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 270 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 266 71 (clonazepam or rivotril).ti,ab. 209 72 (tizanidine or zanaflex).ti,ab. 89 73 DANTROLENE/ 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/ 76 (levodopa or I dopa or I?dopa).ti,ab. 77 (levopa or dopar or larodopa or dopaflex).ti,ab.	62	BACLOFEN/	139
benzodiazepine\$.ti,ab. 2441 66 exp BENZODIAZEPINONES/ 3949 67 exp MUSCLE RELAXANTS, CENTRAL/ 2479 68 exp DIAZEPAM/ 1790 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 270 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 266 71 (clonazepam or rivotril).ti,ab. 209 72 (tizanidine or zanaflex).ti,ab. 89 73 DANTROLENE/ 25 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/ 847 76 (levodopa or I dopa or I?dopa).ti,ab. 1450 77 (levopa or dopar or larodopa or dopaflex).ti,ab. 0	63	(baclofen or baclophen or lioresal or spinax or lyflex).ti,ab.	233
66 exp BENZODIAZEPINONES/ 67 exp MUSCLE RELAXANTS, CENTRAL/ 68 exp DIAZEPAM/ 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 70 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 71 (clonazepam or rivotril).ti,ab. 72 (tizanidine or zanaflex).ti,ab. 73 DANTROLENE/ 74 (dantrolene or dantrium).ti,ab. 75 LEVODOPA/ 76 (levodopa or I dopa or I?dopa).ti,ab. 77 (levopa or dopar or larodopa or dopaflex).ti,ab.	64	exp BENZODIAZEPINES/	6895
67 exp MUSCLE RELAXANTS, CENTRAL/ 68 exp DIAZEPAM/ 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 70 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 266 71 (clonazepam or rivotril).ti,ab. 209 72 (tizanidine or zanaflex).ti,ab. 89 73 DANTROLENE/ 25 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/ 847 76 (levodopa or I dopa or I?dopa).ti,ab. 1450 77 (levopa or dopar or larodopa or dopaflex).ti,ab.	65	benzodiazepine\$.ti,ab.	2441
68 exp DIAZEPAM/ 69 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 70 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 266 71 (clonazepam or rivotril).ti,ab. 72 (tizanidine or zanaflex).ti,ab. 89 73 DANTROLENE/ 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/ 76 (levodopa or I dopa or I?dopa).ti,ab. 77 (levopa or dopar or larodopa or dopaflex).ti,ab. 0	66	exp BENZODIAZEPINONES/	3949
(diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).ti,ab. 70 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 266 71 (clonazepam or rivotril).ti,ab. 72 (tizanidine or zanaflex).ti,ab. 89 73 DANTROLENE/ 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/ 76 (levodopa or I dopa or I?dopa).ti,ab. 77 (levopa or dopar or larodopa or dopaflex).ti,ab.	67	exp MUSCLE RELAXANTS, CENTRAL/	2479
valclair).ti,ab. 70 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab. 266 71 (clonazepam or rivotril).ti,ab. 209 72 (tizanidine or zanaflex).ti,ab. 89 73 DANTROLENE/ 25 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/ 847 76 (levodopa or l dopa or l?dopa).ti,ab. 77 (levopa or dopar or larodopa or dopaflex).ti,ab.	68	exp DIAZEPAM/	1790
71 (clonazepam or rivotril).ti,ab. 209 72 (tizanidine or zanaflex).ti,ab. 89 73 DANTROLENE/ 25 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/ 847 76 (levodopa or l dopa or l?dopa).ti,ab. 1450 77 (levopa or dopar or larodopa or dopaflex).ti,ab.	69		2796
72 (tizanidine or zanaflex).ti,ab. 73 DANTROLENE/ 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/ 847 76 (levodopa or I dopa or I?dopa).ti,ab. 1450 77 (levopa or dopar or larodopa or dopaflex).ti,ab.	70	(nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab.	266
73 DANTROLENE/ 25 74 (dantrolene or dantrium).ti,ab. 50 75 LEVODOPA/ 847 76 (levodopa or I dopa or I?dopa).ti,ab. 1450 77 (levopa or dopar or larodopa or dopaflex).ti,ab.	71	(clonazepam or rivotril).ti,ab.	209
74 (dantrolene or dantrium).ti,ab.5075 LEVODOPA/84776 (levodopa or I dopa or I?dopa).ti,ab.145077 (levopa or dopar or larodopa or dopaflex).ti,ab.0	72	(tizanidine or zanaflex).ti,ab.	89
75 LEVODOPA/ 847 76 (levodopa or l dopa or l?dopa).ti,ab. 1450 77 (levopa or dopar or larodopa or dopaflex).ti,ab. 0	73	DANTROLENE/	25
76 (levodopa or I dopa or I?dopa).ti,ab. 1450 77 (levopa or dopar or larodopa or dopaflex).ti,ab. 0	74	(dantrolene or dantrium).ti,ab.	50
77 (levopa or dopar or larodopa or dopaflex).ti,ab.	75	LEVODOPA/	847
	76	(levodopa or I dopa or I?dopa).ti,ab.	1450
78 (co beneldopa or co?beneldopa or madopar).ti,ab.	77	(levopa or dopar or larodopa or dopaflex).ti,ab.	0
	78	(co beneldopa or co?beneldopa or madopar).ti,ab.	66

79	(co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).ti,ab.	124
80	TRIHEXYPHENIDYL/	65
81	(tr#hex#phen#d#l or THP or benzhexol or broflex or artane).ti,ab.	163
82	TETRABENAZINE/	22
83	(tetrabenazin\$ or xenazine or nitoman).ti,ab.	27
84	CLONIDINE/	1420
85	(clonidine or catapres or dixarit).ti,ab.	2063
86	or/62-85	13883
87	and/61,86	84
88	and/7,87	1

EBM Reviews - Health Technology Assessment

 $SPAST_Q3_oral_drugs_economic_hta_110810$

#	Searches
=	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).tw.
5	hyperton\$.tw.
6	exp DYSKINESIAS/
7	dyskinesi\$.tw.
8	((abnormal\$ or involuntar\$) adj2 mov\$).tw.
9	exp DYSTONIA/
10	dystoni\$.tw.
11	exp CHOREA/
12	(chorea\$ or choreic\$ or choreo\$).tw.
13	exp ATHETOSIS/
14	(athetos\$ or athetoid).tw.
15	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).tw.
17	exp ATAXIA/
18	atax\$.tw.
19	upper motor neuron? lesion\$.tw.
20	or/1-19
21	exp BRAIN INJURIES/
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).tw.
23	ABI.tw.

24 static encephalopath \$.tw. 25 CEREBRAL PALSY/ 26 (cerebral adi3 pals\$).tw. 27 exp MENINGITIS/ 28 (meningitis or meningococcal).tw. 29 exp CRANIOCEREBRAL TRAUMA/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 31 exp ENCEPHALITIS/ 32 encephaliti\$.tw. 33 exp STROKE/ 34 stroke\$.tw. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or 37 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/ 41 (shak\$ adj3 (injur\$ or syndrome\$)).tw. 42 or/21-41 43 exp PARALYSIS/ 44 HEMIPLEGIA/ 45 exp PARAPLEGIA/ 46 QUADRIPLEGIA/ 47 exp PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw. 49 (monopares or dipares or hemipares or quadripares or tetrapares).tw. 50 or/43-49 51 and/20,50 52 and/42,50 53 and/20,42 54 or/51-53 55 BACLOFEN/ 56 (baclofen or baclophen or lioresal or spinax or lyflex).tw. 57 exp BENZODIAZEPINES/ 58 benzodiazepine\$.tw. 59 exp BENZODIAZEPINONES/

60	exp MUSCLE RELAXANTS, CENTRAL/
61	exp DIAZEPAM/
62	(diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw.
63	(nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw.
64	(clonazepam or rivotril).tw.
65	(tizanidine or zanaflex).tw.
66	DANTROLENE/
67	(dantrolene or dantrium).tw.
68	LEVODOPA/
69	(levodopa or I dopa or I?dopa).tw.
70	(levopa or dopar or larodopa or dopaflex).tw.
71	(co beneldopa or co?beneldopa or madopar).tw.
72	(co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw.
73	TRIHEXYPHENIDYL/
74	(tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw.
75	TETRABENAZINE/
76	(tetrabenazin\$ or xenazine or nitoman).tw.
77	CLONIDINE/
78	(clonidine or catapres or dixarit).tw.
79	or/55-78
80	and/54,79

EBM Reviews - NHS Economic Evaluation Database

 $SPAST_Q3_oral_drugs_economic_nhseed_110810$

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).tw.
5	hyperton\$.tw.
6	exp DYSKINESIAS/
7	dyskinesi\$.tw.
8	((abnormal\$ or involuntar\$) adj2 mov\$).tw.
9	exp DYSTONIA/
10	dystoni\$.tw.
11	exp CHOREA/
12	(chorea\$ or choreic\$ or choreo\$).tw.

13	exp ATHETOSIS/
14	(athetos\$ or athetoid).tw.
15	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).tw.
17	exp ATAXIA/
18	atax\$.tw.
19	upper motor neuron? lesion\$.tw.
20	or/1-19
21	exp BRAIN INJURIES/
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).tw.
23	ABI.tw.
24	static encephalopath\$.tw.
25	CEREBRAL PALSY/
26	(cerebral adj3 pals\$).tw.
27	exp MENINGITIS/
28	(meningitis or meningococcal).tw.
29	exp CRANIOCEREBRAL TRAUMA/
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw.
31	exp ENCEPHALITIS/
32	encephaliti\$.tw.
33	exp STROKE/
34	stroke\$.tw.
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw.
36	exp CEREBROVASCULAR DISORDERS/
37	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw.
38	exp HYDROCEPHALUS/
39	hydrocephal\$.tw.
40	SHAKEN BABY SYNDROME/
41	(shak\$ adj3 (injur\$ or syndrome\$)).tw.
42	or/21-41
43	exp PARALYSIS/
44	HEMIPLEGIA/
45	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw.

49 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).tw. 50 or/43-49 51 and/20,50 52 and/42,50 53 and/20,42 55 BACLOFEN/ 56 (baclofen or baclophen or lioresal or spinax or lyflex).tw. 57 exp BENZODIAZEPINES/ 58 benzodiazepine\$.tw. 59 exp BENZODIAZEPINONES/ 60 exp MUSCLE RELAXANTS, CENTRAL/ 61 exp DIAZEPAM/ 62 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw. 63 (nitrazepam or rivotril).tw. 65 (tizanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or madopar).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw. 79 or/55-78 80 and/54,79		
51 and/20,50 52 and/42,50 53 and/20,42 54 or/51-53 55 BACLOFEN/ 56 (baclofen or baclophen or lioresal or spinax or lyflex).tw. 57 exp BENZODIAZEPINES/ 58 benzodiazepine\$.tw. 59 exp BENZODIAZEPINONES/ 60 exp MUSCLE RELAXANTS, CENTRAL/ 61 exp DIAZEPAM/ 62 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw. 63 (initrazepam or nitrodiazepam or mogadon or somnite or remnos).tw. 64 (clonazepam or rivotrii).tw. 65 (titzanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levodopa or dopar or larodopa or madopar).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.		
52 and/42,50 53 and/20,42 54 or/51-53 55 BACLOFEN/ 56 (baclofen or baclophen or lioresal or spinax or lyflex).tw. 57 exp BENZODIAZEPINES/ 58 benzodiazepine\$.tw. 59 exp BENZODIAZEPINONES/ 60 exp MUSCLE RELAXANTS, CENTRAL/ 61 exp DIAZEPAM/ 62 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw. 63 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw. 64 (clonazepam or rivotril).tw. 65 (tizanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	50	or/43-49
53 and/20,42 54 or/51-53 55 BACLOFEN/ 56 (baclofen or baclophen or lioresal or spinax or lyflex).tw. 57 exp BENZODIAZEPINES/ 58 benzodiazepine\$.tw. 59 exp BENZODIAZEPINONES/ 60 exp MUSCLE RELAXANTS, CENTRAL/ 61 exp DIAZEPAM/ 62 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw. 63 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw. 64 (clonazepam or rivotril).tw. 65 (tizanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	51	and/20,50
54 or/51-53 55 BACLOFEN/ 56 (baclofen or baclophen or lioresal or spinax or lyflex).tw. 57 exp BENZODIAZEPINES/ 58 benzodiazepine\$.tw. 59 exp BENZODIAZEPINONES/ 60 exp MUSCLE RELAXANTS, CENTRAL/ 61 exp DIAZEPAM/ 62 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw. 63 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw. 64 (clonazepam or rivotril).tw. 65 (tizanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	52	and/42,50
55 BACLOFEN/ 56 (baclofen or baclophen or lioresal or spinax or lyflex).tw. 57 exp BENZODIAZEPINES/ 58 benzodiazepine\$.tw. 59 exp BENZODIAZEPINONES/ 60 exp MUSCLE RELAXANTS, CENTRAL/ 61 exp DIAZEPAM/ 62 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw. 63 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw. 64 (clonazepam or rivotril).tw. 65 (tizanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	53	and/20,42
56 (baclofen or baclophen or lioresal or spinax or lyflex).tw. 57 exp BENZODIAZEPINES/ 58 benzodiazepine\$.tw. 59 exp BENZODIAZEPINONES/ 60 exp MUSCLE RELAXANTS, CENTRAL/ 61 exp DIAZEPAM/ 62 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw. 63 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw. 64 (clonazepam or rivotril).tw. 65 (tizanidine or zanaflex).tw. 66 (DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or l?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	54	or/51-53
57 exp BENZODIAZEPINES/ 58 benzodiazepine\$.tw. 59 exp BENZODIAZEPINONES/ 60 exp MUSCLE RELAXANTS, CENTRAL/ 61 exp DIAZEPAM/ 62 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw. 63 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw. 64 (clonazepam or rivotril).tw. 65 (tizanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#I or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	55	BACLOFEN/
58 benzodiazepine\$.tw. 59 exp BENZODIAZEPINONES/ 60 exp MUSCLE RELAXANTS, CENTRAL/ 61 exp DIAZEPAM/ 62 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw. 63 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw. 64 (clonazepam or rivotril).tw. 65 (tizanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	56	(baclofen or baclophen or lioresal or spinax or lyflex).tw.
59 exp BENZODIAZEPINONES/ 60 exp MUSCLE RELAXANTS, CENTRAL/ 61 exp DIAZEPAM/ 62 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw. 63 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw. 64 (clonazepam or rivotril).tw. 65 (tizanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	57	exp BENZODIAZEPINES/
60 exp MUSCLE RELAXANTS, CENTRAL/ 61 exp DIAZEPAM/ 62 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw. 63 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw. 64 (clonazepam or rivotril).tw. 65 (tizanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	58	benzodiazepine\$.tw.
61 exp DIAZEPAM/ 62 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw. 63 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw. 64 (clonazepam or rivotril).tw. 65 (tizanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	59	exp BENZODIAZEPINONES/
62 (diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw. 63 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw. 64 (clonazepam or rivotril).tw. 65 (tizanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	60	exp MUSCLE RELAXANTS, CENTRAL/
63 (nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw. 64 (clonazepam or rivotril).tw. 65 (tizanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	61	exp DIAZEPAM/
64 (clonazepam or rivotril).tw. 65 (tizanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#I or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	62	(diazepam or valium or rimapam or dialar or diazemuls or stesolid or valclair).tw.
65 (tizanidine or zanaflex).tw. 66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	63	(nitrazepam or nitrodiazepam or mogadon or somnite or remnos).tw.
66 DANTROLENE/ 67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	64	(clonazepam or rivotril).tw.
67 (dantrolene or dantrium).tw. 68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	65	(tizanidine or zanaflex).tw.
68 LEVODOPA/ 69 (levodopa or I dopa or I?dopa).tw. 70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#I or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw.	66	DANTROLENE/
[levodopa or I dopa or I?dopa).tw. [ro levopa or dopar or larodopa or dopaflex).tw. [ro beneldopa or co?beneldopa or madopar).tw. [ro careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. [ro	67	(dantrolene or dantrium).tw.
70 (levopa or dopar or larodopa or dopaflex).tw. 71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw. 79 or/55-78	68	LEVODOPA/
71 (co beneldopa or co?beneldopa or madopar).tw. 72 (co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. 73 TRIHEXYPHENIDYL/ 74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw. 79 or/55-78	69	(levodopa or I dopa or I?dopa).tw.
(co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).tw. TRIHEXYPHENIDYL/ (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. TETRABENAZINE/ (tetrabenazin\$ or xenazine or nitoman).tw. TOONIDINE/ (clonidine or catapres or dixarit).tw. Topic	70	(levopa or dopar or larodopa or dopaflex).tw.
recado).tw.	71	(co beneldopa or co?beneldopa or madopar).tw.
74 (tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw. 75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw. 79 or/55-78	72	
75 TETRABENAZINE/ 76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw. 79 or/55-78	73	TRIHEXYPHENIDYL/
76 (tetrabenazin\$ or xenazine or nitoman).tw. 77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw. 79 or/55-78	74	(tr#hex#phen#d#l or THP or benzhexol or broflex or artane).tw.
77 CLONIDINE/ 78 (clonidine or catapres or dixarit).tw. 79 or/55-78	75	TETRABENAZINE/
78 (clonidine or catapres or dixarit).tw. 79 or/55-78	76	(tetrabenazin\$ or xenazine or nitoman).tw.
79 or/55-78	77	CLONIDINE/
	78	(clonidine or catapres or dixarit).tw.
80 and/54,79	79	or/55-78
	80	and/54,79

EMBASE 1980+

 $SPAST_Q3_oral_drugs_economic_embase_110810$

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	SPASTICITY/
9	exp MUSCLE SPASM/
	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
	hyperton\$.ti,ab.
	DYSKINESIA/
	dyskinesi\$.ti,ab.
=	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
=	DYSTONIA/
=	dystoni\$.ti,ab.
	exp CHOREA/
	CHOREOATHETOSIS/
_	ATHETOSIS/
=	(chorea\$ or choreic\$ or choreo\$).ti,ab.
	(athetos\$ or athetoid).ti,ab.
	exp MUSCLE WEAKNESS/
=	(musc\$ adj3 weak\$).ti,ab.
	exp ATAXIA/
	atax\$.ti,ab.
=	upper motor neuron? lesion\$.ti,ab.
	or/8-27
=	exp BRAIN INJURY/
=	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
	ABI.ti,ab.
_	static encephalopath\$.ti,ab.
	CEREBRAL PALSY/
34	(cerebral adj3 pals\$).ti,ab.

35	exp MENINGITIS/
36	(meningitis or meningococcal).ti,ab.
37	exp HEAD INJURY/
38	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
39	exp ENCEPHALITIS/
40	encephaliti\$.ti,ab.
41	STROKE/
	stroke\$.ti,ab.
43	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
44	exp CEREBROVASCULAR DISEASE/
45	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
46	exp HYDROCEPHALUS/
47	hydrocephal\$.ti,ab.
48	SHAKEN BABY SYNDROME/
49	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
50	or/29-49
51	exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/
52	SPASTIC PARAPLEGIA/
53	PARESIS/ or MONOPARESIS/ or HEMIPARESIS/
54	SPASTIC PARESIS/
55	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
56	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
57	or/51-56
58	and/28,57
59	and/50,57
60	and/28,50
61	or/58-60
62	BACLOFEN/
63	(baclofen or baclophen or lioresal or spinax or lyflex).ti,ab.
64	BENZODIAZEPINE/
65	benzodiazepine\$.ti,ab.
66	exp BENZODIAZEPINE DERIVATIVE/
67	exp CENTRAL MUSCLE RELAXANT/
68	DIAZEPAM/
69	(diazepam or valium or rimapam or dialar or diazemuls or stesolid or

	valclair).ti,ab.
70	NITRAZEPAM/
71	(nitrazepam or nitrodiazepam or mogadon or somnite or remnos).ti,ab.
72	CLONAZEPAM/
73	(clonazepam or rivotril).ti,ab.
74	TIZANIDINE/
75	(tizanidine or zanaflex).ti,ab.
76	DANTROLENE/
77	(dantrolene or dantrium).ti,ab.
78	LEVODOPA/
79	BENSERAZIDE PLUS LEVODOPA/ or CO BENELDOPA/
80	CARBIDOPA PLUS LEVODOPA/ or CO CARELDOPA/
81	(levodopa or I dopa or I?dopa).ti,ab.
82	(levopa or dopar or larodopa or dopaflex).ti,ab.
83	(co beneldopa or co?beneldopa or madopar).ti,ab.
84	(co careldopa or co?careldopa or sinemet or duodopa or caramet or stalevo or lecado).ti,ab.
85	TRIHEXYPHENIDYL/
86	(tr#hex#phen#d#l or THP or benzhexol or broflex or artane).ti,ab.
87	TETRABENAZINE/
88	(tetrabenazin\$ or xenazine or nitoman).ti,ab.
89	CLONIDINE/
90	(clonidine or catapres or dixarit).ti,ab.
91	or/62-90
92	and/61,91
93	limit 92 to english language
94	and/7,93
•	

Question 4 What is the effectiveness of the long-term use of Intramuscular Botulinum toxin A or B (BoNT) in combination with other interventions (physiotherapy/occupational therapy/orthoses) as compared to other interventions at reducing spasticity, maintaining motor function and preventing secondary complications in children with spasticity and with or without other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder?

Ovid MEDLINE(R) 1950+

SPAST_Q4_botox_medline_020810

#	Searches
1	randomized controlled trial.pt.
2	controlled clinical trial.pt.
3	DOUBLE BLIND METHOD/
4	SINGLE BLIND METHOD/
5	RANDOM ALLOCATION/
6	RANDOMIZED CONTROLLED TRIALS/
7	or/1-6
8	((single or double or triple or treble) adj5 (blind\$ or mask\$)).tw,sh.
9	clinical trial.pt.
10	exp CLINICAL TRIAL/
11	exp CLINICAL TRIALS AS TOPIC/
12	(clinic\$ adj5 trial\$).tw,sh.
13	PLACEBOS/
14	placebo\$.tw,sh.
15	random\$.tw,sh.
16	or/8-15
17	or/7,16
18	META ANALYSIS/
19	META ANALYSIS AS TOPIC/
20	meta analysis.pt.
21	(metaanaly\$ or meta-analy\$ or (meta adj analy\$)).tw,sh.
22	(systematic\$ adj5 (review\$ or overview\$)).tw,sh.
23	(methodologic\$ adj5 (review\$ or overview\$)).tw,sh.
24	or/18-23
25	review\$.pt.
26	(medline or medlars or embase or cinahl or cochrane or psycinfo or psychinfo or psychlit or psyclit or "web of science" or "science citation" or scisearch).tw.
27	((hand or manual\$) adj2 search\$).tw.
28	(electronic database\$ or bibliographic database\$ or computeri?ed database\$ or online database\$).tw,sh.

29	(pooling or pooled or mantel haenszel).tw,sh.
	(peto or dersimonian or der simonian or fixed effect).tw,sh.
_	or/26-30
	and/25,31
	exp COHORT STUDIES/
	cohort\$.tw.
	or/33-34
	or/17,24,32,35
	letter.pt.
	comment.pt.
	editorial.pt.
	historical article.pt.
	or/37-40
42	36 not 41
43	MUSCLE SPASTICITY/
44	exp SPASM/
	exp MUSCLE HYPERTONIA/
46	(spastic\$ or spasm\$).ti,ab.
47	hyperton\$.ti,ab.
48	exp DYSKINESIAS/
49	dyskinesi\$.ti,ab.
50	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
51	exp DYSTONIA/
52	dystoni\$.ti,ab.
53	exp CHOREA/
54	(chorea\$ or choreic\$ or choreo\$).ti,ab.
55	exp ATHETOSIS/
56	(athetos\$ or athetoid).ti,ab.
57	MUSCLE WEAKNESS/
58	(musc\$ adj3 weak\$).ti,ab.
59	exp ATAXIA/
60	atax\$.ti,ab.
61	upper motor neuron? lesion\$.ti,ab.
62	or/43-61
63	exp BRAIN INJURIES/
64	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
65	ABI.ti,ab.
66	static encephalopath\$.ti,ab.
67	CEREBRAL PALSY/

68	(cerebral adj3 pals\$).ti,ab.
69	exp MENINGITIS/
70	(meningitis or meningococcal).ti,ab.
71	exp CRANIOCEREBRAL TRAUMA/
72	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
73	exp ENCEPHALITIS/
74	encephaliti\$.ti,ab.
75	exp STROKE/
76	stroke\$.ti,ab.
77	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
78	exp CEREBROVASCULAR DISORDERS/
79	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
80	exp HYDROCEPHALUS/
81	hydrocephal\$.ti,ab.
82	SHAKEN BABY SYNDROME/
83	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
84	or/63-83
85	exp PARALYSIS/
86	HEMIPLEGIA/
87	exp PARAPLEGIA/
88	QUADRIPLEGIA/
89	exp PARESIS/
90	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
91	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
92	or/85-91
93	and/62,92
94	and/84,92
95	and/62,84
96	or/93-95
97	exp BOTULINUM TOXINS/
98	BOTULINUM TOXIN TYPE A/
99	botulinum\$.ti,ab.
100	(BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab.
101	(botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab.
102	(neurobloc or myobloc).ti,ab.

103	or/97-102
104	and/96,103
105	limit 104 to english language
106	limit 105 to animals
107	limit 105 to (animals and humans)
108	106 not 107
109	105 not 108
110	and/42,109

Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations

SPAST_Q4_botox_medline_in-process_020810

#	Searches
1	(spastic\$ or spasm\$).ti,ab.
2	hyperton\$.ti,ab.
3	dyskinesi\$.ti,ab.
4	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
5	dystoni\$.ti,ab.
6	(chorea\$ or choreic\$ or choreo\$).ti,ab.
7	(athetos\$ or athetoid).ti,ab.
8	(musc\$ adj3 weak\$).ti,ab.
9	atax\$.ti,ab.
10	upper motor neuron? lesion\$.ti,ab.
11	or/1-10
12	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
13	ABI.ti,ab.
14	static encephalopath\$.ti,ab.
15	(cerebral adj3 pals\$).ti,ab.
	(meningitis or meningococcal).ti,ab.
17	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
18	encephaliti\$.ti,ab.
19	stroke\$.ti,ab.
20	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
21	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
22	hydrocephal\$.ti,ab.
23	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.

24	or/12-23
25	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
26	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
27	or/25-26
28	and/11,27
29	and/24,27
30	and/11,24
31	or/28-30
32	botulinum\$.ti,ab.
33	(BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab.
34	(botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab.
35	(neurobloc or myobloc).ti,ab.
36	or/32-35
37	and/31,36

EBM Reviews - Cochrane Central Register of Controlled Trials

SPAST_Q4_botox_cctr_020810

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.
6	exp DYSKINESIAS/
7	dyskinesi\$.ti,ab.
8	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
9	exp DYSTONIA/
10	dystoni\$.ti,ab.
11	exp CHOREA/
12	(chorea\$ or choreic\$ or choreo\$).ti,ab.
13	exp ATHETOSIS/
14	(athetos\$ or athetoid).ti,ab.
15	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).ti,ab.
17	exp ATAXIA/
18	atax\$.ti,ab.
19	upper motor neuron? lesion\$.ti,ab.

20	or/1-19			
21	exp BRAIN INJURIES/			
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.			
23	ABI.ti,ab.			
24	static encephalopath\$.ti,ab.			
25	CEREBRAL PALSY/			
26	(cerebral adj3 pals\$).ti,ab.			
27	exp MENINGITIS/			
28	(meningitis or meningococcal).ti,ab.			
29	exp CRANIOCEREBRAL TRAUMA/			
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.			
31	exp ENCEPHALITIS/			
32	encephaliti\$.ti,ab.			
33	exp STROKE/			
34	stroke\$.ti,ab.			
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.			
36	exp CEREBROVASCULAR DISORDERS/			
	((brain vascular or intra cranial vascular or intra?cranial vascular or			
37	cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.			
38	exp HYDROCEPHALUS/			
=	hydrocephal\$.ti,ab.			
=	SHAKEN BABY SYNDROME/			
	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.			
_	or/21-41			
	exp PARALYSIS/			
\vdash	HEMIPLEGIA/			
	exp PARAPLEGIA/			
-	QUADRIPLEGIA/			
	exp PARESIS/			
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.			
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.			
50	or/43-49			
51	and/20,50			
52	and/42,50			
53	and/20,42			
54	or/51-53			
55	exp BOTULINUM TOXINS/			

56	BOTULINUM TOXIN TYPE A/
57	botulinum\$.ti,ab.
58	(BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab.
59	(botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab.
60	(neurobloc or myobloc).ti,ab.
61	or/55-60
62	and/54,61

EBM Reviews - Cochrane Database of Systematic Reviews 200+, EBM Reviews - Database of Abstracts of Reviews of Effects

SPAST_Q4_botox_cdsrdare_020810

#	Searches
1	MUSCLE SPASTICITY.kw.
2	SPASM.kw.
3	MUSCLE HYPERTONIA.kw.
4	(spastic\$ or spasm\$).tw,tx.
5	hyperton\$.tw,tx.
6	DYSKINESIAS.kw.
7	dyskinesi\$.tw,tx.
8	((abnormal\$ or involuntar\$) adj2 mov\$).tw,tx.
9	DYSTONIA.kw.
10	dystoni\$.tw,tx.
11	CHOREA.kw.
12	(chorea\$ or choreic\$ or choreo\$).tw,tx.
13	ATHETOSIS.kw.
14	(athetos\$ or athetoid).tw,tx.
15	MUSCLE WEAKNESS.kw.
16	(musc\$ adj3 weak\$).tw,tx.
17	ATAXIA.kw.
18	atax\$.tw,tx.
19	upper motor neuron? lesion\$.tw,tx.
20	or/1-19
21	BRAIN INJURIES.kw.
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).tw,tx.
23	ABI.tw,tx.
24	static encephalopath\$.tw,tx.
25	CEREBRAL PALSY.kw.

26 (cerebral adj3 pals\$).tw,tx. 27 MENINGITIS.kw. 28 (meningitis or meningococcal).tw,tx. 29 CRANIOCEREBRAL TRAUMA.kw. ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw,tx. 31 ENCEPHALITIS.kw. 32 encephaliti\$.tw,tx. 33 STROKE.kw. 34 stroke\$.tw,tx. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw,tx. 36 CEREBROVASCULAR DISORDERS.kw. (brain vascular or intra cranial vascular or intra?cranial vascular or 37 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw,tx. 38 HYDROCEPHALUS.kw. 39||hydrocephal\$.tw,tx. 40 SHAKEN BABY SYNDROME.kw. 41||(shak\$ adj3 (injur\$ or syndrome\$)).tw,tx. 42 or/21-41 43||PARALYSIS.kw. 44 HEMIPLEGIA.kw. 45||PARAPLEGIA.kw. 46 QUADRIPLEGIA.kw. 47 PARESIS.kw. 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw,tx. 49 (monopares or dipares or hemipares or quadripares or tetrapares).tw,tx. 50 or/43-49 51 and/20,50 52 and/42.50 53 and/20,42 54 or/51-53 55 BOTULINUM TOXINS.kw. 56 BOTULINUM TOXIN TYPE A.kw. 57 botulinum\$.tw,tx. 58 (BTA or BTB or BTX or BoNT\$ or BoTx).tw,tx. (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).tw,tx. 60 (neurobloc or myobloc).tw,tx.

61 or/55-60	
62 and/54,61	

EMBASE 1980+

SPAST_Q4_botox_embase_020810

#	Searches		
1	CLINICAL TRIALS/		
2	(clinic\$ adj5 trial\$).tw,sh.		
3	SINGLE BLIND PROCEDURE/		
4	DOUBLE BLIND PROCEDURE/		
5	RANDOM ALLOCATION/		
6	CROSSOVER PROCEDURE/		
7	PLACEBO/		
8	placebo\$.tw,sh.		
9	random\$.tw,sh.		
10	RANDOMIZED CONTROLLED TRIALS/		
11	((single or double or triple or treble) adj (blind\$ or mask\$)).tw,sh.		
12	randomi?ed control\$ trial\$.tw.		
13	or/1-12		
14	META ANALYSIS/		
15	((meta adj analy\$) or metaanalys\$ or meta-analy\$).tw,sh.		
16	(systematic\$ adj5 (review\$ or overview\$)).tw,sh.		
17	(methodologic\$ adj5 (review\$ or overview\$)).tw,sh.		
18	or/14-17		
19	review.pt.		
20	(medline or medlars or embase).ab.		
21	(scisearch or science citation index).ab.		
22	(psychlit or psyclit or psychinfo or psycinfo or cinahl or cochrane).ab.		
23	((hand or manual\$) adj2 search\$).tw.		
24	(electronic database\$ or bibliographic database\$ or computeri?ed database\$ or online database\$).tw.		
25	(pooling or pooled or mantel haenszel).tw.		
26	(peto or dersimonian or "der simonian" or fixed effect).tw.		
27	or/20-26		
28	and/19,27		
29	COHORT ANALYSIS/		
30	LONGITUDINAL STUDY/		
31	FOLLow UP/		

32	PROSPECTIVE STUDY/		
33	cohort\$.tw.		
34	or/29-33		
35	or/13,18,28,34		
36	(book or conference paper or editorial or letter or note or proceeding or she		
37	survey).pt. 35 not 36		
	SPASTICITY/		
38			
39	exp MUSCLE SPASM/		
40	exp MUSCLE HYPERTONIA/		
41	(spastic\$ or spasm\$).ti,ab.		
	hyperton\$.ti,ab.		
43	DYSKINESIA/		
	dyskinesi\$.ti,ab.		
	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.		
46	DYSTONIA/		
47	dystoni\$.ti,ab.		
48	exp CHOREA/		
49	CHOREOATHETOSIS/		
50	ATHETOSIS/		
51	(chorea\$ or choreic\$ or choreo\$).ti,ab.		
52	(athetos\$ or athetoid).ti,ab.		
53	exp MUSCLE WEAKNESS/		
54	(musc\$ adj3 weak\$).ti,ab.		
55	exp ATAXIA/		
56	atax\$.ti,ab.		
57	upper motor neuron? lesion\$.ti,ab.		
58	or/38-57		
59	exp BRAIN INJURY/		
60	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.		
61	ABI.ti,ab.		
62	static encephalopath\$.ti,ab.		
63	CEREBRAL PALSY/		
64	(cerebral adj3 pals\$).ti,ab.		
65	exp MENINGITIS/		
66	(meningitis or meningococcal).ti,ab.		
67	exp HEAD INJURY/		
68	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.		

To encephaliti\$.ti,ab.	69	exp ENCEPHALITIS/		
71 STROKE/ 72 stroke\$.ti,ab. 73 ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm or isch?emi\$),ti,ab. 74 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 75 exp HYDROCEPHALUS/ 77 hydrocephal\$.ti,ab. 78 SHAKEN BABY SYNDROME/ 79 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 80 or/59-79 81 exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/ 82 SPASTIC PARAPLEGIA/ 83 PARESIS/ or MONOPARESIS/ or HEMIPARESIS/ 84 SPASTIC PARESIS/ 85 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 86 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 87 or/81-86 88 and/58,87 89 and/80,87 90 and/58,80 91 or/88-90 92 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	=			
((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysmor isch?emi\$)).ti,ab. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysmor isch?emi\$)).ti,ab. ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. ((brain or cerebral or intra cranial vascular or intra?cranial vascular or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. ((brain or vascular or intra cranial vascular or intra?cranial vascular or occlusion\$ or damage\$ or disturb\$ or insulficien\$ or occlusion\$ or damage\$ or disturb\$ or syndrome\$)).ti,ab. ((shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. ((ana)cr59-79 ((shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. ((branched)capaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa		•		
73 or isch?emi\$)).ti,ab. 74 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 76 exp HYDROCEPHALUS/ 77 hydrocephal\$.ti,ab. 78 SHAKEN BABY SYNDROME/ 79 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 80 or/59-79 81 exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/ 82 SPASTIC PARAPLEGIA/ 83 PARESIS/ or MONOPARESIS/ or HEMIPARESIS/ 84 SPASTIC PARESIS/ 85 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 86 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 87 or/81-86 88 and/58,87 89 and/80,87 90 and/58,80 91 or/88-90 92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BONT\$ or BOTX).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	72	stroke\$.ti,ab.		
((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 76 exp HYDROCEPHALUS/ 77 hydrocephal\$.ti,ab. 78 SHAKEN BABY SYNDROME/ 79 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 80 or/59-79 81 exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/ 82 SPASTIC PARAPLEGIA/ 83 PARESIS/ or MONOPARESIS/ or HEMIPARESIS/ 84 SPASTIC PARESIS/ 85 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 86 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 87 or/81-86 88 and/58,87 89 and/80,87 90 and/58,80 91 or/88-90 92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language		((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$		
cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insuft\$)).ti,ab. responder of damage\$ or disturb\$ or insuft\$)).ti,ab. responder of damage\$ or disturb\$ or insuft\$)).ti,ab. responder of damage\$ or disturb\$ or insuft\$) ti,ab. responder of damage\$ or disturb\$ or syndrome\$)).ti,ab. responder of dexpender of damage\$ or developmen\$ or developm	74	exp CEREBROVASCULAR DISEASE/		
77 hydrocephal\$.ti,ab. 78 SHAKEN BABY SYNDROME/ 79 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 80 or/59-79 81 exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/ 82 SPASTIC PARAPLEGIA/ 83 PARESIS/ or MONOPARESIS/ or HEMIPARESIS/ 84 SPASTIC PARESIS/ 85 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 86 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 87 or/81-86 88 and/58,87 89 and/80,87 90 and/58,80 91 or/88-90 92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	75	cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or		
78 SHAKEN BABY SYNDROME/ 79 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 80 or/59-79 81 exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/ 82 SPASTIC PARAPLEGIA/ 83 PARESIS/ or MONOPARESIS/ or HEMIPARESIS/ 84 SPASTIC PARESIS/ 85 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 86 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 87 or/81-86 88 and/58,87 89 and/80,87 90 and/58,80 91 or/88-90 92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	76	exp HYDROCEPHALUS/		
79 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 80 or/59-79 81 exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/ 82 SPASTIC PARAPLEGIA/ 83 PARESIS/ or MONOPARESIS/ or HEMIPARESIS/ 84 SPASTIC PARESIS/ 85 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 86 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 87 or/81-86 88 and/58,87 89 and/80,87 90 and/58,80 91 or/88-90 92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	77	hydrocephal\$.ti,ab.		
80 or/59-79 81 exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/ 82 SPASTIC PARAPLEGIA/ 83 PARESIS/ or MONOPARESIS/ or HEMIPARESIS/ 84 SPASTIC PARESIS/ 85 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 86 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 87 or/81-86 88 and/58,87 89 and/80,87 90 and/58,80 91 or/88-90 92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	78	SHAKEN BABY SYNDROME/		
81 exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/ 82 SPASTIC PARAPLEGIA/ 83 PARESIS/ or MONOPARESIS/ or HEMIPARESIS/ 84 SPASTIC PARESIS/ 85 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 86 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 87 or/81-86 88 and/58,87 89 and/80,87 90 and/58,80 91 or/88-90 92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	79	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.		
QÚADRIPLEGIA/ SPASTIC PARAPLEGIA/ SPASTIC PARESIS/ or MONOPARESIS/ or HEMIPARESIS/ SPASTIC PARESIS/	80	or/59-79		
B3 PARESIS/ or MONOPARESIS/ or HEMIPARESIS/ 84 SPASTIC PARESIS/ 85 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 86 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 87 or/81-86 88 and/58,87 89 and/80,87 90 and/58,80 91 or/88-90 92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language				
84 SPASTIC PARESIS/ 85 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 86 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 87 or/81-86 88 and/58,87 89 and/80,87 90 and/58,80 91 or/88-90 92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	82	SPASTIC PARAPLEGIA/		
(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. r/81-86 and/58,87 and/80,87 and/58,80 nor/88-90 BOTULINUM TOXIN/ BOTULINUM TOXIN A/ BOTULINUM TOXIN B/ botulinum\$.ti,ab. (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. (neurobloc or myobloc).ti,ab. modeline in the property of tetrapares\$).ti,ab. modeline in the property or tetrapares\$).ti,ab.	83			
86 (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab. 87 or/81-86 88 and/58,87 89 and/80,87 90 and/58,80 91 or/88-90 92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	84			
87 or/81-86 88 and/58,87 89 and/80,87 90 and/58,80 91 or/88-90 92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	85			
88 and/58,87 89 and/80,87 90 and/58,80 91 or/88-90 92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	86	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.		
and/80,87 and/58,80 problem of the second	87	or/81-86		
90 and/58,80 91 or/88-90 92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	88	and/58,87		
91 or/88-90 92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	89	and/80,87		
92 BOTULINUM TOXIN/ 93 BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	90	and/58,80		
BOTULINUM TOXIN A/ 94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	91	or/88-90		
94 BOTULINUM TOXIN B/ 95 botulinum\$.ti,ab. 96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	92	BOTULINUM TOXIN/		
botulinum\$.ti,ab. 6 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	93	BOTULINUM TOXIN A/		
96 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. 97 (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 98 (neurobloc or myobloc).ti,ab. 99 or/92-98 100 and/91,99 101 limit 100 to english language	94	BOTULINUM TOXIN B/		
(botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. (neurobloc or myobloc).ti,ab. or/92-98 nod/91,99 limit 100 to english language	95	botulinum\$.ti,ab.		
vistabel or xeomin or bocouture).ti,ab. (neurobloc or myobloc).ti,ab. or/92-98 nod/91,99 limit 100 to english language	96	(BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab.		
99 or/92-98 100 and/91,99 101 limit 100 to english language	97			
100 and/91,99 101 limit 100 to english language	98	(neurobloc or myobloc).ti,ab.		
101 limit 100 to english language	99	or/92-98		
	100	and/91,99		
102 and/37 101	101	limit 100 to english language		
	102	and/37,101		

CINAHL 1981+

SPAST_Q4_botox_cinahl_020810

#	Query	Limiters/Expanders
S127	S118 and S125	Limiters - Exclude MEDLINE records Search modes - Boolean/Phrase
S126	S118 and S125	Search modes - Boolean/Phrase
S125	S119 or S120 or S121 or S122 or S123 or S124	Search modes - Boolean/Phrase
S124	TI (neurobloc or myobloc) or AB (neurobloc or myobloc)	Search modes - Boolean/Phrase
S123	AB (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture)	Search modes - Boolean/Phrase
S122	TI (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture)	Search modes - Boolean/Phrase
S121	TI (BTA or BTB or BTX or BoNT* or BoTx) or AB (BTA or BTB or BTX or BoNT* or BoTx)	Search modes - Boolean/Phrase
S120	TI (botulinum*) or AB (botulinum*)	Search modes - Boolean/Phrase
S119	MH BOTULINUM TOXINS	Search modes - Boolean/Phrase
S118	S115 or S116 or S117	Search modes - Boolean/Phrase
S117	S105 and S114	Search modes - Boolean/Phrase
S116	S18 and S114	Search modes - Boolean/Phrase
S115	S18 and S105	Search modes - Boolean/Phrase
S114	S106 or S107 or S108 or S109 or S110 or S111 or S112 or S113	Search modes - Boolean/Phrase
S113	AB (monopares* or dipares* or hemipares* or quadripares* or tetrapares*)	Search modes - Boolean/Phrase
S112	TI (monopares* or dipares* or hemipares* or quadripares* or tetrapares*)	Search modes - Boolean/Phrase
S111	AB (monoplegi* or diplegi* or hemiplegi* or	Search modes -

	quadriplegi* or tetraplegi*)	Boolean/Phrase
S110	TI (monoplegi* or diplegi* or hemiplegi* or quadriplegi* or tetraplegi*)	Search modes - Boolean/Phrase
S109	MH QUADRIPLEGIA	Search modes - Boolean/Phrase
S108	MH PARAPLEGIA	Search modes - Boolean/Phrase
S107	MH HEMIPLEGIA	Search modes - Boolean/Phrase
S106	MH PARALYSIS+	Search modes - Boolean/Phrase
S105	S19 or S20 or S21 or S22 or S23 or S24 or S25 or S26 or S27 or S28 or S29 or S30 or S31 or S32 or S33 or S34 or S35 or S36 or S37 or S38 or S39 or S40 or S41 or S42 or S43 or S44 or S45 or S46 or S47 or S48 or S49 or S50 or S51 or S52 or S53 or S54 or S55 or S56 or S57 or S58 or S59 or S60 or S61 or S62 or S63 or S64 or S65 or S66 or S67 or S68 or S69 or S70 or S71 or S72 or S73 or S74 or S75 or S76 or S77 or S78 or S79 or S80 or S81 or S82 or S83 or S84 or S85 or S86 or S87 or S88 or S89 or S90 or S91 or S92 or S93 or S94 or S95 or S96 or S97 or S98 or S99 or S100 or S101 or S102 or S103 or S104	Search modes - Boolean/Phrase
S104	TI (shak* N3 syndrome*) or AB (shak* N3 syndrome*)	Search modes - Boolean/Phrase
S103	TI (shak* N3 injur*) or AB (shak* N3 injur*)	Search modes - Boolean/Phrase
S102	MH SHAKEN BABY SYNDROME	Search modes - Boolean/Phrase
S101	TI (hydrocephal*) or AB (hydrocephal*)	Search modes - Boolean/Phrase
S100	MH HYDROCEPHALUS+	Search modes - Boolean/Phrase
S99	TI (cerebrovascular N2 insult*) or AB (cerebrovascular N2 insult*)	Search modes - Boolean/Phrase
S98	TI (cerebrovascular N2 disturb*) or AB (cerebrovascular N2 disturb*)	Search modes - Boolean/Phrase
S97	TI (cerebrovascular N2 damage*) or AB (cerebrovascular N2 damage*)	Search modes - Boolean/Phrase
S96	TI (cerebrovascular N2 occlusion*) or AB (cerebrovascular N2 occlusion*)	Search modes - Boolean/Phrase
S95	TI (cerebrovascular N2 insufficien*) or AB	Search modes -

	(cerebrovascular N2 insufficien*)	Boolean/Phrase
S94	TI (cerebrovascular N2 disease*) or AB (cerebrovascular N2 disease*)	Search modes - Boolean/Phrase
S93	TI (cerebrovascular N2 disorder*) or AB (cerebrovascular N2 disorder*)	Search modes - Boolean/Phrase
S92	TI (intracranial vascular N2 insult*) or AB (intracranial vascular N2 insult*)	Search modes - Boolean/Phrase
S91	TI (intracranial vascular N2 disturb*) or AB (intracranial vascular N2 disturb*)	Search modes - Boolean/Phrase
S90	TI (intracranial vascular N2 damage*) or AB (intracranial vascular N2 damage*)	Search modes - Boolean/Phrase
S89	TI (intracranial vascular N2 occlusion*) or AB (intracranial vascular N2 occlusion*)	Search modes - Boolean/Phrase
S88	TI (intracranial vascular N2 insufficien*) or AB (intracranial vascular N2 insufficien*)	Search modes - Boolean/Phrase
S87	TI (intracranial vascular N2 disease*) or AB (intracranial vascular N2 disease*)	Search modes - Boolean/Phrase
S86	TI (intracranial vascular N2 disorder*) or AB (intracranial vascular N2 disorder*)	Search modes - Boolean/Phrase
S85	TI (intra-cranial vascular N2 insult*) or AB (intra-cranial vascular N2 insult*)	Search modes - Boolean/Phrase
S84	TI (intra-cranial vascular N2 disturb*) or AB (intra-cranial vascular N2 disturb*)	Search modes - Boolean/Phrase
S83	TI (intra-cranial vascular N2 damage*) or AB (intra-cranial vascular N2 damage*)	Search modes - Boolean/Phrase
S82	TI (intra-cranial vascular N2 occlusion*) or AB (intra-cranial vascular N2 occlusion*)	Search modes - Boolean/Phrase
S81	TI (intra-cranial vascular N2 insufficien*) or AB (intra-cranial vascular N2 insufficien*)	Search modes - Boolean/Phrase
S80	TI (intra-cranial vascular N2 disease*) or AB (intra-cranial vascular N2 disease*)	Search modes - Boolean/Phrase
S79	TI (intra-cranial vascular N2 disorder*) or AB (intra-cranial vascular N2 disorder*)	Search modes - Boolean/Phrase
S78	TI (brain vascular N2 insult*) or AB (brain vascular N2 insult*)	Search modes - Boolean/Phrase
S77	TI (brain vascular N2 disturb*) or AB (brain vascular N2 disturb*)	Search modes - Boolean/Phrase
S76	TI (brain vascular N2 damage*) or AB (brain vascular N2 damage*)	Search modes - Boolean/Phrase
S75	TI (brain vascular N2 occlusion*) or AB (brain vascular N2 occlusion*)	Search modes - Boolean/Phrase

S53	TI (craniocerebral N3 disturb*) or AB (craniocerebral N3 disturb*)	Search modes - Boolean/Phrase
S52	TI (craniocerebral N3 damage*) or AB (craniocerebral N3 damage*)	Search modes - Boolean/Phrase
S51	TI (craniocerebral N3 trauma*) or AB (craniocerebral N3 trauma*)	Search modes - Boolean/Phrase
S50	TI (craniocerebral N3 injur*) or AB (craniocerebral N3 injur*)	Search modes - Boolean/Phrase
S49	TI (cerebral N3 insult*) or AB (cerebral N3 insult*)	Search modes - Boolean/Phrase
S48	TI (cerebral N3 disturb*) or AB (cerebral N3 disturb*)	Search modes - Boolean/Phrase
S47	TI (cerebral N3 damage*) or AB (cerebral N3 damage*)	Search modes - Boolean/Phrase
S46	TI (cerebral N3 trauma*) or AB (cerebral N3 trauma*)	Search modes - Boolean/Phrase
S45	TI (cerebral N3 injur*) or AB (cerebral N3 injur*)	Search modes - Boolean/Phrase
S44	TI (skull N3 insult*) or AB (skull N3 insult*)	Search modes - Boolean/Phrase
S43	TI (skull N3 disturb*) or AB (skull N3 disturb*)	Search modes - Boolean/Phrase
S42	TI (skull N3 damage*) or AB (skull N3 damage*)	Search modes - Boolean/Phrase
S41	TI (skull N3 trauma*) or AB (skull N3 trauma*)	Search modes - Boolean/Phrase
S40	TI (skull N3 injur*) or AB (skull N3 injur*)	Search modes - Boolean/Phrase
S39	TI (brain N3 insult*) or AB (brain N3 insult*)	Search modes - Boolean/Phrase
S38	TI (brain N3 disturb*) or AB (brain N3 disturb*)	Search modes - Boolean/Phrase
S37	TI (brain N3 damage*) or AB (brain N3 damage*)	Search modes - Boolean/Phrase
S36	TI (brain N3 trauma*) or AB (brain N3 trauma*)	Search modes - Boolean/Phrase
S35	TI (brain N3 injur*) or AB (brain N3 injur*)	Search modes - Boolean/Phrase
S34	TI (head N3 insult*) or AB (head N3 insult*)	Search modes - Boolean/Phrase
S33	TI (head N3 disturb*) or AB (head N3 disturb*)	Search modes - Boolean/Phrase

S32 TI (head N3 damage*) or AB (head N3 damage*) Search modes - Boolean/Phrase S31 TI (head N3 trauma*) or AB (head N3 trauma*) Search modes - Boolean/Phrase S33 TI (head N3 injur*) or AB (head N3 injur*) Search modes - Boolean/Phrase S29 MH HEAD INJURIES+ S28 TI (meningitis or meningococcal) or AB (meningitis or meningococcal) S27 MH MENINGITIS+ S28 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S29 MH CEREBRAL PALSY S20 TI (cerebral N3 pals*) or AB (static encephalopath*) or AB (static encephalopath*) S20 TI (static encephalopath*) or AB (static encephalopath*) S21 TI (adquired N2 brain injur*) or AB (acquired N2 brain injur*) S22 TI (acquired N2 brain injur*) or AB (sacquired N2 brain injur*) S21 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) S23 TI (non-progressive N2 brain injur*) S24 TI (poper motor neuron# lesion*) S25 TI (poper motor neuron# lesion*) S26 TI (poper motor neuron# lesion*) S27 TI (poper motor neuron# lesion*) or AB (poper motor neuron# lesion*) S28 TI (poper motor neuron# lesion*) S29 TI (poper motor neuron# lesion*) S20 TI (poper motor neuron# lesion*) S21 TI (poper motor neuron# lesion*) or AB (poper motor neuron# lesion*) S21 TI (poper motor neuron# lesion*) S22 TI (poper motor neuron# lesion*) S23 MH ATAXIA S24 TI (musc* N3 weak*) or AB (musc* N3 weak*) S25 Search modes - Boolean/Phrase S26 TI (musc* N3 weak*) or AB (musc* N3 weak*) S27 TI (musc* N3 weak*) or AB (musc* N3 weak*) S28 Search modes - Boolean/Phrase S29 TI (musc* N3 weak*) or AB (musc* N3 weak*) S29 TI (musc* make*) S29 Search modes - Boolean/Phrase S20 TI (musc* make*) or AB (musc* na weak*) S20 Search modes - Boolean/Phrase S21 TI (musc* na weak*) or AB (musc* na weak*) S21 TI (musc* na weak*) or AB (musc* na weak*) S22 Search modes - Boolean/Phrase S23 TI (musc* na weak*) or AB (musc* na weak*)			
S31 IT (nead N3 trauma*) or AB (nead N3 trauma*) Solean/Phrase S30 TI (head N3 injur*) or AB (head N3 injur*) Search modes - Boolean/Phrase S29 MH HEAD INJURIES+ S28 TI (meningitis or meningococcal) or AB (meningitis or meningococcal) S27 MH MENINGITIS+ S28 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S29 MH CEREBRAL PALSY S20 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S20 MH CEREBRAL PALSY S21 TI (static encephalopath*) or AB (static encephalopath*) S22 TI (ABI) or AB (ABI) S23 TI (ABI) or AB (ABI) S24 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S25 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S26 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S27 TI (Inon-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S28 Sarch modes - Boolean/Phrase S29 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S21 TI (puper modes - Boolean/Phrase S22 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S28 Sarch modes - Boolean/Phrase S29 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S20 TI (upper motor NAB (atax*) S21 TI (unusc* N3 weak*) or AB (musc* N3 weak*) S22 Sarch modes - Boolean/Phrase S23 TI (upper motor AB (musc* N3 weak*) S24 TI (upper modes - Boolean/Phrase S25 Sarch modes - Boolean/Phrase S26 Sarch modes - Boolean/Phrase S27 TI (upper motor neuron# Sarch modes - Boolean/Phrase S28 TI (upper modes - Boolean/Phrase S29 TI (upper motor neuron# Sarch modes - Boolean/Phrase S29 TI (upper motor neuron# Sarch modes - Boolean/Phrase S29 TI (upper motor neuron# Sarch modes - Boolean/Phrase S29 TI (upper motor neuron# Sarch modes - Boolean/Phrase S29 TI (upper motor neuron# Sarch modes - Boolean/Phrase S29 TI (upper motor neuron# Sarch modes - Boolean/Phrase	S32	TI (head N3 damage*) or AB (head N3 damage*)	
S30 IT (head N3 injur*) or AB (head N3 injur*) S29 MH HEAD INJURIES+ S28 TI (meningitis or meningococcal) or AB (meningitis or meningococcal) S27 MH MENINGITIS+ S28 Search modes - Boolean/Phrase S28 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S29 MH CEREBRAL PALSY S20 TI (cerebral N3 pals*) or AB (static Boolean/Phrase S21 TI (static encephalopath*) or AB (static Encephalopath*) S22 TI (ABI) or AB (ABI) S23 TI (ABI) or AB (ABI) S24 TI (acquired N2 brain injur*) or AB (acquired N2 brain Injur*) S25 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S26 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S27 TI (non-progressive N2 brain injur*) S28 TI (non-progressive N2 brain injur*) S29 TI (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) S21 TI (non-progressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) S23 TI (pon-progressive N2 brain injur*) S24 TI (non-progressive N2 brain injur*) S25 TI (non-progressive N2 brain injur*) S26 TI (non-progressive N2 brain injur*) S27 TI (upper motor neuron# lesion*) or AB (upper motor Boolean/Phrase S28 Sarch modes - Boolean/Phrase S29 TI (upper motor neuron# lesion*) or AB (upper motor Boolean/Phrase S29 TI (upper motor neuron# lesion*) or AB (upper motor Boolean/Phrase S20 TI (upper motor neuron# lesion*) or AB (upper motor Boolean/Phrase S20 TI (upper motor neuron# lesion*) or AB (upper motor Boolean/Phrase S20 TI (upper motor neuron# lesion*) or AB (upper motor Boolean/Phrase S20 TI (upper motor neuron# lesion*) or AB (upper motor Boolean/Phrase S21 TI (upper motor neuron# lesion*) or AB (upper motor Boolean/Phrase S22 Search modes - Boolean/Phrase S23 TI (upper motor neuron# lesion*) or AB (upper motor Boolean/Phrase S25 MH ATAXIA S26 TI (musc* N3 weak*) or AB (musc* N3 weak*) S27 MH MUSCLE WEAKNESS S28 TI MEATINA Search modes - Boolean/Phrase S29 TI MH MUSCLE WEAKNESS	S31	TI (head N3 trauma*) or AB (head N3 trauma*)	
S28 MH HEAD INJURIES+ S28 TI (meningitis or meningococcal) or AB (meningitis or meningococcal) S27 MH MENINGITIS+ S28 Search modes - Boolean/Phrase S26 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S27 MH CEREBRAL PALSY S28 Search modes - Boolean/Phrase S28 MH CEREBRAL PALSY S29 Search modes - Boolean/Phrase S29 TI (static encephalopath*) or AB (static encephalopath*) S20 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S21 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S22 TI (nonprogressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S21 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S29 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S21 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S23 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S24 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S25 Search modes - Boolean/Phrase S26 TI (upper motor neuron# lesion*) or AB (upper motor search modes - Boolean/Phrase S27 TI (upper motor neuron# lesion*) or AB (upper motor search modes - Boolean/Phrase S28 Search modes - Boolean/Phrase S29 MH ATAXIA S20 MH ATAXIA S20 MH MUSCLE WEAKNESS	S30	TI (head N3 injur*) or AB (head N3 injur*)	
meningococcal) Boolean/Phrase Search modes - Boolean/Phrase TI (static encephalopath*) or AB (static encephalopath*) Search modes - Boolean/Phrase Search modes - Boolean/Phrase TI (ABI) or AB (ABI) Search modes - Boolean/Phrase TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) Search modes - Boolean/Phrase TI (nonprogressive N2 brain injur*) or AB (non-progressive N2 brain injur*) Search modes - Boolean/Phrase TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) Search modes - Boolean/Phrase Search modes - Boolean/Phrase TI (non-sprogressive N2 brain injur*) or AB (non-progressive N2 brain injur*) Search modes - Boolean/Phrase TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) Search modes - Boolean/Phrase TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) Search modes - Boolean/Phrase TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) Search modes - Boolean/Phrase MH ATAXIA Search modes - Boolean/Phrase TI (musc* N3 weak*) or AB (musc* N3 weak*) Search modes - Boolean/Phrase Search modes - Boolean/Phrase Search modes - Boolean/Phrase	S29	MH HEAD INJURIES+	
S26 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S26 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S27 MH CEREBRAL PALSY Search modes - Boolean/Phrase S28 TI (static encephalopath*) or AB (static encephalopath*) S29 TI (ABI) or AB (ABI) S20 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S21 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S23 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S26 TI (non-progressive N2 brain injur*) S27 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S28 Search modes - Boolean/Phrase S29 TI (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) S21 TI (non-progressive N2 brain injur*) S22 Search modes - Boolean/Phrase S23 TI (non-progressive N2 brain injur*) S24 Search modes - Boolean/Phrase S25 TI (non-progressive N2 brain injur*) S26 Search modes - Boolean/Phrase S27 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S28 Search modes - Boolean/Phrase S29 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S29 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S20 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S20 TI (upper motor neuron# lesion*) S21 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S21 TI (upper motor neuron# lesion*) S22 Search modes - Boolean/Phrase S23 TI (musc* N3 weak*) or AB (musc* N3 weak*) S24 TI (musc* N3 weak*) or AB (musc* N3 weak*) S25 Search modes - Boolean/Phrase S26 Search modes - Boolean/Phrase S27 TI (musc* N3 weak*) or AB (musc* N3 weak*) S28 Search modes - Boolean/Phrase S29 Search modes - Boolean/Phrase S29 Search modes - Boolean/Phrase	S28	, , , , , , , , , , , , , , , , , , , ,	
S25 MH CEREBRAL PALSY Search modes - Boolean/Phrase S24 TI (static encephalopath*) or AB (static encephalopath*) S25 TI (ABI) or AB (ABI) S26 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S27 TI (nonprogressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S28 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S29 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S21 TI (non-progressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S23 TI (non-progressive N2 brain injur*) S24 TI (non-progressive N2 brain injur*) S25 Search modes - Boolean/Phrase S26 Search modes - Boolean/Phrase S27 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S28 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S29 TI (utatx*) or AB (atax*) S20 TI (musc* N3 weak*) or AB (musc* N3 weak*) S20 TI (musc* N3 weak*) or AB (musc* N3 weak*) S21 TI (musc* N3 weak*) or AB (musc* N3 weak*) S21 TI (musc* N3 weak*) or AB (musc* N3 weak*) S21 TI (musc* N3 weak*) or AB (musc* N3 weak*) S21 TI (musc* N3 weak*) or AB (musc* N3 weak*) S21 TI (musc* N3 weak*) or AB (musc* N3 weak*) S21 TI (musc* N3 weak*) or AB (musc* N3 weak*) S21 TI (musc* N3 weak*) or AB (musc* N3 weak*)	S27	MH MENINGITIS+	
TI (static encephalopath*) or AB (static encephalopath*) or AB (static encephalopath*) TI (static encephalopath*) or AB (static encephalopath*) TI (ABI) or AB (ABI) Search modes - Boolean/Phrase Search modes - Boolean/Phrase TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) Search modes - Boolean/Phrase TI (nonprogressive N2 brain injur*) or AB (non-progressive N2 brain injur*) Search modes - Boolean/Phrase TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) Search modes - Boolean/Phrase Search modes - Boolean/Phrase Search modes - Boolean/Phrase TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) TI (utatax*) or AB (atax*) Search modes - Boolean/Phrase Search modes - Boolean/Phrase TI (musc* N3 weak*) or AB (musc* N3 weak*) Search modes - Boolean/Phrase	S26	TI (cerebral N3 pals*) or AB (cerebral N3 pals*)	
scarch modes - Boolean/Phrase Signature of	S25	MH CEREBRAL PALSY	
S22 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S21 TI (nonprogressive N2 brain injur*) or AB (acquired N2 brain boolean/Phrase S21 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) S23 TI (non-progressive N2 brain injur*) S24 TI (non-progressive N2 brain injur*) S25 TI (non-progressive N2 brain injur*) S26 TI (non-progressive N2 brain injur*) S27 MH BRAIN INJURIES+ S28 Search modes - Boolean/Phrase S28 Search modes - Boolean/Phrase S29 Search modes - Boolean/Phrase S20 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S20 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S217 TI (upper motor neuron# lesion*) or AB (upper motor neuron# neuron# lesion*) S218 Search modes - Boolean/Phrase S219 MH ATAXIA S210 TI (atax*) or AB (atax*) S220 Search modes - Boolean/Phrase S230 TI (musc* N3 weak*) or AB (musc* N3 weak*) S33 MH MUSCLE WEAKNESS S410 MH MUSCLE WEAKNESS S411 MH MUSCLE WEAKNESS S412 Search modes - Boolean/Phrase	S24	` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	
injur*) Boolean/Phrase TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) TI (non-progressive N2 brain injur*) TI (non-progressive N2 brain injur*) TI (non-progressive N2 brain injur*) Search modes - Boolean/Phrase S19 MH BRAIN INJURIES+ S10 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) TI (utax*) or AB (atax*) S16 TI (atax*) or AB (atax*) S17 MH ATAXIA Search modes - Boolean/Phrase S18 MH ATAXIA S19 MH ATAXIA S10 or S1	S23	TI (ABI) or AB (ABI)	
S21	S22	1 ' '	
progressive N2 brain injur*) Boolean/Phrase Search modes - Boolean/Phrase S10 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) Search modes - Boolean/Phrase TI (atax*) or AB (atax*) Search modes - Boolean/Phrase S15 MH ATAXIA Search modes - Boolean/Phrase S16 TI (musc* N3 weak*) or AB (musc* N3 weak*) Search modes - Boolean/Phrase	S21		
S19 MH BRAIN INJURIES+ S1 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S2arch modes - Boolean/Phrase S16 TI (atax*) or AB (atax*) S2arch modes - Boolean/Phrase S15 MH ATAXIA S2arch modes - Boolean/Phrase S16 TI (musc* N3 weak*) or AB (musc* N3 weak*) S2arch modes - Boolean/Phrase S17 Search modes - Boolean/Phrase S18 MH MUSCLE WEAKNESS S18 MH MUSCLE WEAKNESS S19 Dearch modes - Boolean/Phrase S20 Search modes - Boolean/Phrase S20 Search modes - Boolean/Phrase	S20	, , , , ,	
S18 S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) Search modes - Boolean/Phrase S16 TI (atax*) or AB (atax*) S17 Search modes - Boolean/Phrase S18 Search modes - Boolean/Phrase S19 Search modes - Boolean/Phrase S10 Search modes - Boolean/Phrase S11 Search modes - Boolean/Phrase S12 Search modes - Boolean/Phrase S13 MH MUSCLE WEAKNESS S14 Search modes - Boolean/Phrase S15 Search modes - Boolean/Phrase	S19	MH BRAIN INJURIES+	
S17 neuron# lesion*) S18 TI (atax*) or AB (atax*) S19 MH ATAXIA S10 Search modes - Boolean/Phrase S10 Search modes - Boolean/Phrase S11 Search modes - Boolean/Phrase S12 TI (musc* N3 weak*) or AB (musc* N3 weak*) S13 MH MUSCLE WEAKNESS S14 Search modes - Boolean/Phrase S15 Search modes - Boolean/Phrase	S18	S10 or S11 or S12 or S13 or S14 or S15 or S16 or	
S16 IT (atax*) or AB (atax*) S17 MH ATAXIA Search modes - Boolean/Phrase S18 TI (musc* N3 weak*) or AB (musc* N3 weak*) S19 MH MUSCLE WEAKNESS Search modes - Boolean/Phrase Search modes - Boolean/Phrase	S17	, , , , , , , , , , , , , , , , , , , ,	
S15 MH ATAXIA Boolean/Phrase S14 TI (musc* N3 weak*) or AB (musc* N3 weak*) Search modes - Boolean/Phrase S13 MH MUSCLE WEAKNESS Search modes - Boolean/Phrase	S16	TI (atax*) or AB (atax*)	
S14 IT (musc* N3 weak*) or AB (musc* N3 weak*) Boolean/Phrase S13 MH MUSCLE WEAKNESS Search modes - Boolean/Phrase	S15	MH ATAXIA	
S13 MH MUSCLE WEAKNESS Boolean/Phrase	S14	TI (musc* N3 weak*) or AB (musc* N3 weak*)	
S12 TI (athetos* or athetoid*) or AB (athetos* or athetoid*) Search modes -	S13	MH MUSCLE WEAKNESS	
	S12	TI (athetos* or athetoid*) or AB (athetos* or athetoid*)	Search modes -

		Boolean/Phrase
S11	TI (chorea* or choreic* or choreo*) or AB (chorea* or choreic* or choreo*)	Search modes - Boolean/Phrase
S10	MH CHOREA+	Search modes - Boolean/Phrase
S9	TI (dystoni*) or AB (dystoni*)	Search modes - Boolean/Phrase
S8	MH DYSTONIA+	Search modes - Boolean/Phrase
S7	TI (involuntar* N2 mov*) or AB (involuntar* N2 mov*)	Search modes - Boolean/Phrase
S6	TI (abnormal N2 mov*) or AB (abnormal N2 mov*)	Search modes - Boolean/Phrase
S5	TI (dyskinesi*) or AB (dyskinesi*)	Search modes - Boolean/Phrase
S4	MH DYSKINESIAS+	Search modes - Boolean/Phrase
S3	TI (spastic* or spasm* or hyperton*) or AB (spastic* or spasm* or hyperton*)	Search modes - Boolean/Phrase
S2	MH SPASM+	Search modes - Boolean/Phrase
S1	MH MUSCLE SPASTICITY	Search modes - Boolean/Phrase

Question 4 Health economics searches

Ovid MEDLINE(R) 1950+

$SPAST_Q4_botox_economic_medline_110810$

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	MUSCLE SPASTICITY/
9	exp SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
12	hyperton\$.ti,ab.
13	exp DYSKINESIAS/
14	dyskinesi\$.ti,ab.
15	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
16	exp DYSTONIA/
17	dystoni\$.ti,ab.
18	exp CHOREA/
19	(chorea\$ or choreic\$ or choreo\$).ti,ab.
20	exp ATHETOSIS/
	(athetos\$ or athetoid).ti,ab.
22	MUSCLE WEAKNESS/
	(musc\$ adj3 weak\$).ti,ab.
24	exp ATAXIA/
25	atax\$.ti,ab.
26	upper motor neuron? lesion\$.ti,ab.
27	or/8-26
28	exp BRAIN INJURIES/
29	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
30	ABI.ti,ab.
	static encephalopath\$.ti,ab.
32	CEREBRAL PALSY/

33 (cerebral adj3 pals\$).ti,ab. 34 exp MENINGITIS/ 35 (meningitis or meningococcal).ti,ab. 36 exp CRANIOCEREBRAL TRAUMA/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 38 exp ENCEPHALITIS/ 39 encephaliti\$.ti,ab. 40 exp STROKE/ 41 stroke\$.ti.ab. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab. 43 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or 44 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 45 exp HYDROCEPHALUS/ 46 hydrocephal\$.ti,ab. 47 SHAKEN BABY SYNDROME/ 48||(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 49 or/28-48 50 exp PARALYSIS/ 51 HEMIPLEGIA/ 52 exp PARAPLEGIA/ 53 QUADRIPLEGIA/ 54 exp PARESIS/ 55||(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 56 (monopares or dipares or hemipares or quadripares or tetrapares).ti,ab. 57 or/50-56 58 and/27,57 59 and/49.57 60 and/27,49 61 or/58-60 62 exp BOTULINUM TOXINS/ 63 BOTULINUM TOXIN TYPE A/ 64 botulinum\$.ti,ab. 65 (BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab. (botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab. 67 (neurobloc or myobloc).ti,ab.

68	or/62-67
69	and/61,68
70	limit 69 to english language
71	limit 70 to animals
72	limit 70 to (animals and humans)
73	71 not 72
74	70 not 73
75	and/7,74

EBM Reviews - Cochrane Central Register of Controlled Trials

SPAST_Q4_botox_economic_cctr_110810

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	MUSCLE SPASTICITY/
9	exp SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
12	hyperton\$.ti,ab.
13	exp DYSKINESIAS/
14	dyskinesi\$.ti,ab.
15	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
16	exp DYSTONIA/
17	dystoni\$.ti,ab.
18	exp CHOREA/
19	(chorea\$ or choreic\$ or choreo\$).ti,ab.
20	exp ATHETOSIS/
-	(athetos\$ or athetoid).ti,ab.
22	MUSCLE WEAKNESS/
23	(musc\$ adj3 weak\$).ti,ab.
24	exp ATAXIA/
25	atax\$.ti,ab.
26	upper motor neuron? lesion\$.ti,ab.

27	or/8-26
28	exp BRAIN INJURIES/
29	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
30	ABI.ti,ab.
31	static encephalopath\$.ti,ab.
32	CEREBRAL PALSY/
33	(cerebral adj3 pals\$).ti,ab.
34	exp MENINGITIS/
35	(meningitis or meningococcal).ti,ab.
36	exp CRANIOCEREBRAL TRAUMA/
37	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
38	exp ENCEPHALITIS/
39	encephaliti\$.ti,ab.
40	exp STROKE/
41	stroke\$.ti,ab.
42	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
43	exp CEREBROVASCULAR DISORDERS/
	((brain vascular or intra cranial vascular or intra?cranial vascular or
44	cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
45	exp HYDROCEPHALUS/
46	hydrocephal\$.ti,ab.
47	SHAKEN BABY SYNDROME/
48	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
49	or/28-48
50	exp PARALYSIS/
51	HEMIPLEGIA/
52	exp PARAPLEGIA/
53	QUADRIPLEGIA/
54	exp PARESIS/
55	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
56	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
57	or/50-56
58	and/27,57
=	and/49,57
60	and/27,49
61	or/58-60
62	exp BOTULINUM TOXINS/

63	BOTULINUM TOXIN TYPE A/
64	botulinum\$.ti,ab.
65	(BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab.
66	(botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab.
67	(neurobloc or myobloc).ti,ab.
68	or/62-67
69	and/61,68
70	and/7,69

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 $SPAST_Q4_botox_economic_hta_110810$

#	Searches	Results
1	MUSCLE SPASTICITY/	17
2	exp SPASM/	0
3	exp MUSCLE HYPERTONIA/	18
4	(spastic\$ or spasm\$).tw.	31
5	hyperton\$.tw.	4
6	exp DYSKINESIAS/	19
7	dyskinesi\$.tw.	6
8	((abnormal\$ or involuntar\$) adj2 mov\$).tw.	0
9	exp DYSTONIA/	9
10	dystoni\$.tw.	13
11	exp CHOREA/	0
12	(chorea\$ or choreic\$ or choreo\$).tw.	1
13	exp ATHETOSIS/	0
14	(athetos\$ or athetoid).tw.	0
15	MUSCLE WEAKNESS/	0
16	(musc\$ adj3 weak\$).tw.	2
17	exp ATAXIA/	4
18	atax\$.tw.	8
19	upper motor neuron? lesion\$.tw.	0
20	or/1-19	64
21	exp BRAIN INJURIES/	21
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).tw.	3
23	ABI.tw.	5
24	static encephalopath\$.tw.	0

25	CEREBRAL PALSY/	20
26	(cerebral adj3 pals\$).tw.	31
27	exp MENINGITIS/	4
28	(meningitis or meningococcal).tw.	12
	exp CRANIOCEREBRAL TRAUMA/	32
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw.	46
31	exp ENCEPHALITIS/	1
32	encephaliti\$.tw.	3
33	exp STROKE/	1
34	stroke\$.tw.	166
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw.	37
36	exp CEREBROVASCULAR DISORDERS/	99
37	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw.	34
38	exp HYDROCEPHALUS/	3
39	hydrocephal\$.tw.	4
40	SHAKEN BABY SYNDROME/	0
41	(shak\$ adj3 (injur\$ or syndrome\$)).tw.	0
42	or/21-41	311
43	exp PARALYSIS/	10
44	HEMIPLEGIA/	0
45	exp PARAPLEGIA/	2
46	QUADRIPLEGIA/	2
47	exp PARESIS/	1
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw.	4
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).tw.	0
50	or/43-49	13
51	and/20,50	2
52	and/42,50	3
53	and/20,42	14
54	or/51-53	15
55	exp BOTULINUM TOXINS/	9
56	BOTULINUM TOXIN TYPE A/	5
57	botulinum\$.tw.	24
58	(BTA or BTB or BTX or BoNT\$ or BoTx).tw.	11
59	(botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin	1

	or vistabel or xeomin or bocouture).tw.	
60	(neurobloc or myobloc).tw.	0
61	or/55-60	27
62	and/54,61	7

EBM Reviews - NHS Economic Evaluation Database

 $SPAST_Q4_botox_economic_nhseed_110810$

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).tw.
5	hyperton\$.tw.
6	exp DYSKINESIAS/
7	dyskinesi\$.tw.
8	((abnormal\$ or involuntar\$) adj2 mov\$).tw.
9	exp DYSTONIA/
10	dystoni\$.tw.
	exp CHOREA/
12	(chorea\$ or choreic\$ or choreo\$).tw.
	exp ATHETOSIS/
14	(athetos\$ or athetoid).tw.
15	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).tw.
	exp ATAXIA/
=	atax\$.tw.
	upper motor neuron? lesion\$.tw.
20	or/1-19
=	exp BRAIN INJURIES/
	((non progressive or non?progressive or acquired) adj2 brain injur\$).tw.
23	ABI.tw.
24	static encephalopath\$.tw.
25	CEREBRAL PALSY/
26	(cerebral adj3 pals\$).tw.
27	exp MENINGITIS/
	(meningitis or meningococcal).tw.
29	exp CRANIOCEREBRAL TRAUMA/
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or

	damage\$ or disturb\$ or insult\$)).tw.
31	exp ENCEPHALITIS/
32	encephaliti\$.tw.
33	exp STROKE/
	stroke\$.tw.
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw.
36	exp CEREBROVASCULAR DISORDERS/
37	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw.
38	exp HYDROCEPHALUS/
39	hydrocephal\$.tw.
40	SHAKEN BABY SYNDROME/
41	(shak\$ adj3 (injur\$ or syndrome\$)).tw.
42	or/21-41
43	exp PARALYSIS/
44	HEMIPLEGIA/
45	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).tw.
50	or/43-49
	and/20,50
52	and/42,50
53	and/20,42
54	or/51-53
55	exp BOTULINUM TOXINS/
56	BOTULINUM TOXIN TYPE A/
57	botulinum\$.tw.
58	(BTA or BTB or BTX or BoNT\$ or BoTx).tw.
59	(botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).tw.
60	(neurobloc or myobloc).tw.
61	or/55-60
62	and/54,61

EMBASE 1980+

$SPAST_Q4_botox_economic_embase_110810$

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	SPASTICITY/
9	exp MUSCLE SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
	hyperton\$.ti,ab.
	DYSKINESIA/
	dyskinesi\$.ti,ab.
	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
16	DYSTONIA/
17	dystoni\$.ti,ab.
	exp CHOREA/
19	CHOREOATHETOSIS/
\vdash	ATHETOSIS/
21	(chorea\$ or choreic\$ or choreo\$).ti,ab.
	(athetos\$ or athetoid).ti,ab.
23	exp MUSCLE WEAKNESS/
24	(musc\$ adj3 weak\$).ti,ab.
25	exp ATAXIA/
26	atax\$.ti,ab.
27	upper motor neuron? lesion\$.ti,ab.
28	or/8-27
29	exp BRAIN INJURY/
30	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
	ABI.ti,ab.
==	static encephalopath\$.ti,ab.
33	CEREBRAL PALSY/
34	(cerebral adj3 pals\$).ti,ab.

35	exp MENINGITIS/
36	(meningitis or meningococcal).ti,ab.
37	exp HEAD INJURY/
38	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
39	exp ENCEPHALITIS/
40	encephaliti\$.ti,ab.
41	STROKE/
42	stroke\$.ti,ab.
43	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
44	exp CEREBROVASCULAR DISEASE/
45	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
46	exp HYDROCEPHALUS/
47	hydrocephal\$.ti,ab.
48	SHAKEN BABY SYNDROME/
49	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
50	or/29-49
51	exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/
52	SPASTIC PARAPLEGIA/
53	PARESIS/ or MONOPARESIS/ or HEMIPARESIS/
54	SPASTIC PARESIS/
55	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
56	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
57	or/51-56
58	and/28,57
59	and/50,57
60	and/28,50
61	or/58-60
62	BOTULINUM TOXIN/
63	BOTULINUM TOXIN A/
64	BOTULINUM TOXIN B/
65	botulinum\$.ti,ab.
66	(BTA or BTB or BTX or BoNT\$ or BoTx).ti,ab.
67	(botox or dysport or azzalure or oculinum or prosigne or purtox or reloxin or vistabel or xeomin or bocouture).ti,ab.
68	(neurobloc or myobloc).ti,ab.

69	or/62-68
70	and/61,69
71	limit 70 to english language
72	and/7,71

Question 5 In children and young people with spasticity due to a non-progressive brain disorder does an intrathecal baclofen test help to identify those likely to benefit from pump-administered continuous intrathecal baclofen (CITB)?

Question 6 In children and young people with spasticity due to a non-progressive brain disorder what are the benefits and risks of continuous intrathecal baclofen therapy (CITB)?

These questions were addressed through a single search.

Ovid MEDLINE(R) 1950+

SPAST_Q5-6_baclofen_medline_270710

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.
6	exp DYSKINESIAS/
7	dyskinesi\$.ti,ab.
8	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
9	exp DYSTONIA/
10	dystoni\$.ti,ab.
11	exp CHOREA/
12	(chorea\$ or choreic\$ or choreo\$).ti,ab.
13	exp ATHETOSIS/
14	(athetos\$ or athetoid).ti,ab.
15	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).ti,ab.
17	exp ATAXIA/
18	atax\$.ti,ab.
19	upper motor neuron? lesion\$.ti,ab.
20	or/1-19
21	exp BRAIN INJURIES/
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
23	ABI.ti,ab.
24	static encephalopath\$.ti,ab.
25	CEREBRAL PALSY/
26	(cerebral adj3 pals\$).ti,ab.
27	exp MENINGITIS/

_	(meningitis or meningococcal).ti,ab.
29	exp CRANIOCEREBRAL TRAUMA/
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
31	exp ENCEPHALITIS/
32	encephaliti\$.ti,ab.
33	exp STROKE/
34	stroke\$.ti,ab.
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
36	exp CEREBROVASCULAR DISORDERS/
37	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
38	exp HYDROCEPHALUS/
39	hydrocephal\$.ti,ab.
40	SHAKEN BABY SYNDROME/
41	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
42	or/21-41
43	exp PARALYSIS/
44	HEMIPLEGIA/
45	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
50	or/43-49
51	and/20,50
52	and/42,50
53	and/20,42
54	or/51-53
55	BACLOFEN/
56	(baclofen or baclophen or lioresal or spinax or lyflex).ti,ab.
57	ITB.ti,ab.
58	or/55-57
59	and/54,58
60	limit 59 to english language
61	limit 60 to animals
62	limit 60 to (animals and humans)
63	61 not 62

64 60 not 63

Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations

 $SPAST_Q5-6_baclofen_medline_in-process_290610$

#	Searches
1	(spastic\$ or spasm\$).ti,ab.
2	hyperton\$.ti,ab.
3	dyskinesi\$.ti,ab.
4	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
5	dystoni\$.ti,ab.
6	(chorea\$ or choreic\$ or choreo\$).ti,ab.
7	(athetos\$ or athetoid).ti,ab.
8	(musc\$ adj3 weak\$).ti,ab.
9	atax\$.ti,ab.
10	upper motor neuron? lesion\$.ti,ab.
11	or/1-10
12	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
13	ABI.ti,ab.
14	static encephalopath\$.ti,ab.
15	(cerebral adj3 pals\$).ti,ab.
	(meningitis or meningococcal).ti,ab.
17	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
18	encephaliti\$.ti,ab.
	stroke\$.ti,ab.
20	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
21	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
22	hydrocephal\$.ti,ab.
23	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
24	or/12-23
25	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
26	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
27	or/25-26
28	and/11,27
29	and/24,27

30	and/11,24
31	or/28-30
32	(baclofen or baclophen or lioresal or spinax or lyflex).ti,ab.
33	ITB.ti,ab.
34	or/32-33
35	and/31,34

EBM Reviews - Cochrane Central Register of Controlled Trials

SPAST_Q5-6_baclofen_cctr_290610

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.
6	exp DYSKINESIAS/
7	dyskinesi\$.ti,ab.
8	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
9	exp DYSTONIA/
10	dystoni\$.ti,ab.
=	exp CHOREA/
12	(chorea\$ or choreic\$ or choreo\$).ti,ab.
13	exp ATHETOSIS/
14	(athetos\$ or athetoid).ti,ab.
15	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).ti,ab.
17	exp ATAXIA/
18	atax\$.ti,ab.
19	upper motor neuron? lesion\$.ti,ab.
20	or/1-19
21	exp BRAIN INJURIES/
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
23	ABI.ti,ab.
	static encephalopath\$.ti,ab.
25	CEREBRAL PALSY/
26	(cerebral adj3 pals\$).ti,ab.
27	exp MENINGITIS/

28	(meningitis or meningococcal).ti,ab.
	exp CRANIOCEREBRAL TRAUMA/
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
31	exp ENCEPHALITIS/
32	encephaliti\$.ti,ab.
33	exp STROKE/
34	stroke\$.ti,ab.
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
36	exp CEREBROVASCULAR DISORDERS/
37	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
38	exp HYDROCEPHALUS/
39	hydrocephal\$.ti,ab.
40	SHAKEN BABY SYNDROME/
41	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
42	or/21-41
43	exp PARALYSIS/
44	HEMIPLEGIA/
45	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
50	or/43-49
51	and/20,50
52	and/42,50
53	and/20,42
54	or/51-53
55	BACLOFEN/
56	(baclofen or baclophen or lioresal or spinax or lyflex).ti,ab.
57	ITB.ti,ab.
58	or/55-57
59	and/54,58

EBM Reviews - Cochrane Database of Systematic Reviews 2005+, EBM Reviews - Database of Abstracts of Reviews of Effects

SPAST_Q5-6_baclofen_cdsrdare_290610

#	Searches
1	MUSCLE SPASTICITY.kw.
2	SPASM.kw.
3	MUSCLE HYPERTONIA.kw.
4	(spastic\$ or spasm\$).tw,tx.
5	hyperton\$.tw,tx.
6	DYSKINESIAS.kw.
7	dyskinesi\$.tw,tx.
8	((abnormal\$ or involuntar\$) adj2 mov\$).tw,tx.
9	DYSTONIA.kw.
10	dystoni\$.tw,tx.
11	CHOREA.kw.
	(chorea\$ or choreic\$ or choreo\$).tw,tx.
13	ATHETOSIS.kw.
	(athetos\$ or athetoid).tw,tx.
15	MUSCLE WEAKNESS.kw.
16	(musc\$ adj3 weak\$).tw,tx.
17	ATAXIA.kw.
18	atax\$.tw,tx.
19	upper motor neuron? lesion\$.tw,tx.
20	or/1-19
21	BRAIN INJURIES.kw.
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).tw,tx.
23	ABI.tw,tx.
24	static encephalopath\$.tw,tx.
25	CEREBRAL PALSY.kw.
26	(cerebral adj3 pals\$).tw,tx.
27	MENINGITIS.kw.
28	(meningitis or meningococcal).tw,tx.
29	CRANIOCEREBRAL TRAUMA.kw.
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw,tx.
31	ENCEPHALITIS.kw.
32	encephaliti\$.tw,tx.
33	STROKE.kw.

	stroke\$.tw,tx.
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw,tx.
36	CEREBROVASCULAR DISORDERS.kw.
37	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw,tx.
38	HYDROCEPHALUS.kw.
39	hydrocephal\$.tw,tx.
40	SHAKEN BABY SYNDROME.kw.
41	(shak\$ adj3 (injur\$ or syndrome\$)).tw,tx.
42	or/21-41
43	PARALYSIS.kw.
44	HEMIPLEGIA.kw.
45	PARAPLEGIA.kw.
46	QUADRIPLEGIA.kw.
47	PARESIS.kw.
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw,tx.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).tw,tx.
50	or/43-49
51	and/20,50
52	and/42,50
53	and/20,42
54	or/51-53
55	BACLOFEN.kw.
56	(baclofen or baclophen or lioresal or spinax or lyflex).tw,tx.
57	ITB.tw,tx.
58	or/55-57
59	and/54,58

EMBASE 1980+

 $SPAST_Q5-6_baclofen_embase_270710$

#	Searches
1	SPASTICITY/
2	exp MUSCLE SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.

6	DYSKINESIA/
7	dyskinesi\$.ti,ab.
	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
	DYSTONIA/
10	dystoni\$.ti,ab.
11	exp CHOREA/
12	CHOREOATHETOSIS/
13	ATHETOSIS/
14	(chorea\$ or choreic\$ or choreo\$).ti,ab.
15	(athetos\$ or athetoid).ti,ab.
16	exp MUSCLE WEAKNESS/
17	(musc\$ adj3 weak\$).ti,ab.
18	exp ATAXIA/
19	atax\$.ti,ab.
20	upper motor neuron? lesion\$.ti,ab.
21	or/1-20
22	exp BRAIN INJURY/
23	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
24	ABI.ti,ab.
25	static encephalopath\$.ti,ab.
26	CEREBRAL PALSY/
27	(cerebral adj3 pals\$).ti,ab.
28	exp MENINGITIS/
29	(meningitis or meningococcal).ti,ab.
30	exp HEAD INJURY/
31	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
32	exp ENCEPHALITIS/
33	encephaliti\$.ti,ab.
34	STROKE/
	stroke\$.ti,ab.
36	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
37	exp CEREBROVASCULAR DISEASE/
	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
39	exp HYDROCEPHALUS/
40	hydrocephal\$.ti,ab.
41	SHAKEN BABY SYNDROME/

42	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
	or/22-42
44	exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/
45	SPASTIC PARAPLEGIA/
46	PARESIS/ or MONOPARESIS/ or HEMIPARESIS/
47	SPASTIC PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
50	or/44-49
51	and/21,50
52	and/43,50
53	and/21,43
54	or/51-53
55	BACLOFEN/
56	(baclofen or baclophen or lioresal or spinax or lyflex).ti,ab.
57	ITB.ti,ab.
58	or/55-57
59	and/54,58
60	limit 59 to english language

CINAHL 1981+

SPAST_Q5-6_baclofen_cinahl_290610

#	Query	Limiters/Expanders
S125	S118 and S123	Limiters - Exclude MEDLINE records Search modes - Boolean/Phrase
S124	S118 and S123	Search modes - Boolean/Phrase
S123	S119 or S120 or S121 or S122	Search modes - Boolean/Phrase
S122	TI (ITB) or AB (ITB)	Search modes - Boolean/Phrase
S121	AB (baclofen or baclophen or lioresal or spinax or lyflex)	Search modes - Boolean/Phrase
S120	TI (baclofen or baclophen or lioresal or spinax or lyflex)	Search modes - Boolean/Phrase

S119	MH BACLOFEN	Search modes - Boolean/Phrase
S118	S115 or S116 or S117	Search modes - Boolean/Phrase
S117	S105 and S114	Search modes - Boolean/Phrase
S116	S18 and S114	Search modes - Boolean/Phrase
S115	S18 and S105	Search modes - Boolean/Phrase
S114	S106 or S107 or S108 or S109 or S110 or S111 or S112 or S113	Search modes - Boolean/Phrase
S113	AB (monopares* or dipares* or hemipares* or quadripares* or tetrapares*)	Search modes - Boolean/Phrase
S112	TI (monopares* or dipares* or hemipares* or quadripares* or tetrapares*)	Search modes - Boolean/Phrase
S111	AB (monoplegi* or diplegi* or hemiplegi* or quadriplegi* or tetraplegi*)	Search modes - Boolean/Phrase
S110	TI (monoplegi* or diplegi* or hemiplegi* or quadriplegi* or tetraplegi*)	Search modes - Boolean/Phrase
S109	MH QUADRIPLEGIA	Search modes - Boolean/Phrase
S108	MH PARAPLEGIA	Search modes - Boolean/Phrase
S107	MH HEMIPLEGIA	Search modes - Boolean/Phrase
S106	MH PARALYSIS+	Search modes - Boolean/Phrase
S105	S19 or S20 or S21 or S22 or S23 or S24 or S25 or S26 or S27 or S28 or S29 or S30 or S31 or S32 or S33 or S34 or S35 or S36 or S37 or S38 or S39 or S40 or S41 or S42 or S43 or S44 or S45 or S46 or S47 or S48 or S49 or S50 or S51 or S52 or S53 or S54 or S55 or S56 or S57 or S58 or S59 or S60 or S61 or S62 or S63 or S64 or S65 or S66 or S67 or S68 or S69 or S70 or S71 or S72 or S73 or S74 or S75 or S76 or S77 or S78 or S79 or S80 or S81 or S82 or S83 or S84 or S85 or S86 or S87 or S88 or S89 or S90 or S91 or S92 or S93 or S94 or S95 or S96 or S97 or S98 or S99 or S100 or S101 or S102 or S103 or S104	Search modes - Boolean/Phrase
S104	TI (shak* N3 syndrome*) or AB (shak* N3 syndrome*)	Search modes - Boolean/Phrase

S82	TI (intra-cranial vascular N2 occlusion*) or AB (intra-cranial vascular N2 occlusion*)	Search modes - Boolean/Phrase
S81	TI (intra-cranial vascular N2 insufficien*) or AB (intra-cranial vascular N2 insufficien*)	Search modes - Boolean/Phrase
S80	TI (intra-cranial vascular N2 disease*) or AB (intra- cranial vascular N2 disease*)	Search modes - Boolean/Phrase
S79	TI (intra-cranial vascular N2 disorder*) or AB (intra-cranial vascular N2 disorder*)	Search modes - Boolean/Phrase
S78	TI (brain vascular N2 insult*) or AB (brain vascular N2 insult*)	Search modes - Boolean/Phrase
S77	TI (brain vascular N2 disturb*) or AB (brain vascular N2 disturb*)	Search modes - Boolean/Phrase
S76	TI (brain vascular N2 damage*) or AB (brain vascular N2 damage*)	Search modes - Boolean/Phrase
S75	TI (brain vascular N2 occlusion*) or AB (brain vascular N2 occlusion*)	Search modes - Boolean/Phrase
S74	TI (brain vascular N2 insufficien*) or AB (brain vascular N2 insufficien*)	Search modes - Boolean/Phrase
S73	TI (brain vascular N2 disease*) or AB (brain vascular N2 disease*)	Search modes - Boolean/Phrase
S72	TI (brain vascular N2 disorder*) or AB (brain vascular N2 disorder*)	Search modes - Boolean/Phrase
S71	MH CEREBROVASCULAR DISORDERS+	Search modes - Boolean/Phrase
S70	TI (intracranial N3 isch#emi*) or AB (intracranial N3 isch#emi*)	Search modes - Boolean/Phrase
S69	TI (intracranial N3 aneurysm*) or AB (intracranial N3 aneurysm*)	Search modes - Boolean/Phrase
S68	TI (intracranial N3 embolism) or AB (intracranial N3 embolism)	Search modes - Boolean/Phrase
S67	TI (intra-cranial N3 isch#emi*) or AB (intra-cranial N3 isch#emi*)	Search modes - Boolean/Phrase
S66	TI (intra-cranial N3 aneurysm*) or AB (intra-cranial N3 aneurysm*)	Search modes - Boolean/Phrase
S65	TI (intra-cranial N3 embolism) or AB (intra-cranial N3 embolism)	Search modes - Boolean/Phrase
S64	TI (cerebral N3 isch#emi*) or AB (cerebral N3 isch#emi*)	Search modes - Boolean/Phrase
S63	TI (cerebral N3 aneurysm*) or AB (cerebral N3 aneurysm*)	Search modes - Boolean/Phrase
S62	TI (cerebral N3 embolism) or AB (cerebral N3 embolism)	Search modes - Boolean/Phrase

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S40	TI (skull N3 injur*) or AB (skull N3 injur*)	Search modes - Boolean/Phrase
S39	TI (brain N3 insult*) or AB (brain N3 insult*)	Search modes - Boolean/Phrase
S38	TI (brain N3 disturb*) or AB (brain N3 disturb*)	Search modes - Boolean/Phrase
S37	TI (brain N3 damage*) or AB (brain N3 damage*)	Search modes - Boolean/Phrase
S36	TI (brain N3 trauma*) or AB (brain N3 trauma*)	Search modes - Boolean/Phrase
S35	TI (brain N3 injur*) or AB (brain N3 injur*)	Search modes - Boolean/Phrase
S34	TI (head N3 insult*) or AB (head N3 insult*)	Search modes - Boolean/Phrase
S33	TI (head N3 disturb*) or AB (head N3 disturb*)	Search modes - Boolean/Phrase
S32	TI (head N3 damage*) or AB (head N3 damage*)	Search modes - Boolean/Phrase
S31	TI (head N3 trauma*) or AB (head N3 trauma*)	Search modes - Boolean/Phrase
S30	TI (head N3 injur*) or AB (head N3 injur*)	Search modes - Boolean/Phrase
S29	MH HEAD INJURIES+	Search modes - Boolean/Phrase
S28	TI (meningitis or meningococcal) or AB (meningitis or meningococcal)	Search modes - Boolean/Phrase
S27	MH MENINGITIS+	Search modes - Boolean/Phrase
S26	TI (cerebral N3 pals*) or AB (cerebral N3 pals*)	Search modes - Boolean/Phrase
S25	MH CEREBRAL PALSY	Search modes - Boolean/Phrase
S24	TI (static encephalopath*) or AB (static encephalopath*)	Search modes - Boolean/Phrase
S23	TI (ABI) or AB (ABI)	Search modes - Boolean/Phrase
S22	TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*)	Search modes - Boolean/Phrase
S21	TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*)	Search modes - Boolean/Phrase
S20	TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*)	Search modes - Boolean/Phrase
	•	

MH BRAIN INJURIES+	Search modes - Boolean/Phrase
S1 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17	Search modes - Boolean/Phrase
TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*)	Search modes - Boolean/Phrase
TI (atax*) or AB (atax*)	Search modes - Boolean/Phrase
MH ATAXIA	Search modes - Boolean/Phrase
TI (musc* N3 weak*) or AB (musc* N3 weak*)	Search modes - Boolean/Phrase
MH MUSCLE WEAKNESS	Search modes - Boolean/Phrase
TI (athetos* or athetoid*) or AB (athetos* or athetoid*)	Search modes - Boolean/Phrase
TI (chorea* or choreic* or choreo*) or AB (chorea* or choreic* or choreo*)	Search modes - Boolean/Phrase
MH CHOREA+	Search modes - Boolean/Phrase
TI (dystoni*) or AB (dystoni*)	Search modes - Boolean/Phrase
MH DYSTONIA+	Search modes - Boolean/Phrase
TI (involuntar* N2 mov*) or AB (involuntar* N2 mov*)	Search modes - Boolean/Phrase
TI (abnormal N2 mov*) or AB (abnormal N2 mov*)	Search modes - Boolean/Phrase
TI (dyskinesi*) or AB (dyskinesi*)	Search modes - Boolean/Phrase
MH DYSKINESIAS+	Search modes - Boolean/Phrase
TI (spastic* or spasm* or hyperton*) or AB (spastic* or spasm* or hyperton*)	Search modes - Boolean/Phrase
MH SPASM+	Search modes - Boolean/Phrase
MH MUSCLE SPASTICITY	Search modes - Boolean/Phrase
	S1 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) TI (atax*) or AB (atax*) MH ATAXIA TI (musc* N3 weak*) or AB (musc* N3 weak*) MH MUSCLE WEAKNESS TI (athetos* or athetoid*) or AB (athetos* or athetoid*) TI (chorea* or choreic* or choreo*) or AB (chorea* or choreic* or choreo*) MH CHOREA+ TI (dystoni*) or AB (dystoni*) MH DYSTONIA+ TI (involuntar* N2 mov*) or AB (involuntar* N2 mov*) TI (dyskinesi*) or AB (dyskinesi*) MH DYSKINESIAS+ TI (spastic* or spasm* or hyperton*) or AB (spastic* or spasm* or hyperton*) MH SPASM+

Questions 5 and 6 Health economics searches

Ovid MEDLINE(R) 1950+

SPAST_Q5-6_baclofen_economic_medline_110810

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	MUSCLE SPASTICITY/
9	exp SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
12	hyperton\$.ti,ab.
13	exp DYSKINESIAS/
14	dyskinesi\$.ti,ab.
15	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
	exp DYSTONIA/
	dystoni\$.ti,ab.
=	exp CHOREA/
\vdash	(chorea\$ or choreic\$ or choreo\$).ti,ab.
20	exp ATHETOSIS/
	(athetos\$ or athetoid).ti,ab.
=	MUSCLE WEAKNESS/
23	(musc\$ adj3 weak\$).ti,ab.
24	exp ATAXIA/
	atax\$.ti,ab.
26	upper motor neuron? lesion\$.ti,ab.
27	or/8-26
28	exp BRAIN INJURIES/
	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
30	ABI.ti,ab.
	static encephalopath\$.ti,ab.
\vdash	CEREBRAL PALSY/
33	(cerebral adj3 pals\$).ti,ab.

34	exp MENINGITIS/
35	(meningitis or meningococcal).ti,ab.
36	exp CRANIOCEREBRAL TRAUMA/
37	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
38	exp ENCEPHALITIS/
39	encephaliti\$.ti,ab.
40	exp STROKE/
41	stroke\$.ti,ab.
42	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
43	exp CEREBROVASCULAR DISORDERS/
44	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
45	exp HYDROCEPHALUS/
46	hydrocephal\$.ti,ab.
47	SHAKEN BABY SYNDROME/
48	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
49	or/28-48
50	exp PARALYSIS/
51	HEMIPLEGIA/
52	exp PARAPLEGIA/
53	QUADRIPLEGIA/
54	exp PARESIS/
55	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
56	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
57	or/50-56
58	and/27,57
59	and/49,57
60	and/27,49
61	or/58-60
62	BACLOFEN/
63	(baclofen or baclophen or lioresal or spinax or lyflex).ti,ab.
64	ITB.ti,ab.
65	or/62-64
66	and/61,65
67	limit 66 to english language
68	limit 67 to animals
69	limit 67 to (animals and humans)

70 68 not 69	
71 67 not 70	
72 and/7,71	

EBM Reviews - Cochrane Central Register of Controlled Trials

SPAST_Q5-6_baclofen_economic_cctr_110810

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	MUSCLE SPASTICITY/
9	exp SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
12	hyperton\$.ti,ab.
13	exp DYSKINESIAS/
=	dyskinesi\$.ti,ab.
15	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
16	exp DYSTONIA/
17	dystoni\$.ti,ab.
18	exp CHOREA/
19	(chorea\$ or choreic\$ or choreo\$).ti,ab.
20	exp ATHETOSIS/
21	(athetos\$ or athetoid).ti,ab.
22	MUSCLE WEAKNESS/
23	(musc\$ adj3 weak\$).ti,ab.
24	exp ATAXIA/
25	atax\$.ti,ab.
26	upper motor neuron? lesion\$.ti,ab.
27	or/8-26
28	exp BRAIN INJURIES/
29	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
=	ABI.ti,ab.
31	static encephalopath\$.ti,ab.

32	CEREBRAL PALSY/
33	(cerebral adj3 pals\$).ti,ab.
34	exp MENINGITIS/
35	(meningitis or meningococcal).ti,ab.
	exp CRANIOCEREBRAL TRAUMA/
37	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
38	exp ENCEPHALITIS/
39	encephaliti\$.ti,ab.
40	exp STROKE/
	stroke\$.ti,ab.
42	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
43	exp CEREBROVASCULAR DISORDERS/
44	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
45	exp HYDROCEPHALUS/
46	hydrocephal\$.ti,ab.
47	SHAKEN BABY SYNDROME/
48	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
49	or/28-48
50	exp PARALYSIS/
51	HEMIPLEGIA/
	exp PARAPLEGIA/
53	QUADRIPLEGIA/
54	exp PARESIS/
55	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
56	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
57	or/50-56
58	and/27,57
59	and/49,57
60	and/27,49
61	or/58-60
62	BACLOFEN/
63	(baclofen or baclophen or lioresal or spinax or lyflex).ti,ab.
64	ITB.ti,ab.
65	or/62-64
66	and/61,65
67	and/7,66

EBM Reviews - Health Technology Assessment

SPAST_Q5-6_baclofen_economic_hta_110810

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).tw.
5	hyperton\$.tw.
6	exp DYSKINESIAS/
7	dyskinesi\$.tw.
8	((abnormal\$ or involuntar\$) adj2 mov\$).tw.
9	exp DYSTONIA/
10	dystoni\$.tw.
11	exp CHOREA/
	(chorea\$ or choreic\$ or choreo\$).tw.
	exp ATHETOSIS/
=	(athetos\$ or athetoid).tw.
=	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).tw.
17	exp ATAXIA/
	atax\$.tw.
	upper motor neuron? lesion\$.tw.
\vdash	or/1-19
	exp BRAIN INJURIES/
	((non progressive or non?progressive or acquired) adj2 brain injur\$).tw.
	ABI.tw.
	static encephalopath\$.tw.
	CEREBRAL PALSY/
	(cerebral adj3 pals\$).tw.
	exp MENINGITIS/
=	(meningitis or meningococcal).tw.
29	exp CRANIOCEREBRAL TRAUMA/
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw.
31	exp ENCEPHALITIS/
	encephaliti\$.tw.
33	exp STROKE/

_	
34	stroke\$.tw.
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw.
36	exp CEREBROVASCULAR DISORDERS/
	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw.
38	exp HYDROCEPHALUS/
39	hydrocephal\$.tw.
40	SHAKEN BABY SYNDROME/
41	(shak\$ adj3 (injur\$ or syndrome\$)).tw.
42	or/21-41
43	exp PARALYSIS/
44	HEMIPLEGIA/
45	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).tw.
50	or/43-49
51	and/20,50
52	and/42,50
53	and/20,42
54	or/51-53
55	BACLOFEN/
56	(baclofen or baclophen or lioresal or spinax or lyflex).tw.
57	ITB.tw.
58	or/55-57
59	and/54,58
00	4114/01,00

EBM Reviews - NHS Economic Evaluation Database

 $SPAST_Q5-6_baclofen_economic_nhseed_110810$

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).tw.
5	hyperton\$.tw.

dyskinesi\$.tw. ((abnormal\$ or involuntar\$) adj2 mov\$).tw. ((abnormal\$ or chorec\$ or choreo\$).tw. (abnormal\$ or chorec\$ or choreo\$).tw. ((athetos\$ or athetoid).tw. ((athetos\$ or athetoid).tw. ((athetos\$ or athetoid).tw. ((musc\$ adj3 weak\$).tw. ((musc\$ adj3 weak\$).tw. ((abnormal\$ adja weak\$).tw. ((abn	6	exp DYSKINESIAS/
Section Sect		
9 exp DYSTONIA/ 10 dystoni\$.tw. 11 exp CHOREA/ 12 (chorea\$ or choreic\$ or choreo\$).tw. 13 exp ATHETOSIS/ 14 (athetos\$ or athetoid).tw. 15 MUSCLE WEAKNESS/ 16 (musc\$ adj3 weak\$).tw. 17 exp ATAXIA/ 18 atax\$.tw. 19 upper motor neuron? lesion\$.tw. 20 or/1-19 21 exp BRAIN INJURIES/ 22 ((non progressive or non?progressive or acquired) adj2 brain injur\$).tw. 23 ABI.tw. 24 static encephalopath\$.tw. 25 CEREBRAL PALSY/ 26 (cerebral adj3 pals\$).tw. 27 exp MENINGITIS/ 28 (meningitis or meningococcal).tw. 29 exp CRANIOCEREBRAL TRAUMA/ 30 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 31 exp ENCEPHALITIS/ 29 encephaliti\$.tw. 30 exp STROKE/ 31 stroke\$.tw. 31 ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 35 ((Usain or acerebral or intra cranial vascular or damage\$ or disturb\$ or insult\$).tw. 36 exp CEREBROVASCULAR DISORDERS/ 37 ((Usain vascular or intra cranial vascular or intra?cranial vascular or damage\$ or disturb\$ or insult\$).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/		
10 dystoni\$.tw. 11 exp CHOREA/ (chorea\$ or choreic\$ or choreo\$).tw. 13 exp ATHETOSIS/ 14 (athetos\$ or athetoid).tw. 15 MUSCLE WEAKNESS/ 16 (musc\$ adj3 weak\$).tw. 17 exp ATAXIA/ 18 atax\$.tw. 19 upper motor neuron? lesion\$.tw. 20 or/1-19 21 exp BRAIN INJURIES/ 22 ((non progressive or non?progressive or acquired) adj2 brain injur\$).tw. 23 ABI.tw. 24 static encephalopath\$.tw. 25 CEREBRAL PALSY/ (cerebral adj3 pals\$).tw. 27 exp MENINGITIS/ 28 (meningitis or meningococcal).tw. 29 exp CRANIOCEREBRAL TRAUMA/ ((thead or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 31 exp ENCEPHALITIS/ 32 encephaliti\$.tw. 33 exp STROKE/ 34 stroke\$.tw. ((Urain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((Urain vascular or intra cranial vascular or intra?cranial vascular or cerebrals; tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. SHAKEN BABY SYNDROME/		
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19 upper motor neuron? lesion\$.tw. 20 or/1-19 21 exp BRAIN INJURIES/ 22 ((non progressive or non?progressive or acquired) adj2 brain injur\$).tw. 23 ABI.tw. 24 static encephalopath\$.tw. 25 CEREBRAL PALSY/ 26 (cerebral adj3 pals\$).tw. 27 exp MENINGITIS/ 28 (meningitis or meningococcal).tw. 29 exp CRANIOCEREBRAL TRAUMA/ 30 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 31 exp ENCEPHALITIS/ 32 encephaliti\$.tw. 33 exp STROKE/ 34 stroke\$.tw. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/		•
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21 exp BRAIN INJURIES/ 22 ((non progressive or non?progressive or acquired) adj2 brain injur\$).tw. 23 ABI.tw. 24 static encephalopath\$.tw. 25 CEREBRAL PALSY/ 26 (cerebral adj3 pals\$).tw. 27 exp MENINGITIS/ 28 ((meningitis or meningococcal).tw. 29 exp CRANIOCEREBRAL TRAUMA/ 30 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 31 exp ENCEPHALITIS/ 32 encephaliti\$.tw. 33 exp STROKE/ 34 stroke\$.tw. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw.	==	
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23 ABI.tw. 24 static encephalopath\$.tw. 25 CEREBRAL PALSY/ 26 (cerebral adj3 pals\$).tw. 27 exp MENINGITIS/ 28 (meningitis or meningococcal).tw. 29 exp CRANIOCEREBRAL TRAUMA/ 30 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 31 exp ENCEPHALITIS/ 32 encephaliti\$.tw. 33 exp STROKE/ 34 stroke\$.tw. 35 ((forain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((forain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/		·
24 static encephalopath\$.tw. 25 CEREBRAL PALSY/ 26 (cerebral adj3 pals\$).tw. 27 exp MENINGITIS/ 28 (meningitis or meningococcal).tw. 29 exp CRANIOCEREBRAL TRAUMA/ 30 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 31 exp ENCEPHALITIS/ 32 encephaliti\$.tw. 33 exp STROKE/ 34 stroke\$.tw. 35 ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/		
25 CEREBRAL PALSY/ 26 (cerebral adj3 pals\$).tw. 27 exp MENINGITIS/ 28 (meningitis or meningococcal).tw. 29 exp CRANIOCEREBRAL TRAUMA/ 30 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 31 exp ENCEPHALITIS/ 32 encephaliti\$.tw. 33 exp STROKE/ 34 stroke\$.tw. 35 ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/	=	
26 (cerebral adj3 pals\$).tw. 27 exp MENINGITIS/ 28 (meningitis or meningococcal).tw. 29 exp CRANIOCEREBRAL TRAUMA/ 30 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 31 exp ENCEPHALITIS/ 32 encephaliti\$.tw. 33 exp STROKE/ 34 stroke\$.tw. 35 ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ (((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/		
27 exp MENINGITIS/ 28 (meningitis or meningococcal).tw. 29 exp CRANIOCEREBRAL TRAUMA/ 30 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 31 exp ENCEPHALITIS/ 32 encephaliti\$.tw. 33 exp STROKE/ 34 stroke\$.tw. 35 ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/	25	CEREBRAL PALSY/
28 (meningitis or meningococcal).tw. 29 exp CRANIOCEREBRAL TRAUMA/ 30 ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 31 exp ENCEPHALITIS/ 32 encephaliti\$.tw. 33 exp STROKE/ 34 stroke\$.tw. 35 ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/	26	(cerebral adj3 pals\$).tw.
29 exp CRANIOCEREBRAL TRAUMA/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 31 exp ENCEPHALITIS/ 32 encephaliti\$.tw. 33 exp STROKE/ 34 stroke\$.tw. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/	27	exp MENINGITIS/
((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. Sexpan="2">31 exp ENCEPHALITIS/	28	(meningitis or meningococcal).tw.
darnages or disturbs or insults)).tw. 31 exp ENCEPHALITIS/ 32 encephalitis.tw. 33 exp STROKE/ 34 strokes.tw. 35 ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysms or isch?emis)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorders or diseases or insufficiens or occlusions or damages or disturbs or insults)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephals.tw. 40 SHAKEN BABY SYNDROME/	29	exp CRANIOCEREBRAL TRAUMA/
32 encephaliti\$.tw. 33 exp STROKE/ 34 stroke\$.tw. 35 ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/	30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw.
33 exp STROKE/ 34 stroke\$.tw. 35 ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/	31	exp ENCEPHALITIS/
stroke\$.tw. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/	32	encephaliti\$.tw.
((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. ((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$	33	exp STROKE/
or isch?emi\$)).tw. Gexp CEREBROVASCULAR DISORDERS/	34	stroke\$.tw.
((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/	35	
 37 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/ 	36	exp CEREBROVASCULAR DISORDERS/
39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/	37	cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or
40 SHAKEN BABY SYNDROME/	38	exp HYDROCEPHALUS/
	39	hydrocephal\$.tw.
41 (shak\$ adj3 (injur\$ or syndrome\$)).tw.	40	SHAKEN BABY SYNDROME/
	41	(shak\$ adj3 (injur\$ or syndrome\$)).tw.

42	or/21-41
43	exp PARALYSIS/
44	HEMIPLEGIA/
45	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).tw.
50	or/43-49
51	and/20,50
52	and/42,50
53	and/20,42
54	or/51-53
55	BACLOFEN/
56	(baclofen or baclophen or lioresal or spinax or lyflex).tw.
57	ITB.tw.
58	or/55-57
59	and/54,58

EMBASE 1980+

SPAST_Q5-6_baclofen_economic_embase_110810

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	SPASTICITY/
9	exp MUSCLE SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
12	hyperton\$.ti,ab.
13	DYSKINESIA/
14	dyskinesi\$.ti,ab.
15	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.

16	DYSTONIA/
	dystoni\$.ti,ab.
	exp CHOREA/
	CHOREOATHETOSIS/
	ATHETOSIS/
21	(chorea\$ or choreic\$ or choreo\$).ti,ab.
	(athetos\$ or athetoid).ti,ab.
=	exp MUSCLE WEAKNESS/
24	(musc\$ adj3 weak\$).ti,ab.
25	exp ATAXIA/
26	atax\$.ti,ab.
27	upper motor neuron? lesion\$.ti,ab.
28	or/8-27
29	exp BRAIN INJURY/
30	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
31	ABI.ti,ab.
32	static encephalopath\$.ti,ab.
33	CEREBRAL PALSY/
34	(cerebral adj3 pals\$).ti,ab.
35	exp MENINGITIS/
36	(meningitis or meningococcal).ti,ab.
37	exp HEAD INJURY/
38	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
39	exp ENCEPHALITIS/
40	encephaliti\$.ti,ab.
41	STROKE/
42	stroke\$.ti,ab.
43	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
44	exp CEREBROVASCULAR DISEASE/
	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
46	exp HYDROCEPHALUS/
	hydrocephal\$.ti,ab.
	SHAKEN BABY SYNDROME/
\perp	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
=	or/29-49
51	exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or

QUADRIPLEGIA/
SPASTIC PARAPLEGIA/
PARESIS/ or MONOPARESIS/ or HEMIPARESIS/
SPASTIC PARESIS/
(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
or/51-56
and/28,57
and/50,57
and/28,50
or/58-60
BACLOFEN/
(baclofen or baclophen or lioresal or spinax or lyflex).ti,ab.
ITB.ti,ab.
or/62-64
and/61,65
limit 66 to english language
and/7,67

Question 7 What is the effectiveness of orthopaedic surgery in preventing or treating musculoskeletal deformity in children with spasticity caused by a non-progressive brain disorder?

Question 8 What is the effectiveness of single event multilevel orthopaedic surgery (SEMLS) in managing musculoskeletal deformity in children with spasticity caused by a non-progressive brain disorder?

These questions were addressed through a single search

Ovid MEDLINE(R) 1948+

SPAST_Q7-8_orthopaedic_surgery_stem_medline_280111

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.
6	exp DYSKINESIAS/
7	dyskinesi\$.ti,ab.
8	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
9	exp DYSTONIA/
10	dystoni\$.ti,ab.
11	exp CHOREA/
12	(chorea\$ or choreic\$ or choreo\$).ti,ab.
	exp ATHETOSIS/
	(athetos\$ or athetoid).ti,ab.
15	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).ti,ab.
17	exp ATAXIA/
18	atax\$.ti,ab.
19	upper motor neuron? lesion\$.ti,ab.
20	or/1-19
21	exp BRAIN INJURIES/
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
23	ABI.ti,ab.
	static encephalopath\$.ti,ab.
25	CEREBRAL PALSY/
26	(cerebral adj3 pals\$).ti,ab.
27	exp MENINGITIS/
28	(meningitis or meningococcal).ti,ab.

	exp CRANIOCEREBRAL TRAUMA/
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
31	exp ENCEPHALITIS/
32	encephaliti\$.ti,ab.
33	exp STROKE/
	stroke\$.ti,ab.
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
36	exp CEREBROVASCULAR DISORDERS/
37	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
38	exp HYDROCEPHALUS/
39	hydrocephal\$.ti,ab.
40	SHAKEN BABY SYNDROME/
41	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
42	or/21-41
43	exp PARALYSIS/
44	HEMIPLEGIA/
45	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
50	or/43-49
51	and/20,50
52	and/42,50
53	and/20,42
54	or/51-53
55	exp ORTHOPEDIC PROCEDURES/
56	orthop?edic\$.ti,ab.
57	TENOTOMY/ or TENDON TRANSFER/ or TENODESIS/
58	(tendon\$ or tenotom\$ or tenodes\$).ti,ab.
59	((musculo tendinous or musculo?tendinous or fractional) adj3 length\$).ti,ab.
60	(myotom\$ or aponeurotom\$).ti,ab.
61	(musc\$ adj3 (releas\$ or recess\$)).ti,ab.
	exp ARTHRODESIS/
63	arthrodes\$.ti,ab.
64	((joint\$ or bon\$) adj3 fus\$).ti,ab.

65	exp OSTEOTOMY/
66	osteotom\$.ti,ab.
67	open reduc\$.ti,ab.
68	((single event\$ or single?event\$ or multi level\$ or multi?level\$ or multi?stage? or stag\$ or interval\$) adj3 surg\$).ti,ab.
69	(SEMS or SEMLS).ti,ab.
70	or/55-69
71	and/54,70
72	limit 71 to english language
73	limit 72 to animals
74	limit 72 to (animals and humans)
75	73 not 74
76	72 not 75

Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations

SPAST_Q7-8_orthopaedic_surgery_mip_260111

#	Searches
1	(spastic\$ or spasm\$).ti,ab.
2	hyperton\$.ti,ab.
3	dyskinesi\$.ti,ab.
4	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
5	dystoni\$.ti,ab.
6	(chorea\$ or choreic\$ or choreo\$).ti,ab.
7	(athetos\$ or athetoid).ti,ab.
8	(musc\$ adj3 weak\$).ti,ab.
9	atax\$.ti,ab.
10	upper motor neuron? lesion\$.ti,ab.
11	or/1-10
12	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
13	ABI.ti,ab.
14	static encephalopath\$.ti,ab.
15	(cerebral adj3 pals\$).ti,ab.
	(meningitis or meningococcal).ti,ab.
17	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
18	encephaliti\$.ti,ab.
	stroke\$.ti,ab.
20	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.

21	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
22	hydrocephal\$.ti,ab.
23	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
24	or/12-23
25	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
26	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
27	or/25-26
28	and/11,27
29	and/24,27
30	and/11,24
31	or/28-30
32	orthop?edic\$.ti,ab.
33	(tendon\$ or tenotom\$ or tenodes\$).ti,ab.
34	((musculo tendinous or musculo?tendinous or fractional) adj3 length\$).ti,ab.
35	(myotom\$ or aponeurotom\$).ti,ab.
36	(musc\$ adj3 (releas\$ or recess\$)).ti,ab.
37	arthrodes\$.ti,ab.
38	((joint\$ or bon\$) adj3 fus\$).ti,ab.
39	osteotom\$.ti,ab.
40	open reduc\$.ti,ab.
41	((single event\$ or single?event\$ or multi level\$ or multi?level\$ or multi?stage? or stag\$ or interval\$) adj3 surg\$).ti,ab.
42	(SEMS or SEMLS).ti,ab.
43	or/32-42
44	and/31,43

EBM Reviews - Cochrane Central Register of Controlled Trials

 $SPAST_Q7-8_orthopaedic_surgery_cctr_260111$

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.
6	exp DYSKINESIAS/
7	dyskinesi\$.ti,ab.

8 ((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab. 9 exp DYSTONIA/ 10 dystoni\$.ti,ab. 11 exp CHOREA/ 12 (chorea\$ or choreic\$ or choreo\$).ti,ab. 13 exp ATHETOSIS/ 14 (athetos or athetoid).ti,ab. 15 MUSCLE WEAKNESS/ 16 (musc\$ adj3 weak\$).ti,ab. 17 exp ATAXIA/ 18 atax\$.ti,ab. 19 upper motor neuron? lesion\$.ti,ab. 20 or/1-19 21 exp BRAIN INJURIES/ 22||((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab. 23 ABI.ti,ab. 24 static encephalopath\$.ti,ab. 25 CEREBRAL PALSY/ 26 (cerebral adj3 pals\$).ti,ab. 27 exp MENINGITIS/ 28 (meningitis or meningococcal).ti,ab. 29 exp CRANIOCEREBRAL TRAUMA/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 31 exp ENCEPHALITIS/ 32 encephaliti\$.ti,ab. 33 exp STROKE/ 34 stroke\$.ti.ab. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or 37 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 38 exp HYDROCEPHALUS/ 39||hydrocephal\$.ti,ab. 40 SHAKEN BABY SYNDROME 41 (shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 42 or/21-41 43 exp PARALYSIS/

44	HEMIPLEGIA/
45	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
50	or/43-49
51	and/20,50
52	and/42,50
53	and/20,42
54	or/51-53
55	exp ORTHOPEDIC PROCEDURES/
56	orthop?edic\$.ti,ab.
57	TENOTOMY/ or TENDON TRANSFER/ or TENODESIS/
58	(tendon\$ or tenotom\$ or tenodes\$).ti,ab.
59	((musculo tendinous or musculo?tendinous or fractional) adj3 length\$).ti,ab.
60	(myotom\$ or aponeurotom\$).ti,ab.
61	(musc\$ adj3 (releas\$ or recess\$)).ti,ab.
62	exp ARTHRODESIS/
63	arthrodes\$.ti,ab.
64	((joint\$ or bon\$) adj3 fus\$).ti,ab.
65	exp OSTEOTOMY/
66	osteotom\$.ti,ab.
67	open reduc\$.ti,ab.
68	((single event\$ or single?event\$ or multi level\$ or multi?level\$ or multi?stage? or stag\$ or interval\$) adj3 surg\$).ti,ab.
69	(SEMS or SEMLS).ti,ab.
70	or/55-69
71	and/54,70

EBM Reviews - Cochrane Database of Systematic Reviews 2005+, EBM Reviews - Database of Abstracts of Reviews of Effects

 $SPAST_Q7-8_orthopaedic_surgery_cdsrdare_260111$

#	Searches
1	MUSCLE SPASTICITY.kw.
2	SPASM.kw.
3	MUSCLE HYPERTONIA.kw.
4	(spastic\$ or spasm\$).tw,tx.

- 5 hyperton\$.tw,tx.
 6 DYSKINESIAS.kw.
 7 dyskinesi\$.tw,tx.
- 8 ((abnormal\$ or involuntar\$) adj2 mov\$).tw,tx.
- 9 DYSTONIA.kw.
- 10 dystoni\$.tw,tx.
- 11 CHOREA.kw.
- 12 (chorea\$ or choreic\$ or choreo\$).tw,tx.
- 13 ATHETOSIS.kw.
- 14 (athetos\$ or athetoid).tw,tx.
- 15 MUSCLE WEAKNESS.kw.
- 16 (musc\$ adj3 weak\$).tw,tx.
- 17 ATAXIA.kw.
- 18 atax\$.tw,tx.
- 19 upper motor neuron? lesion\$.tw,tx.
- 20 or/1-19
- 21 BRAIN INJURIES.kw.
- 22 ((non progressive or non?progressive or acquired) adj2 brain injur\$).tw,tx.
- 23 ABI.tw,tx.
- 24 static encephalopath\$.tw,tx.
- 25 CEREBRAL PALSY.kw.
- 26 (cerebral adj3 pals\$).tw,tx.
- 27 MENINGITIS.kw.
- 28 (meningitis or meningococcal).tw,tx.
- 29 CRANIOCEREBRAL TRAUMA.kw.
- ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw,tx.
- 31 ENCEPHALITIS.kw.
- 32 encephaliti\$.tw,tx.
- 33 STROKE.kw.
- 34 stroke\$.tw,tx.
- ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw,tx.
- 36 CEREBROVASCULAR DISORDERS.kw.
 - ((brain vascular or intra cranial vascular or intra?cranial vascular or
- 37 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw,tx.
- 38 HYDROCEPHALUS.kw.
- 39 hydrocephal\$.tw,tx.
- 40 SHAKEN BABY SYNDROME.kw.

41	(shak\$ adj3 (injur\$ or syndrome\$)).tw,tx.
42	or/21-41
43	PARALYSIS.kw.
44	HEMIPLEGIA.kw.
45	PARAPLEGIA.kw.
46	QUADRIPLEGIA.kw.
47	PARESIS.kw.
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw,tx.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).tw,tx.
50	or/43-49
51	and/20,50
52	and/42,50
53	and/20,42
54	or/51-53
55	ORTHOPEDIC PROCEDURES.kw.
56	orthop?edic\$.tw,tx.
57	(TENOTOMY or TENDON TRANSFER or TENODESIS).kw.
58	(tendon\$ or tenotom\$ or tenodes\$).tw,tx.
59	((musculo tendinous or musculo?tendinous or fractional) adj3 length\$).tw,tx.
60	(myotom\$ or aponeurotom\$).tw,tx.
61	(musc\$ adj3 (releas\$ or recess\$)).tw,tx.
62	ARTHRODESIS.kw.
	arthrodes\$.tw,tx.
	((joint\$ or bon\$) adj3 fus\$).tw,tx.
65	OSTEOTOMY.kw.
66	osteotom\$.tw,tx.
67	open reduc\$.tw,tx.
68	((single event\$ or single?event\$ or multi level\$ or multi?level\$ or multi?stage? or stag\$ or interval\$) adj3 surg\$).tw,tx.
69	(SEMS or SEMLS).tw,tx.
70	or/55-69
71	and/54,70

Embase 1980+

 $SPAST_Q7-8_orthopaedic_surgery_stem_embase_280111$

#	Searches
1	SPASTICITY/
2	exp MUSCLE SPASM/

3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
-	hyperton\$.ti,ab.
	DYSKINESIA/
7	dyskinesi\$.ti,ab.
	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
	DYSTONIA/
	dystoni\$.ti,ab.
	exp CHOREA/
	CHOREOATHETOSIS/
=	ATHETOSIS/
	(chorea\$ or choreic\$ or choreo\$).ti,ab.
	(athetos\$ or athetoid).ti,ab.
	exp MUSCLE WEAKNESS/
	(musc\$ adj3 weak\$).ti,ab.
	exp ATAXIA/
-	atax\$.ti,ab.
	upper motor neuron? lesion\$.ti,ab.
	or/1-20
-	exp BRAIN INJURY/
	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
	ABI.ti,ab.
	static encephalopath\$.ti,ab.
	CEREBRAL PALSY/
	(cerebral adj3 pals\$).ti,ab.
	exp MENINGITIS/
-	(meningitis or meningococcal).ti,ab.
	exp HEAD INJURY/
	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
32	exp ENCEPHALITIS/
33	encephaliti\$.ti,ab.
34	STROKE/
35	stroke\$.ti,ab.
36	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
37	exp CEREBROVASCULAR DISEASE/
	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.

39	exp HYDROCEPHALUS/
40	hydrocephal\$.ti,ab.
41	SHAKEN BABY SYNDROME/
42	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
	or/22-42
44	exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/
45	SPASTIC PARAPLEGIA/
46	PARESIS/ or MONOPARESIS/ or HEMIPARESIS/
47	SPASTIC PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
50	or/44-49
51	and/21,50
52	and/43,50
53	and/21,43
54	or/51-53
55	exp ORTHOPEDIC SURGERY/
56	orthop?edic\$.ti,ab.
57	exp TENDON SURGERY/
58	(tendon\$ or tenotom\$ or tenodes\$).ti,ab.
59	((musculo tendinous or musculo?tendinous or fractional) adj3 length\$).ti,ab.
60	MYOTOMY/
61	APONEUROTOMY/
62	(myotom\$ or aponeurotom\$).ti,ab.
63	(musc\$ adj3 (releas\$ or recess\$)).ti,ab.
64	exp ARTHRODESIS/
65	arthrodes\$.ti,ab.
66	((joint\$ or bon\$) adj3 fus\$).ti,ab.
67	exp OSTEOTOMY/
68	osteotom\$.ti,ab.
69	OPEN REDUCTION/
70	open reduc\$.ti,ab.
71	((single event\$ or single?event\$ or multi level\$ or multi?level\$ or multi?stage? or stag\$ or interval\$) adj3 surg\$).ti,ab.
72	(SEMS or SEMLS).ti,ab.
73	or/55-72
74	and/54,73
75	limit 74 to english language

CINAHL 1981+

 $SPAST_Q7-8_orthopaedic_surgery_cinahl_260111$

#	Query	Limiters/Expanders
S138	S137	Limiters - Exclude MEDLINE records Search modes - Boolean/Phrase
S137	S118 and S136	Search modes - Boolean/Phrase
S136	S119 or S120 or S121 or S122 or S123 or S124 or S125 or S126 or S127 or S128 or S129 or S130 or S131 or S132 or S133 or S134 or S135	Search modes - Boolean/Phrase
S135	TI (SEMS or SEMLS) or AB (SEMS or SEMLS)	Search modes - Boolean/Phrase
S134	AB (single event surg* or multi level surg* or multi#level surg* or multi stage surg* or multi#stage surg* or stag* surg* or interval surg*)	Search modes - Boolean/Phrase
S133	TI (single event surg* or multi level surg* or multi#level surg* or multi stage surg* or multi#stage surg* or stag* surg* or interval surg*)	Search modes - Boolean/Phrase
S132	TI (open reduc*) or AB (open reduc*)	Search modes - Boolean/Phrase
S131	TI (osteotom*) or AB (osteotom*)	Search modes - Boolean/Phrase
S130	MH OSTEOTOMY	Search modes - Boolean/Phrase
S129	AB (joint* N3 fus*) or AB (bon* N3 fus*)	Search modes - Boolean/Phrase
S128	TI (joint* N3 fus*) or TI (bon* N3 fus*)	Search modes - Boolean/Phrase
S127	TI (arthrodes*) or AB (arthrodes*)	Search modes - Boolean/Phrase
S126	MH ARTHRODESIS+	Search modes - Boolean/Phrase
S125	TI (musc* releas* or musc* recess*) or AB (musc* releas* or musc* recess*)	Search modes - Boolean/Phrase
S124	AB (musculo-tendinous length* or musculo#tendinous length* or fractional length*)	Search modes - Boolean/Phrase
S123	TI (musculo-tendinous length* or musculo#tendinous length* or fractional length*)	Search modes - Boolean/Phrase

S122	AB (tendon* or tenotom* or tenodes* or myotom* or aponeurotom*)	Search modes - Boolean/Phrase
S121	TI (tendon* or tenotom* or tenodes* or myotom* or aponeurotom*)	Search modes - Boolean/Phrase
S120	TI (orthop#edic*) or AB (orthop#edic*)	Search modes - Boolean/Phrase
S119	MH ORTHOPEDIC SURGERY+	Search modes - Boolean/Phrase
S118	S115 or S116 or S117	Search modes - Boolean/Phrase
S117	S105 and S114	Search modes - Boolean/Phrase
S116	S18 and S114	Search modes - Boolean/Phrase
S115	S18 and S105	Search modes - Boolean/Phrase
S114	S106 or S107 or S108 or S109 or S110 or S111 or S112 or S113	Search modes - Boolean/Phrase
S113	AB (monopares* or dipares* or hemipares* or quadripares* or tetrapares*)	Search modes - Boolean/Phrase
S112	TI (monopares* or dipares* or hemipares* or quadripares* or tetrapares*)	Search modes - Boolean/Phrase
S111	AB (monoplegi* or diplegi* or hemiplegi* or quadriplegi* or tetraplegi*)	Search modes - Boolean/Phrase
S110	TI (monoplegi* or diplegi* or hemiplegi* or quadriplegi* or tetraplegi*)	Search modes - Boolean/Phrase
S109	MH QUADRIPLEGIA	Search modes - Boolean/Phrase
S108	MH PARAPLEGIA	Search modes - Boolean/Phrase
S107	MH HEMIPLEGIA	Search modes - Boolean/Phrase
S106	MH PARALYSIS+	Search modes - Boolean/Phrase
S105	S19 or S20 or S21 or S22 or S23 or S24 or S25 or S26 or S27 or S28 or S29 or S30 or S31 or S32 or S33 or S34 or S35 or S36 or S37 or S38 or S39 or S40 or S41 or S42 or S43 or S44 or S45 or S46 or S47 or S48 or S49 or S50 or S51 or S52 or S53 or S54 or S55 or S56 or S57 or S58 or S59 or S60 or S61 or S62 or S63 or S64 or S65 or S66 or S67 or S68 or S69 or S70 or S71 or S72 or S73 or S74 or S75 or S76 or S77 or S78 or S79 or S80 or S81 or	Search modes - Boolean/Phrase

	S82 or S83 or S84 or S85 or S86 or S87 or S88 or S89 or S90 or S91 or S92 or S93 or S94 or S95 or S96 or S97 or S98 or S99 or S100 or S101 or S102 or S103 or S104	
S104	TI (shak* N3 syndrome*) or AB (shak* N3 syndrome*)	Search modes - Boolean/Phrase
S103	TI (shak* N3 injur*) or AB (shak* N3 injur*)	Search modes - Boolean/Phrase
S102	MH SHAKEN BABY SYNDROME	Search modes - Boolean/Phrase
S101	TI (hydrocephal*) or AB (hydrocephal*)	Search modes - Boolean/Phrase
S100	MH HYDROCEPHALUS+	Search modes - Boolean/Phrase
S99	TI (cerebrovascular N2 insult*) or AB (cerebrovascular N2 insult*)	Search modes - Boolean/Phrase
S98	TI (cerebrovascular N2 disturb*) or AB (cerebrovascular N2 disturb*)	Search modes - Boolean/Phrase
S97	TI (cerebrovascular N2 damage*) or AB (cerebrovascular N2 damage*)	Search modes - Boolean/Phrase
S96	TI (cerebrovascular N2 occlusion*) or AB (cerebrovascular N2 occlusion*)	Search modes - Boolean/Phrase
S95	TI (cerebrovascular N2 insufficien*) or AB (cerebrovascular N2 insufficien*)	Search modes - Boolean/Phrase
S94	TI (cerebrovascular N2 disease*) or AB (cerebrovascular N2 disease*)	Search modes - Boolean/Phrase
S93	TI (cerebrovascular N2 disorder*) or AB (cerebrovascular N2 disorder*)	Search modes - Boolean/Phrase
S92	TI (intracranial vascular N2 insult*) or AB (intracranial vascular N2 insult*)	Search modes - Boolean/Phrase
S91	TI (intracranial vascular N2 disturb*) or AB (intracranial vascular N2 disturb*)	Search modes - Boolean/Phrase
S90	TI (intracranial vascular N2 damage*) or AB (intracranial vascular N2 damage*)	Search modes - Boolean/Phrase
S89	TI (intracranial vascular N2 occlusion*) or AB (intracranial vascular N2 occlusion*)	Search modes - Boolean/Phrase
S88	TI (intracranial vascular N2 insufficien*) or AB (intracranial vascular N2 insufficien*)	Search modes - Boolean/Phrase
S87	TI (intracranial vascular N2 disease*) or AB (intracranial vascular N2 disease*)	Search modes - Boolean/Phrase
S86	TI (intracranial vascular N2 disorder*) or AB (intracranial vascular N2 disorder*)	Search modes - Boolean/Phrase

S85	TI (intra-cranial vascular N2 insult*) or AB (intra-cranial vascular N2 insult*)	Search modes - Boolean/Phrase
S84	TI (intra-cranial vascular N2 disturb*) or AB (intra-cranial vascular N2 disturb*)	Search modes - Boolean/Phrase
S83	TI (intra-cranial vascular N2 damage*) or AB (intra-cranial vascular N2 damage*)	Search modes - Boolean/Phrase
S82	TI (intra-cranial vascular N2 occlusion*) or AB (intra-cranial vascular N2 occlusion*)	Search modes - Boolean/Phrase
S81	TI (intra-cranial vascular N2 insufficien*) or AB (intra-cranial vascular N2 insufficien*)	Search modes - Boolean/Phrase
S80	TI (intra-cranial vascular N2 disease*) or AB (intra-cranial vascular N2 disease*)	Search modes - Boolean/Phrase
S79	TI (intra-cranial vascular N2 disorder*) or AB (intra-cranial vascular N2 disorder*)	Search modes - Boolean/Phrase
S78	TI (brain vascular N2 insult*) or AB (brain vascular N2 insult*)	Search modes - Boolean/Phrase
S77	TI (brain vascular N2 disturb*) or AB (brain vascular N2 disturb*)	Search modes - Boolean/Phrase
S76	TI (brain vascular N2 damage*) or AB (brain vascular N2 damage*)	Search modes - Boolean/Phrase
S75	TI (brain vascular N2 occlusion*) or AB (brain vascular N2 occlusion*)	Search modes - Boolean/Phrase
S74	TI (brain vascular N2 insufficien*) or AB (brain vascular N2 insufficien*)	Search modes - Boolean/Phrase
S73	TI (brain vascular N2 disease*) or AB (brain vascular N2 disease*)	Search modes - Boolean/Phrase
S72	TI (brain vascular N2 disorder*) or AB (brain vascular N2 disorder*)	Search modes - Boolean/Phrase
S71	MH CEREBROVASCULAR DISORDERS+	Search modes - Boolean/Phrase
S70	TI (intracranial N3 isch#emi*) or AB (intracranial N3 isch#emi*)	Search modes - Boolean/Phrase
S69	TI (intracranial N3 aneurysm*) or AB (intracranial N3 aneurysm*)	Search modes - Boolean/Phrase
S68	TI (intracranial N3 embolism) or AB (intracranial N3 embolism)	Search modes - Boolean/Phrase
S67	TI (intra-cranial N3 isch#emi*) or AB (intra-cranial N3 isch#emi*)	Search modes - Boolean/Phrase
S66	TI (intra-cranial N3 aneurysm*) or AB (intra-cranial N3 aneurysm*)	Search modes - Boolean/Phrase
S65	TI (intra-cranial N3 embolism) or AB (intra-cranial N3 embolism)	Search modes - Boolean/Phrase

TI (cerebral N3 isch#emi*) or AB (cerebral N3 isch#emi*)	Search modes - Boolean/Phrase
TI (cerebral N3 aneurysm*) or AB (cerebral N3 aneurysm*)	Search modes - Boolean/Phrase
TI (cerebral N3 embolism) or AB (cerebral N3 embolism)	Search modes - Boolean/Phrase
TI (brain N3 isch#emi*) or AB (brain N3 isch#emi*)	Search modes - Boolean/Phrase
TI (brain N3 aneurysm*) or AB (brain N3 aneurysm*)	Search modes - Boolean/Phrase
TI (brain N3 embolism) or AB (brain N3 embolism)	Search modes - Boolean/Phrase
TI (stroke*) or AB (stroke*)	Search modes - Boolean/Phrase
MH STROKE	Search modes - Boolean/Phrase
TI (encephaliti*) or AB (encephaliti*)	Search modes - Boolean/Phrase
MH ENCEPHALITIS+	Search modes - Boolean/Phrase
TI (craniocerebral N3 insult*) or AB (craniocerebral N3 insult*)	Search modes - Boolean/Phrase
TI (craniocerebral N3 disturb*) or AB (craniocerebral N3 disturb*)	Search modes - Boolean/Phrase
TI (craniocerebral N3 damage*) or AB (craniocerebral N3 damage*)	Search modes - Boolean/Phrase
TI (craniocerebral N3 trauma*) or AB (craniocerebral N3 trauma*)	Search modes - Boolean/Phrase
TI (craniocerebral N3 injur*) or AB (craniocerebral N3 injur*)	Search modes - Boolean/Phrase
TI (cerebral N3 insult*) or AB (cerebral N3 insult*)	Search modes - Boolean/Phrase
TI (cerebral N3 disturb*) or AB (cerebral N3 disturb*)	Search modes - Boolean/Phrase
TI (cerebral N3 damage*) or AB (cerebral N3 damage*)	Search modes - Boolean/Phrase
TI (cerebral N3 trauma*) or AB (cerebral N3 trauma*)	Search modes - Boolean/Phrase
TI (cerebral N3 injur*) or AB (cerebral N3 injur*)	Search modes - Boolean/Phrase
TI (skull N3 insult*) or AB (skull N3 insult*)	Search modes - Boolean/Phrase
	isch#emi*) TI (cerebral N3 aneurysm*) or AB (cerebral N3 aneurysm*) TI (cerebral N3 embolism) or AB (cerebral N3 embolism) TI (brain N3 isch#emi*) or AB (brain N3 isch#emi*) TI (brain N3 aneurysm*) or AB (brain N3 aneurysm*) TI (brain N3 embolism) or AB (brain N3 embolism) TI (brain N3 embolism) or AB (brain N3 embolism) TI (stroke*) or AB (stroke*) MH STROKE TI (encephaliti*) or AB (encephaliti*) MH ENCEPHALITIS+ TI (craniocerebral N3 insult*) or AB (craniocerebral N3 insult*) TI (craniocerebral N3 damage*) or AB (craniocerebral N3 disturb*) TI (craniocerebral N3 damage*) or AB (craniocerebral N3 trauma*) TI (craniocerebral N3 injur*) or AB (craniocerebral N3 injur*) TI (creebral N3 insult*) or AB (cerebral N3 insult*) TI (cerebral N3 damage*) or AB (cerebral N3 disturb*) TI (cerebral N3 disturb*) or AB (cerebral N3 disturb*) TI (cerebral N3 damage*) or AB (cerebral N3 disturb*) TI (cerebral N3 damage*) or AB (cerebral N3 disturb*) TI (cerebral N3 damage*) or AB (cerebral N3 disturb*) TI (cerebral N3 damage*) or AB (cerebral N3 disturb*) TI (cerebral N3 trauma*) or AB (cerebral N3 trauma*) TI (cerebral N3 trauma*) or AB (cerebral N3 trauma*)

S43	TI (skull N3 disturb*) or AB (skull N3 disturb*)	Search modes - Boolean/Phrase
S42	TI (skull N3 damage*) or AB (skull N3 damage*)	Search modes - Boolean/Phrase
S41	TI (skull N3 trauma*) or AB (skull N3 trauma*)	Search modes - Boolean/Phrase
S40	TI (skull N3 injur*) or AB (skull N3 injur*)	Search modes - Boolean/Phrase
S39	TI (brain N3 insult*) or AB (brain N3 insult*)	Search modes - Boolean/Phrase
S38	TI (brain N3 disturb*) or AB (brain N3 disturb*)	Search modes - Boolean/Phrase
S37	TI (brain N3 damage*) or AB (brain N3 damage*)	Search modes - Boolean/Phrase
S36	TI (brain N3 trauma*) or AB (brain N3 trauma*)	Search modes - Boolean/Phrase
S35	TI (brain N3 injur*) or AB (brain N3 injur*)	Search modes - Boolean/Phrase
S34	TI (head N3 insult*) or AB (head N3 insult*)	Search modes - Boolean/Phrase
S33	TI (head N3 disturb*) or AB (head N3 disturb*)	Search modes - Boolean/Phrase
S32	TI (head N3 damage*) or AB (head N3 damage*)	Search modes - Boolean/Phrase
S31	TI (head N3 trauma*) or AB (head N3 trauma*)	Search modes - Boolean/Phrase
S30	TI (head N3 injur*) or AB (head N3 injur*)	Search modes - Boolean/Phrase
S29	MH HEAD INJURIES+	Search modes - Boolean/Phrase
S28	TI (meningitis or meningococcal) or AB (meningitis or meningococcal)	Search modes - Boolean/Phrase
S27	MH MENINGITIS+	Search modes - Boolean/Phrase
S26	TI (cerebral N3 pals*) or AB (cerebral N3 pals*)	Search modes - Boolean/Phrase
S25	MH CEREBRAL PALSY	Search modes - Boolean/Phrase
S24	TI (static encephalopath*) or AB (static encephalopath*)	Search modes - Boolean/Phrase
S23	TI (ABI) or AB (ABI)	Search modes - Boolean/Phrase

S22	TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*)	Search modes - Boolean/Phrase
S21	TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*)	Search modes - Boolean/Phrase
S20	TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*)	Search modes - Boolean/Phrase
S19	MH BRAIN INJURIES+	Search modes - Boolean/Phrase
S18	S1 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17	Search modes - Boolean/Phrase
S17	TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*)	Search modes - Boolean/Phrase
S16	TI (atax*) or AB (atax*)	Search modes - Boolean/Phrase
S15	MH ATAXIA	Search modes - Boolean/Phrase
S14	TI (musc* N3 weak*) or AB (musc* N3 weak*)	Search modes - Boolean/Phrase
S13	MH MUSCLE WEAKNESS	Search modes - Boolean/Phrase
S12	TI (athetos* or athetoid*) or AB (athetos* or athetoid*)	Search modes - Boolean/Phrase
S11	TI (chorea* or choreic* or choreo*) or AB (chorea* or choreic* or choreo*)	Search modes - Boolean/Phrase
S10	MH CHOREA+	Search modes - Boolean/Phrase
S9	TI (dystoni*) or AB (dystoni*)	Search modes - Boolean/Phrase
S8	MH DYSTONIA+	Search modes - Boolean/Phrase
S7	TI (involuntar* N2 mov*) or AB (involuntar* N2 mov*)	Search modes - Boolean/Phrase
S6	TI (abnormal N2 mov*) or AB (abnormal N2 mov*)	Search modes - Boolean/Phrase
S5	TI (dyskinesi*) or AB (dyskinesi*)	Search modes - Boolean/Phrase
S4	MH DYSKINESIAS+	Search modes - Boolean/Phrase
S3	TI (spastic* or spasm* or hyperton*) or AB (spastic* or spasm* or hyperton*)	Search modes - Boolean/Phrase
S2	MH SPASM+	Search modes -

Spasticity in children and young people with non-progressive brain disorders (appendices)

		Boolean/Phrase
S1	IMH MUSCLE SPASTICLLY	Search modes - Boolean/Phrase

Questions 7 and 8 Health economics searches

Ovid MEDLINE(R) 1948+

 $SPAST_Q7-8_orthopaedic_surgery_economic_medline_270111$

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	MUSCLE SPASTICITY/
9	exp SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
12	hyperton\$.ti,ab.
13	exp DYSKINESIAS/
14	dyskinesi\$.ti,ab.
15	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
16	exp DYSTONIA/
17	dystoni\$.ti,ab.
18	exp CHOREA/
	(chorea\$ or choreic\$ or choreo\$).ti,ab.
20	exp ATHETOSIS/
	(athetos\$ or athetoid).ti,ab.
\vdash	MUSCLE WEAKNESS/
=	(musc\$ adj3 weak\$).ti,ab.
\vdash	exp ATAXIA/
\vdash	atax\$.ti,ab.
\vdash	upper motor neuron? lesion\$.ti,ab.
\vdash	or/8-26
\vdash	exp BRAIN INJURIES/
	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
	ABI.ti,ab.
	static encephalopath\$.ti,ab.
32	CEREBRAL PALSY/

33 (cerebral adj3 pals\$).ti,ab. 34 exp MENINGITIS/ 35 (meningitis or meningococcal).ti,ab. 36 exp CRANIOCEREBRAL TRAUMA/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 38 exp ENCEPHALITIS/ 39 encephaliti\$.ti,ab. 40 exp STROKE/ 41 stroke\$.ti.ab. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab. 43 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or 44 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 45 exp HYDROCEPHALUS/ 46 hydrocephal ti, ab. 47 SHAKEN BABY SYNDROME/ 48||(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 49 or/28-48 50 exp PARALYSIS/ 51 HEMIPLEGIA/ 52 exp PARAPLEGIA/ 53 QUADRIPLEGIA/ 54 exp PARESIS/ 55 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 56 (monopares or dipares or hemipares or quadripares or tetrapares).ti,ab. 57 or/50-56 58 and/27,57 59 and 49.57 60 and/27,49 61 or/58-60 62 exp ORTHOPEDIC PROCEDURES/ 63 orthop?edic\$.ti,ab. 64 TENOTOMY/ or TENDON TRANSFER/ or TENODESIS/ 65 (tendon\$ or tenotom\$ or tenodes\$).ti,ab. 66 ((musculo tendinous or musculo?tendinous or fractional) adj3 length\$).ti,ab. 67 (myotom\$ or aponeurotom\$).ti,ab. 68 (musc\$ adj3 (releas\$ or recess\$)).ti,ab.

69	exp ARTHRODESIS/
70	arthrodes\$.ti,ab.
71	((joint\$ or bon\$) adj3 fus\$).ti,ab.
72	exp OSTEOTOMY/
73	osteotom\$.ti,ab.
	open reduc\$.ti,ab.
75	((single event\$ or single?event\$ or multi level\$ or multi?level\$ or multi?stage? or stag\$ or interval\$) adj3 surg\$).ti,ab.
76	(SEMS or SEMLS).ti,ab.
77	or/62-76
78	and/61,77
79	limit 78 to english language
80	limit 79 to animals
81	limit 79 to (animals and humans)
82	80 not 81
83	79 not 82
84	and/7,83

EBM Reviews - Cochrane Central Register of Controlled Trials

 $SPAST_Q7-8_orthopaedic_surgery_economic_cctr_270111$

#	Searches
1	costs.tw.
2	cost effective\$.tw.
3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	MUSCLE SPASTICITY/
9	exp SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
12	hyperton\$.ti,ab.
13	exp DYSKINESIAS/
14	dyskinesi\$.ti,ab.
15	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
16	exp DYSTONIA/
17	dystoni\$.ti,ab.

18	exp CHOREA/
19	(chorea\$ or choreic\$ or choreo\$).ti,ab.
20	exp ATHETOSIS/
21	(athetos\$ or athetoid).ti,ab.
22	MUSCLE WEAKNESS/
23	(musc\$ adj3 weak\$).ti,ab.
24	exp ATAXIA/
25	atax\$.ti,ab.
26	upper motor neuron? lesion\$.ti,ab.
27	or/8-26
28	exp BRAIN INJURIES/
29	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
30	ABI.ti,ab.
31	static encephalopath\$.ti,ab.
32	CEREBRAL PALSY/
33	(cerebral adj3 pals\$).ti,ab.
34	exp MENINGITIS/
35	(meningitis or meningococcal).ti,ab.
36	exp CRANIOCEREBRAL TRAUMA/
37	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
38	exp ENCEPHALITIS/
39	encephaliti\$.ti,ab.
40	exp STROKE/
41	stroke\$.ti,ab.
42	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
43	exp CEREBROVASCULAR DISORDERS/
44	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
45	exp HYDROCEPHALUS/
46	hydrocephal\$.ti,ab.
47	SHAKEN BABY SYNDROME/
48	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
49	or/28-48
50	exp PARALYSIS/
51	HEMIPLEGIA/
52	exp PARAPLEGIA/
53	QUADRIPLEGIA/

54 exp PARESIS/	
[55] (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.	
[56] (monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,al	b.
57 or/50-56	
58 and/27,57	
59 and/49,57	
60 and/27,49	
61 or/58-60	
62 exp ORTHOPEDIC PROCEDURES/	
63 orthop?edic\$.ti,ab.	
64 TENOTOMY/ or TENDON TRANSFER/ or TENODESIS/	
65 (tendon\$ or tenotom\$ or tenodes\$).ti,ab.	
66 ((musculo tendinous or musculo?tendinous or fractional) adj3 length\$).ti,ab.	
[67] (myotom\$ or aponeurotom\$).ti,ab.	
68 (musc\$ adj3 (releas\$ or recess\$)).ti,ab.	
69 exp ARTHRODESIS/	
70 arthrodes\$.ti,ab.	
71 ((joint\$ or bon\$) adj3 fus\$).ti,ab.	
72 exp OSTEOTOMY/	
73 osteotom\$.ti,ab.	
74 open reduc\$.ti,ab.	
((single event\$ or single?event\$ or multi level\$ or multi?level\$ or multi?stage stag\$ or interval\$) adj3 surg\$).ti,ab.	e? or
76 (SEMS or SEMLS).ti,ab.	
77 or/62-76	
78 and/61,77	
79 and/7,78	

EBM Reviews - Health Technology Assessment

SPAST_Q7-8_orthopaedic_surgery_economic_hta_270111

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).tw.
5	hyperton\$.tw.
6	exp DYSKINESIAS/

_	
7	dyskinesi\$.tw.
8	((abnormal\$ or involuntar\$) adj2 mov\$).tw.
9	exp DYSTONIA/
10	dystoni\$.tw.
11	exp CHOREA/
12	(chorea\$ or choreic\$ or choreo\$).tw.
13	exp ATHETOSIS/
14	(athetos\$ or athetoid).tw.
15	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).tw.
17	exp ATAXIA/
18	atax\$.tw.
19	upper motor neuron? lesion\$.tw.
20	or/1-19
21	exp BRAIN INJURIES/
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).tw.
23	ABI.tw.
24	static encephalopath\$.tw.
25	CEREBRAL PALSY/
26	(cerebral adj3 pals\$).tw.
27	exp MENINGITIS/
28	(meningitis or meningococcal).tw.
29	exp CRANIOCEREBRAL TRAUMA/
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw.
31	exp ENCEPHALITIS/
32	encephaliti\$.tw.
33	exp STROKE/
34	stroke\$.tw.
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw.
36	exp CEREBROVASCULAR DISORDERS/
37	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw.
38	exp HYDROCEPHALUS/
39	hydrocephal\$.tw.
40	SHAKEN BABY SYNDROME/
41	(shak\$ adj3 (injur\$ or syndrome\$)).tw.
42	or/21-41

Г	
=	exp PARALYSIS/
	HEMIPLEGIA/
45	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).tw.
50	or/43-49
51	and/20,50
52	and/42,50
53	and/20,42
54	or/51-53
55	exp ORTHOPEDIC PROCEDURES/
56	orthop?edic\$.tw.
57	TENOTOMY/ or TENDON TRANSFER/ or TENODESIS/
58	(tendon\$ or tenotom\$ or tenodes\$).tw.
59	((musculo tendinous or musculo?tendinous or fractional) adj3 length\$).tw.
60	(myotom\$ or aponeurotom\$).tw.
61	(musc\$ adj3 (releas\$ or recess\$)).tw.
62	exp ARTHRODESIS/
63	arthrodes\$.tw.
64	((joint\$ or bon\$) adj3 fus\$).tw.
65	exp OSTEOTOMY/
66	osteotom\$.tw.
67	open reduc\$.tw.
68	((single event\$ or single?event\$ or multi level\$ or multi?level\$ or multi?stage? or stag\$ or interval\$) adj3 surg\$).tw.
69	(SEMS or SEMLS).tw.
70	or/55-69
71	and/54,70

EBM Reviews - NHS Economic Evaluation Database

 $SPAST_Q7-8_orthopaedic_surgery_economic_nhseed_270111$

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).tw.

5 hyperton\$.tw. 6 exp DYSKINESIAS/ dyskinesi\$.tw. 8 ((abnormal\$ or involuntar\$) adj2 mov\$).tw. 9 exp DYSTONIA/ 10 dystoni\$.tw. 11 exp CHOREA/ 12 (chorea\$ or choreic\$ or choreo\$).tw. 13 exp ATHETOSIS/ 14 (athetos\$ or athetoid).tw. 15 MUSCLE WEAKNESS/ 16 (musc\$ adj3 weak\$).tw. 17 exp ATAXIA/ 18 atax\$.tw. 19 upper motor neuron? lesion\$.tw. 20 or/1-19 21 exp BRAIN INJURIES/ 22 ((non progressive or non?progressive or acquired) adj2 brain injur\$).tw. 23 ABI.tw. 24 static encephalopath\$.tw. 25 CEREBRAL PALSY/ 26 (cerebral adj3 pals\$).tw. 27 exp MENINGITIS/ 28 (meningitis or meningococcal).tw. 29 exp CRANIOCEREBRAL TRAUMA/ ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw. 31 exp ENCEPHALITIS/ 32 encephaliti\$.tw. 33 exp STROKE/ 34 stroke\$.tw. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw. 36 exp CEREBROVASCULAR DISORDERS/ ((brain vascular or intra cranial vascular or intra?cranial vascular or 37 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw. 38 exp HYDROCEPHALUS/ 39 hydrocephal\$.tw. 40 SHAKEN BABY SYNDROME/

41	(shak\$ adj3 (injur\$ or syndrome\$)).tw.
42	or/21-41
43	exp PARALYSIS/
44	HEMIPLEGIA/
45	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).tw.
50	or/43-49
51	and/20,50
52	and/42,50
53	and/20,42
54	or/51-53
55	exp ORTHOPEDIC PROCEDURES/
56	orthop?edic\$.tw.
57	TENOTOMY/ or TENDON TRANSFER/ or TENODESIS/
58	(tendon\$ or tenotom\$ or tenodes\$).tw.
59	((musculo tendinous or musculo?tendinous or fractional) adj3 length\$).tw.
60	(myotom\$ or aponeurotom\$).tw.
61	(musc\$ adj3 (releas\$ or recess\$)).tw.
62	exp ARTHRODESIS/
63	arthrodes\$.tw.
64	((joint\$ or bon\$) adj3 fus\$).tw.
65	exp OSTEOTOMY/
	osteotom\$.tw.
67	open reduc\$.tw.
68	((single event\$ or single?event\$ or multi level\$ or multi?level\$ or multi?stage? or stag\$ or interval\$) adj3 surg\$).tw.
69	(SEMS or SEMLS).tw.
70	or/55-69
71	and/54,70

EMBASE 1980+

 ${\bf SPAST_Q7-8_orthopaedic_surgery_economic_embase_270111}$

#	Searches
1	costs.tw.
2	cost effective\$.tw.

3	economic.tw.
4	or/1-3
5	(metabolic adj cost).tw.
6	((energy or oxygen) adj cost).tw.
7	4 not (5 or 6)
8	SPASTICITY/
9	exp MUSCLE SPASM/
10	exp MUSCLE HYPERTONIA/
11	(spastic\$ or spasm\$).ti,ab.
12	hyperton\$.ti,ab.
13	DYSKINESIA/
14	dyskinesi\$.ti,ab.
15	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
16	DYSTONIA/
17	dystoni\$.ti,ab.
18	exp CHOREA/
19	CHOREOATHETOSIS/
20	ATHETOSIS/
21	(chorea\$ or choreic\$ or choreo\$).ti,ab.
22	(athetos\$ or athetoid).ti,ab.
23	exp MUSCLE WEAKNESS/
24	(musc\$ adj3 weak\$).ti,ab.
25	exp ATAXIA/
26	atax\$.ti,ab.
27	upper motor neuron? lesion\$.ti,ab.
	or/8-27
29	exp BRAIN INJURY/
30	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
31	ABI.ti,ab.
32	static encephalopath\$.ti,ab.
33	CEREBRAL PALSY/
34	(cerebral adj3 pals\$).ti,ab.
35	exp MENINGITIS/
36	(meningitis or meningococcal).ti,ab.
37	exp HEAD INJURY/
38	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
39	exp ENCEPHALITIS/
40	encephaliti\$.ti,ab.

41	STROKE/
42	stroke\$.ti,ab.
43	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
44	exp CEREBROVASCULAR DISEASE/
45	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
46	exp HYDROCEPHALUS/
47	hydrocephal\$.ti,ab.
48	SHAKEN BABY SYNDROME/
49	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
50	or/29-49
51	exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/
52	SPASTIC PARAPLEGIA/
53	PARESIS/ or MONOPARESIS/ or HEMIPARESIS/
54	SPASTIC PARESIS/
55	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
56	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
57	or/51-56
58	and/28,57
59	and/50,57
60	and/28,50
61	or/58-60
62	exp ORTHOPEDIC SURGERY/
63	orthop?edic\$.ti,ab.
64	exp TENDON SURGERY/
	(tendon\$ or tenotom\$ or tenodes\$).ti,ab.
66	((musculo tendinous or musculo?tendinous or fractional) adj3 length\$).ti,ab.
67	MYOTOMY/
68	APONEUROTOMY/
69	(myotom\$ or aponeurotom\$).ti,ab.
70	(musc\$ adj3 (releas\$ or recess\$)).ti,ab.
71	exp ARTHRODESIS/
72	arthrodes\$.ti,ab.
	((joint\$ or bon\$) adj3 fus\$).ti,ab.
74	exp OSTEOTOMY/
75	osteotom\$.ti,ab.
76	OPEN REDUCTION/
_	

77	open reduc\$.ti,ab.
78	((single event\$ or single?event\$ or multi level\$ or multi?level\$ or multi?stage? or stag\$ or interval\$) adj3 surg\$).ti,ab.
79	(SEMS or SEMLS).ti,ab.
80	or/62-79
81	and/61,80
82	limit 81 to english language
83	and/7,82

Question 9 What is the clinical effectiveness of Selective Dorsal Rhizotomy in children and young people with spasticity caused by a non-progressive brain disorder?

Ovid MEDLINE(R) 1948+

SPAST_Q9_SDR_medline_200711

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.
6	exp DYSKINESIAS/
7	dyskinesi\$.ti,ab.
8	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
9	exp DYSTONIA/
10	dystoni\$.ti,ab.
11	exp CHOREA/
12	(chorea\$ or choreic\$ or choreo\$).ti,ab.
13	exp ATHETOSIS/
14	(athetos\$ or athetoid).ti,ab.
15	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).ti,ab.
17	exp ATAXIA/
18	atax\$.ti,ab.
19	upper motor neuron? lesion\$.ti,ab.
20	or/1-19
21	exp BRAIN INJURIES/
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
23	ABI.ti,ab.
24	static encephalopath\$.ti,ab.
25	CEREBRAL PALSY/
26	(cerebral adj3 pals\$).ti,ab.
27	exp MENINGITIS/
28	(meningitis or meningococcal).ti,ab.
29	exp CRANIOCEREBRAL TRAUMA/
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.

31	exp ENCEPHALITIS/
32	encephaliti\$.ti,ab.
33	exp STROKE/
34	stroke\$.ti,ab.
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
36	exp CEREBROVASCULAR DISORDERS/
37	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
38	exp HYDROCEPHALUS/
39	hydrocephal\$.ti,ab.
40	SHAKEN BABY SYNDROME/
41	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
42	or/21-41
43	exp PARALYSIS/
44	HEMIPLEGIA/
45	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
50	or/43-49
51	and/20,50
52	and/42,50
53	and/20,42
54	or/51-53
55	exp RHIZOTOMY/
56	rhizotom\$.ti,ab.
57	((spin\$ or sensor\$) adj3 nerve\$ adj3 interrupt\$).ti,ab.
58	or/55-57
59	(dors\$ or posterior\$ or functional).ti,ab.
60	GANGLIA, SPINAL/
61	(gangli\$ adj3 spin\$).ti,ab.
62	or/59-61
63	and/58,62
64	(SDR or SPR or SFDR or SFPR).ti,ab.
65	or/63-64
66	and/54,65

Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations

SPAST_Q9_SDR_mip_200711

#	Searches
1	(spastic\$ or spasm\$).ti,ab.
2	hyperton\$.ti,ab.
3	dyskinesi\$.ti,ab.
4	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
5	dystoni\$.ti,ab.
6	(chorea\$ or choreic\$ or choreo\$).ti,ab.
7	(athetos\$ or athetoid).ti,ab.
8	(musc\$ adj3 weak\$).ti,ab.
9	atax\$.ti,ab.
10	upper motor neuron? lesion\$.ti,ab.
=	or/1-10
	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
13	ABI.ti,ab.
	static encephalopath\$.ti,ab.
15	(cerebral adj3 pals\$).ti,ab.
	(meningitis or meningococcal).ti,ab.
17	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
18	encephaliti\$.ti,ab.
19	stroke\$.ti,ab.
20	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
22	hydrocephal\$.ti,ab.
23	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
24	or/12-23
25	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
26	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
27	or/25-26
28	and/11,27
29	and/24,27
30	and/11,24
31	or/28-30

32	rhizotom\$.ti,ab.
33	((spin\$ or sensor\$) adj3 nerve\$ adj3 interrupt\$).ti,ab.
34	or/32-33
35	(dors\$ or posterior\$ or functional).ti,ab.
36	(gangli\$ adj3 spin\$).ti,ab.
37	or/35-36
38	and/34,37
39	(SDR or SPR or SFDR or SFPR).ti,ab.
40	or/38-39
41	and/31,40

EBM Reviews - Cochrane Central Register of Controlled Trials

SPAST_Q9_SDR_cctr_200711

#	Searches
1	MUSCLE SPASTICITY/
2	exp SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.
6	exp DYSKINESIAS/
7	dyskinesi\$.ti,ab.
8	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
9	exp DYSTONIA/
10	dystoni\$.ti,ab.
11	exp CHOREA/
12	(chorea\$ or choreic\$ or choreo\$).ti,ab.
13	exp ATHETOSIS/
14	(athetos\$ or athetoid).ti,ab.
15	MUSCLE WEAKNESS/
16	(musc\$ adj3 weak\$).ti,ab.
17	exp ATAXIA/
18	atax\$.ti,ab.
19	upper motor neuron? lesion\$.ti,ab.
20	or/1-19
21	exp BRAIN INJURIES/
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
23	ABI.ti,ab.
24	static encephalopath\$.ti,ab.

25	CEREBRAL PALSY/
26	(cerebral adj3 pals\$).ti,ab.
27	exp MENINGITIS/
28	(meningitis or meningococcal).ti,ab.
29	exp CRANIOCEREBRAL TRAUMA/
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
31	exp ENCEPHALITIS/
32	encephaliti\$.ti,ab.
33	exp STROKE/
34	stroke\$.ti,ab.
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.
36	exp CEREBROVASCULAR DISORDERS/
37	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.
38	exp HYDROCEPHALUS/
39	hydrocephal\$.ti,ab.
40	SHAKEN BABY SYNDROME/
41	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.
42	or/21-41
43	exp PARALYSIS/
44	HEMIPLEGIA/
	exp PARAPLEGIA/
46	QUADRIPLEGIA/
47	exp PARESIS/
_	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.
50	or/43-49
51	and/20,50
52	and/42,50
53	and/20,42
54	or/51-53
55	exp RHIZOTOMY/
56	rhizotom\$.ti,ab.
57	((spin\$ or sensor\$) adj3 nerve\$ adj3 interrupt\$).ti,ab.
58	or/55-57
59	(dors\$ or posterior\$ or functional).ti,ab.
60	GANGLIA, SPINAL/

61	(gangli\$ adj3 spin\$).ti,ab.
62	or/59-61
63	and/58,62
64	(SDR or SPR or SFDR or SFPR).ti,ab.
65	or/63-64
66	and/54,65

EBM Reviews - Cochrane Database of Systematic Reviews 2005+, EBM Reviews - Database of Abstracts of Reviews of Effects

SPAST_Q9_SDR_cdsrdare_200711

#	Searches
1	MUSCLE SPASTICITY.kw.
2	SPASM.kw.
3	MUSCLE HYPERTONIA.kw.
4	(spastic\$ or spasm\$).tw,tx.
5	hyperton\$.tw,tx.
6	DYSKINESIAS.kw.
7	dyskinesi\$.tw,tx.
8	((abnormal\$ or involuntar\$) adj2 mov\$).tw,tx.
9	DYSTONIA.kw.
10	dystoni\$.tw,tx.
11	CHOREA.kw.
12	(chorea\$ or choreic\$ or choreo\$).tw,tx.
13	ATHETOSIS.kw.
14	(athetos\$ or athetoid).tw,tx.
15	MUSCLE WEAKNESS.kw.
16	(musc\$ adj3 weak\$).tw,tx.
17	ATAXIA.kw.
18	atax\$.tw,tx.
19	upper motor neuron? lesion\$.tw,tx.
20	or/1-19
21	BRAIN INJURIES.kw.
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).tw,tx.
23	ABI.tw,tx.
24	static encephalopath\$.tw,tx.
25	CEREBRAL PALSY.kw.
26	(cerebral adj3 pals\$).tw,tx.
27	MENINGITIS.kw.

28 (meningitis or meningococcal).tw,tx. 29 CRANIOCEREBRAL TRAUMA.kw. ((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw,tx. 31 ENCEPHALITIS.kw. 32 encephaliti\$.tw,tx. 33 STROKE.kw. 34 stroke\$.tw,tx. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw,tx. 36||CEREBROVASCULAR DISORDERS.kw. ((brain vascular or intra cranial vascular or intra?cranial vascular or 37 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw,tx. 38 HYDROCEPHALUS.kw. 39||hydrocephal\$.tw,tx. 40 SHAKEN BABY SYNDROME.kw. 41 (shak\$ adj3 (injur\$ or syndrome\$)).tw,tx. 42 or/21-41 43||PARALYSIS.kw. 44 HEMIPLEGIA.kw. 45 PARAPLEGIA.kw. 46 QUADRIPLEGIA.kw. 47 PARESIS.kw. 48||(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw,tx. 49 (monopares or dipares or hemipares or quadripares or tetrapares).tw,tx. 50 or/43-49 51 and/20.50 52 and/42,50 53 and/20,42 54 or/51-53 55 RHIZOTOMY.kw. 56 rhizotom\$.tw,tx. 57 ((spin\$ or sensor\$) adj3 nerve\$ adj3 interrupt\$).tw,tx. 58 or/55-57 59||(dors\$ or posterior\$ or functional).tw,tx. 60 GANGLIA, SPINAL.kw. 61 (gangli\$ adj3 spin\$).tw,tx. 62 or/59-61 63 and/58,62

64	(SDR or SPR or SFDR or SFPR).tw,tx.
65	or/63-64
66	and/54,65

Embase 1980+

SPAST_Q9_SDR_embase_200711

#	Searches
1	SPASTICITY/
2	exp MUSCLE SPASM/
3	exp MUSCLE HYPERTONIA/
4	(spastic\$ or spasm\$).ti,ab.
5	hyperton\$.ti,ab.
6	DYSKINESIA/
7	dyskinesi\$.ti,ab.
8	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.
9	DYSTONIA/
10	dystoni\$.ti,ab.
11	exp CHOREA/
12	CHOREOATHETOSIS/
13	ATHETOSIS/
14	(chorea\$ or choreic\$ or choreo\$).ti,ab.
15	(athetos\$ or athetoid).ti,ab.
16	exp MUSCLE WEAKNESS/
17	(musc\$ adj3 weak\$).ti,ab.
18	exp ATAXIA/
19	atax\$.ti,ab.
20	upper motor neuron? lesion\$.ti,ab.
21	or/1-20
22	exp BRAIN INJURY/
23	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.
24	ABI.ti,ab.
25	static encephalopath\$.ti,ab.
26	CEREBRAL PALSY/
27	(cerebral adj3 pals\$).ti,ab.
28	exp MENINGITIS/
29	(meningitis or meningococcal).ti,ab.
	exp HEAD INJURY/
31	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or

damage\$ or disturb\$ or insult\$)).ti,ab. 32 exp ENCEPHALITIS/ 33 encephaliti\$.ti,ab. 34 STROKE/ 35 stroke\$.ti,ab. ((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab. 37 exp CEREBROVASCULAR DISEASE/ ((brain vascular or intra cranial vascular or intra?cranial vascular or 38 cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab. 39 exp HYDROCEPHALUS/ 40 hydrocephal\$.ti,ab. 41 SHAKEN BABY SYNDROME/ 42||(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab. 43 or/22-42 exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/ 45 SPASTIC PARAPLEGIA/ 46 PARESIS or MONOPARESIS or HEMIPARESIS 47 SPASTIC PARESIS/ 48 (monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab. 49 (monopares or dipares or hemipares or quadripares or tetrapares).ti,ab. 50 or/44-49 51 and/21,50 52 and/43,50 53 and/21,43 54 or/51-53 55 exp RHIZOTOMY/ 56||rhizotom\$.ti,ab. 57 ((spin\$ or sensor\$) adj3 nerve\$ adj3 interrupt\$).ti,ab. 58 or/55-57 59 (dors\$ or posterior\$ or functional).ti,ab. 60 SPINAL GANGLION/ 61||(gangli\$ adj3 spin\$).ti,ab. 62 or/59-61 63 and/58.62 64||(SDR or SPR or SFDR or SFPR).ti,ab. 65 or/63-64 66 and/54,65

CINAHL 1981+

SPAST_Q9_SDR_cinahl_200711

#	Query	Limiters/Expanders
S131	S130	Limiters - Exclude MEDLINE records Search modes - Boolean/Phrase
S130	S118 and S129	Search modes - Boolean/Phrase
S129	S127 or S128	Search modes - Boolean/Phrase
S128	TI (SDR or SPR or SFDR or SFPR) or AB (SDR or SPR or SFDR or SFPR)	Search modes - Boolean/Phrase
S127	S122 and S126	Search modes - Boolean/Phrase
S126	S123 or S124 or S125	Search modes - Boolean/Phrase
S125	TI (gangli* N3 spin*) or AB (gangli* N3 spin*)	Search modes - Boolean/Phrase
S124	MH GANGLIA, SENSORY	Search modes - Boolean/Phrase
S123	TI (dors* or posterior* or functional) or AB (dors* or posterior* or functional)	Search modes - Boolean/Phrase
S122	S119 or S120 or S121	Search modes - Boolean/Phrase
S121	TI (nerve* N3 interrupt*) or AB (nerve* N3 interrupt*)	Search modes - Boolean/Phrase
S120	TI (rhizotom*) or AB (rhizotom*)	Search modes - Boolean/Phrase
S119	MH RHIZOTOMY	Search modes - Boolean/Phrase
S118	S115 or S116 or S117	Search modes - Boolean/Phrase
S117	S105 and S114	Search modes - Boolean/Phrase
S116	S18 and S114	Search modes - Boolean/Phrase
S115	S18 and S105	Search modes - Boolean/Phrase
S114	S106 or S107 or S108 or S109 or S110 or S111 or	Search modes -

	S112 or S113	Boolean/Phrase
S113	AB (monopares* or dipares* or hemipares* or quadripares* or tetrapares*)	Search modes - Boolean/Phrase
S112	TI (monopares* or dipares* or hemipares* or quadripares* or tetrapares*)	Search modes - Boolean/Phrase
S111	AB (monoplegi* or diplegi* or hemiplegi* or quadriplegi* or tetraplegi*)	Search modes - Boolean/Phrase
S110	TI (monoplegi* or diplegi* or hemiplegi* or quadriplegi* or tetraplegi*)	Search modes - Boolean/Phrase
S109	MH QUADRIPLEGIA	Search modes - Boolean/Phrase
S108	MH PARAPLEGIA	Search modes - Boolean/Phrase
S107	MH HEMIPLEGIA	Search modes - Boolean/Phrase
S106	MH PARALYSIS+	Search modes - Boolean/Phrase
S105	S19 or S20 or S21 or S22 or S23 or S24 or S25 or S26 or S27 or S28 or S29 or S30 or S31 or S32 or S33 or S34 or S35 or S36 or S37 or S38 or S39 or S40 or S41 or S42 or S43 or S44 or S45 or S46 or S47 or S48 or S49 or S50 or S51 or S52 or S53 or S54 or S55 or S56 or S57 or S58 or S59 or S60 or S61 or S62 or S63 or S64 or S65 or S66 or S67 or S68 or S69 or S70 or S71 or S72 or S73 or S74 or S75 or S76 or S77 or S78 or S79 or S80 or S81 or S82 or S83 or S84 or S85 or S86 or S87 or S88 or S89 or S90 or S91 or S92 or S93 or S94 or S95 or S96 or S97 or S98 or S99 or S100 or S101 or S102 or S103 or S104	Search modes - Boolean/Phrase
S104	TI (shak* N3 syndrome*) or AB (shak* N3 syndrome*)	Search modes - Boolean/Phrase
S103	TI (shak* N3 injur*) or AB (shak* N3 injur*)	Search modes - Boolean/Phrase
S102	MH SHAKEN BABY SYNDROME	Search modes - Boolean/Phrase
S101	TI (hydrocephal*) or AB (hydrocephal*)	Search modes - Boolean/Phrase
S100	MH HYDROCEPHALUS+	Search modes - Boolean/Phrase
S99	TI (cerebrovascular N2 insult*) or AB (cerebrovascular N2 insult*)	Search modes - Boolean/Phrase
S98	TI (cerebrovascular N2 disturb*) or AB	Search modes -

	(cerebrovascular N2 disturb*)	Boolean/Phrase
S97	TI (cerebrovascular N2 damage*) or AB (cerebrovascular N2 damage*)	Search modes - Boolean/Phrase
S96	TI (cerebrovascular N2 occlusion*) or AB (cerebrovascular N2 occlusion*)	Search modes - Boolean/Phrase
S95	TI (cerebrovascular N2 insufficien*) or AB (cerebrovascular N2 insufficien*)	Search modes - Boolean/Phrase
S94	TI (cerebrovascular N2 disease*) or AB (cerebrovascular N2 disease*)	Search modes - Boolean/Phrase
S93	TI (cerebrovascular N2 disorder*) or AB (cerebrovascular N2 disorder*)	Search modes - Boolean/Phrase
S92	TI (intracranial vascular N2 insult*) or AB (intracranial vascular N2 insult*)	Search modes - Boolean/Phrase
S91	TI (intracranial vascular N2 disturb*) or AB (intracranial vascular N2 disturb*)	Search modes - Boolean/Phrase
S90	TI (intracranial vascular N2 damage*) or AB (intracranial vascular N2 damage*)	Search modes - Boolean/Phrase
S89	TI (intracranial vascular N2 occlusion*) or AB (intracranial vascular N2 occlusion*)	Search modes - Boolean/Phrase
S88	TI (intracranial vascular N2 insufficien*) or AB (intracranial vascular N2 insufficien*)	Search modes - Boolean/Phrase
S87	TI (intracranial vascular N2 disease*) or AB (intracranial vascular N2 disease*)	Search modes - Boolean/Phrase
S86	TI (intracranial vascular N2 disorder*) or AB (intracranial vascular N2 disorder*)	Search modes - Boolean/Phrase
S85	TI (intra-cranial vascular N2 insult*) or AB (intra-cranial vascular N2 insult*)	Search modes - Boolean/Phrase
S84	TI (intra-cranial vascular N2 disturb*) or AB (intra-cranial vascular N2 disturb*)	Search modes - Boolean/Phrase
S83	TI (intra-cranial vascular N2 damage*) or AB (intra-cranial vascular N2 damage*)	Search modes - Boolean/Phrase
S82	TI (intra-cranial vascular N2 occlusion*) or AB (intra-cranial vascular N2 occlusion*)	Search modes - Boolean/Phrase
S81	TI (intra-cranial vascular N2 insufficien*) or AB (intra-cranial vascular N2 insufficien*)	Search modes - Boolean/Phrase
S80	TI (intra-cranial vascular N2 disease*) or AB (intra-cranial vascular N2 disease*)	Search modes - Boolean/Phrase
S79	TI (intra-cranial vascular N2 disorder*) or AB (intra-cranial vascular N2 disorder*)	Search modes - Boolean/Phrase
S78	TI (brain vascular N2 insult*) or AB (brain vascular N2 insult*)	Search modes - Boolean/Phrase

S77	TI (brain vascular N2 disturb*) or AB (brain vascular N2 disturb*)	Search modes - Boolean/Phrase
S76	TI (brain vascular N2 damage*) or AB (brain vascular N2 damage*)	Search modes - Boolean/Phrase
S75	TI (brain vascular N2 occlusion*) or AB (brain vascular N2 occlusion*)	Search modes - Boolean/Phrase
S74	TI (brain vascular N2 insufficien*) or AB (brain vascular N2 insufficien*)	Search modes - Boolean/Phrase
S73	TI (brain vascular N2 disease*) or AB (brain vascular N2 disease*)	Search modes - Boolean/Phrase
S72	TI (brain vascular N2 disorder*) or AB (brain vascular N2 disorder*)	Search modes - Boolean/Phrase
S71	MH CEREBROVASCULAR DISORDERS+	Search modes - Boolean/Phrase
S70	TI (intracranial N3 isch#emi*) or AB (intracranial N3 isch#emi*)	Search modes - Boolean/Phrase
S69	TI (intracranial N3 aneurysm*) or AB (intracranial N3 aneurysm*)	Search modes - Boolean/Phrase
S68	TI (intracranial N3 embolism) or AB (intracranial N3 embolism)	Search modes - Boolean/Phrase
S67	TI (intra-cranial N3 isch#emi*) or AB (intra-cranial N3 isch#emi*)	Search modes - Boolean/Phrase
S66	TI (intra-cranial N3 aneurysm*) or AB (intra-cranial N3 aneurysm*)	Search modes - Boolean/Phrase
S65	TI (intra-cranial N3 embolism) or AB (intra-cranial N3 embolism)	Search modes - Boolean/Phrase
S64	TI (cerebral N3 isch#emi*) or AB (cerebral N3 isch#emi*)	Search modes - Boolean/Phrase
S63	TI (cerebral N3 aneurysm*) or AB (cerebral N3 aneurysm*)	Search modes - Boolean/Phrase
S62	TI (cerebral N3 embolism) or AB (cerebral N3 embolism)	Search modes - Boolean/Phrase
S61	TI (brain N3 isch#emi*) or AB (brain N3 isch#emi*)	Search modes - Boolean/Phrase
S60	TI (brain N3 aneurysm*) or AB (brain N3 aneurysm*)	Search modes - Boolean/Phrase
S59	TI (brain N3 embolism) or AB (brain N3 embolism)	Search modes - Boolean/Phrase
S58	TI (stroke*) or AB (stroke*)	Search modes - Boolean/Phrase
S57	MH STROKE	Search modes - Boolean/Phrase

S56	TI (encephaliti*) or AB (encephaliti*)	Search modes - Boolean/Phrase
S55	MH ENCEPHALITIS+	Search modes - Boolean/Phrase
S54	TI (craniocerebral N3 insult*) or AB (craniocerebral N3 insult*)	Search modes - Boolean/Phrase
S53	TI (craniocerebral N3 disturb*) or AB (craniocerebral N3 disturb*)	Search modes - Boolean/Phrase
S52	TI (craniocerebral N3 damage*) or AB (craniocerebral N3 damage*)	Search modes - Boolean/Phrase
S51	TI (craniocerebral N3 trauma*) or AB (craniocerebral N3 trauma*)	Search modes - Boolean/Phrase
S50	TI (craniocerebral N3 injur*) or AB (craniocerebral N3 injur*)	Search modes - Boolean/Phrase
S49	TI (cerebral N3 insult*) or AB (cerebral N3 insult*)	Search modes - Boolean/Phrase
S48	TI (cerebral N3 disturb*) or AB (cerebral N3 disturb*)	Search modes - Boolean/Phrase
S47	TI (cerebral N3 damage*) or AB (cerebral N3 damage*)	Search modes - Boolean/Phrase
S46	TI (cerebral N3 trauma*) or AB (cerebral N3 trauma*)	Search modes - Boolean/Phrase
S45	TI (cerebral N3 injur*) or AB (cerebral N3 injur*)	Search modes - Boolean/Phrase
S44	TI (skull N3 insult*) or AB (skull N3 insult*)	Search modes - Boolean/Phrase
S43	TI (skull N3 disturb*) or AB (skull N3 disturb*)	Search modes - Boolean/Phrase
S42	TI (skull N3 damage*) or AB (skull N3 damage*)	Search modes - Boolean/Phrase
S41	TI (skull N3 trauma*) or AB (skull N3 trauma*)	Search modes - Boolean/Phrase
S40	TI (skull N3 injur*) or AB (skull N3 injur*)	Search modes - Boolean/Phrase
S39	TI (brain N3 insult*) or AB (brain N3 insult*)	Search modes - Boolean/Phrase
S38	TI (brain N3 disturb*) or AB (brain N3 disturb*)	Search modes - Boolean/Phrase
S37	TI (brain N3 damage*) or AB (brain N3 damage*)	Search modes - Boolean/Phrase
S36	TI (brain N3 trauma*) or AB (brain N3 trauma*)	Search modes - Boolean/Phrase

S35 TI (brain N3 injur*) or AB (brain N3 injur*) Search modes - Boolean/Phrase S34 TI (head N3 insult*) or AB (head N3 insult*) Search modes - Boolean/Phrase S35 TI (head N3 disturb*) or AB (head N3 disturb*) Search modes - Boolean/Phrase S37 TI (head N3 damage*) or AB (head N3 damage*) Search modes - Boolean/Phrase S38 TI (head N3 trauma*) or AB (head N3 trauma*) Search modes - Boolean/Phrase S39 TI (head N3 injur*) or AB (head N3 injur*) Search modes - Boolean/Phrase S30 TI (head N3 injur*) or AB (head N3 injur*) Search modes - Boolean/Phrase S29 MH HEAD INJURIES+ Search modes - Boolean/Phrase S29 TI (meningitis or meningococcal) or AB (meningitis or Boolean/Phrase S20 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) Search modes - Boolean/Phrase S21 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) Search modes - Boolean/Phrase S22 TI (static encephalopath*) or AB (static Boolean/Phrase S23 TI (ABI) or AB (ABI) Search modes - Boolean/Phrase S24 TI (captive AB (ABI) Search modes - Boolean/Phrase S25 TI (conprogressive N2 brain injur*) or AB (acquired N2 brain injur*) S26 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S27 TI (non-progressive N2 brain injur*) S28 TI (non-progressive N2 brain injur*) S29 TI (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) S21 TI (non-progressive N2 brain injur*) S22 Si or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S0 olean/Phrase S31 TI (apper motor neuron# lesion*) or AB (upper motor S31 TI (upper motor neuron# lesion*) or AB (upper motor S32 Bearch modes - Boolean/Phrase S33 TI (atax*) or AB (atax*) S34 Search modes - Boolean/Phrase S35 S1 TI (atax*) or AB (atax*) S35 Search modes - Boolean/Phrase			
S34 IT (head N3 insult*) or AB (head N3 insult*) Search modes - Boolean/Phrase S32 TI (head N3 damage*) or AB (head N3 damage*) Search modes - Boolean/Phrase S33 TI (head N3 trauma*) or AB (head N3 trauma*) Search modes - Boolean/Phrase S31 TI (head N3 trauma*) or AB (head N3 trauma*) Search modes - Boolean/Phrase S32 MH HEAD INJURIES+ S28 TI (meningitis or meningococcal) or AB (meningitis or meningococcal) S29 MH MENINGITIS+ Search modes - Boolean/Phrase S20 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S21 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S22 MH CEREBRAL PALSY Search modes - Boolean/Phrase S23 TI (static encephalopath*) or AB (static encephalopath*) S24 TI (acquired N2 brain injur*) or AB (acquired N2 brain spolean/Phrase S25 TI (acquired N2 brain injur*) or AB (acquired N2 brain spolean/Phrase S26 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S29 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S21 TI (supper motor neuron# lesion*) or AB (upper motor solean/Phrase S22 Ti (upper motor neuron# lesion*) or AB (upper motor encuron# lesion*) S23 TI (upper motor neuron# lesion*) or AB (upper motor encuron# lesion*) S24 TI (upper motor neuron# lesion*) or AB (upper motor encuron# lesion*) S25 Search modes - Boolean/Phrase S26 Search modes - Boolean/Phrase S27 TI (upper motor neuron# lesion*) or AB (upper motor encuron# lesion*) S28 Search modes - Boolean/Phrase S29 Search modes - Boolean/Phrase S29 Search modes - Boolean/Phrase S20 Ti (upper motor neuron# lesion*) or AB (upper motor encuron# lesion*) S28 Search modes - Boolean/Phrase S29 Search modes - Boolean/Phrase S29 Search modes - Boolean/Phrase S20 Search modes - Boolean/Phrase S21 Ti (upper motor neuron# lesion*) or AB (upper motor encuron# lesion*)	S35	TI (brain N3 injur*) or AB (brain N3 injur*)	
TI (head N3 disturb*) or AB (head N3 disturb*) Search modes - Boolean/Phrase Sat TI (head N3 damage*) or AB (head N3 damage*) Search modes - Boolean/Phrase Sat TI (head N3 trauma*) or AB (head N3 trauma*) Search modes - Boolean/Phrase Sat TI (head N3 injur*) or AB (head N3 injur*) Search modes - Boolean/Phrase Sat TI (head N3 injur*) or AB (head N3 injur*) Search modes - Boolean/Phrase Sat TI (meningitis or meningococcal) or AB (meningitis or Boolean/Phrase Search modes - Boolean/Phrase Search modes - Boolean/Phrase Sat TI (cerebral N3 pals*) or AB (cerebral N3 pals*) Search modes - Boolean/Phrase Sat TI (cerebral N3 pals*) or AB (static Boolean/Phrase Sat TI (static encephalopath*) or AB (static Boolean/Phrase Sat TI (ABI) or AB (ABI) Search modes - Boolean/Phrase Sat TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) Sat TI (conprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) Sat TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) Sat TI (nonprogressive N2 brain injur*) Sat Sat Or S	S34	TI (head N3 insult*) or AB (head N3 insult*)	
S32 IT (head N3 damage*) or AB (head N3 damage*) S31 TI (head N3 trauma*) or AB (head N3 trauma*) Search modes - Boolean/Phrase S32 TI (head N3 injur*) or AB (head N3 injur*) Search modes - Boolean/Phrase S23 MH HEAD INJURIES+ S24 TI (meningitis or meningococcal) or AB (meningitis or meningococcal) S27 MH MENINGITIS+ S28 Search modes - Boolean/Phrase S28 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S29 MH CEREBRAL PALSY S20 TI (static encephalopath*) or AB (static encephalopath*) S21 TI (static encephalopath*) or AB (static encephalopath*) S22 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S29 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S21 TI (non-progressive N2 brain injur*) or AB (non-solean/Phrase) S22 TI (non-solean/Phrase) S23 TI (non-progressive N2 brain injur*) or AB (non-solean/Phrase) S24 TI (non-progressive N2 brain injur*) or AB (non-solean/Phrase) S25 TI (non-progressive N2 brain injur*) or AB (non-solean/Phrase) S26 TI (non-progressive N2 brain injur*) or AB (non-solean/Phrase) S27 TI (non-progressive N2 brain injur*) or AB (non-solean/Phrase) S28 TI (non-progressive N2 brain injur*) or AB (non-solean/Phrase) S29 TI (non-progressive N2 brain injur*) or AB (non-solean/Phrase) S20 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase) S20 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase) S20 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase) S21 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase) S23 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase)	S33	TI (head N3 disturb*) or AB (head N3 disturb*)	
S31 IT (head N3 trauma*) or AB (head N3 trauma*) S30 TI (head N3 injur*) or AB (head N3 injur*) Search modes - Boolean/Phrase S29 MH HEAD INJURIES+ Search modes - Boolean/Phrase S28 TI (meningitis or meningococcal) or AB (meningitis or Boolean/Phrase S29 MH MENINGITIS+ S20 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S21 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S22 MH CEREBRAL PALSY S23 MH CEREBRAL PALSY S24 TI (static encephalopath*) or AB (static encephalopath*) S25 MH CEREBRAL PALSY S26 TI (ABI) or AB (ABI) S27 TI (ABI) or AB (ABI) S28 TI (ARI) or AB (ABI) S29 TI (inonprogressive N2 brain injur*) or AB (acquired N2 brain injur*) S20 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S21 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S22 TI (nonprogressive N2 brain injur*) or AB (nonsprogressive N2 brain injur*) S23 TI (nonprogressive N3 brain injur*) or AB (nonsprogressive N2 brain injur*) S24 TI (nonprogressive N3 brain injur*) or AB (nonsprogressive N2 brain injur*) S25 MH BRAIN INJURIES+ S26 Search modes - Boolean/Phrase S27 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase S28 Search modes - Boolean/Phrase S29 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase S29 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase S29 TI (upper motor neuron# lesion*) or AB (upper motor Search modes - Boolean/Phrase	S32	TI (head N3 damage*) or AB (head N3 damage*)	
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S28 TI (meningitis or meningococcal) or AB (meningitis or meningococcal) S27 MH MENINGITIS+ S26 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) S27 MH CEREBRAL PALSY S28 MH CEREBRAL PALSY S29 MH CEREBRAL PALSY S20 TI (static encephalopath*) or AB (static encephalopath*) S20 TI (ABI) or AB (ABI) S21 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S22 TI (nonprogressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S21 TI (non-progressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S25 TI (non-progressive N2 brain injur*) or AB (non-progressive N2 brain injur*) S26 TI (non-progressive N2 brain injur*) S27 TI (non-progressive N2 brain injur*) S28 TI (non-progressive N2 brain injur*) S29 TI (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) S21 TI (non-progressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) S23 TI (non-progressive N2 brain injur*) S24 TI (non-progressive N2 brain injur*) S25 Search modes -Boolean/Phrase S26 Search modes -Boolean/Phrase S27 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S28 Search modes -Boolean/Phrase S28 Search modes -Boolean/Phrase S29 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S28 Search modes -Boolean/Phrase S29 TI (upper motor neuron# lesion*) S29 TI (upper motor neuron# lesion*) S20 TI (upper motor neuron# lesion*)	S30	TI (head N3 injur*) or AB (head N3 injur*)	
meningococcal) Search modes - Boolean/Phrase	S29	MH HEAD INJURIES+	
S27 MH MENINGTITS+ Boolean/Phrase S26 TI (cerebral N3 pals*) or AB (cerebral N3 pals*) Search modes - Boolean/Phrase S25 MH CEREBRAL PALSY Search modes - Boolean/Phrase S24 TI (static encephalopath*) or AB (static encephalopath*) S27 TI (ABI) or AB (ABI) S28 TI (ABI) or AB (ABI) S28 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S29 TI (nonprogressive N2 brain injur*) or AB (acquired N2 brain injur*) S20 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S21 TI (non-progressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) S23 TI (non-progressive N2 brain injur*) S24 TI (non-progressive N2 brain injur*) S25 Search modes - Boolean/Phrase S26 TI (non-progressive N2 brain injur*) S27 TI (non-progressive N2 brain injur*) S28 Search modes - Boolean/Phrase S29 TI (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) S21 TI (non-progressive N2 brain injur*) S22 TI (non-progressive N2 brain injur*) S23 TI (non-progressive N2 brain injur*) S24 TI (non-progressive N2 brain injur*) S25 TI (non-progressive N2 brain injur*) S26 TI (non-progressive N2 brain injur*) S27 Search modes - Boolean/Phrase S28 TI (non-progressive N2 brain injur*) S28 Search modes - Boolean/Phrase S29 TI (upper motor neuron# lesion*) or AB (upper motor neuron# besion*) S27 TI (utatax*) or AB (atax*) S28 Search modes - Boolean/Phrase	S28		
S25 MH CEREBRAL PALSY Search modes - Boolean/Phrase S24 TI (static encephalopath*) or AB (static encephalopath*) S25 TI (ABI) or AB (ABI) S26 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S27 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S28 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S29 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) S21 TI (nonprogressive N2 brain injur*) S22 TI (nonprogressive N2 brain injur*) S23 TI (nonprogressive N2 brain injur*) S24 Search modes - Boolean/Phrase S25 Search modes - Boolean/Phrase S26 TI (nonprogressive N2 brain injur*) S27 TI (nonprogressive N2 brain injur*) S28 Search modes - Boolean/Phrase S29 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S29 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S20 TI (upper motor neuron# lesion*) S20 Search modes - Boolean/Phrase S21 TI (upper motor neuron# lesion*) S21 TI (upper motor neuron# lesion*) S22 TI (upper motor neuron# lesion*) S23 TI (upper motor neuron# lesion*) S24 TI (upper motor neuron# lesion*) S25 Search modes - Boolean/Phrase	S27	MH MENINGITIS+	
S25 MH CEREBRAL PALSY S24 TI (static encephalopath*) or AB (static encephalopath*) S25 TI (ABI) or AB (ABI) S26 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S27 TI (nonprogressive N2 brain injur*) or AB (acquired N2 brain injur*) S28 TI (nonprogressive N2 brain injur*) or AB (acquired N2 brain injur*) S29 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S21 MH BRAIN INJURIES+ S22 Search modes - Boolean/Phrase S23 Si or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 S26 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S27 TI (upper motor neuron# lesion*) or AB (upper motor Boolean/Phrase S28 Search modes - Boolean/Phrase S29 TI (atax*) or AB (atax*) S20 TI (atax*) or AB (atax*)	S26	TI (cerebral N3 pals*) or AB (cerebral N3 pals*)	
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S23 IT (ABI) or AB (ABI) S24 Boolean/Phrase S25 TI (acquired N2 brain injur*) or AB (acquired N2 brain injur*) S26 Search modes - Boolean/Phrase S27 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S28 TI (non-progressive N2 brain injur*) S29 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) S20 MH BRAIN INJURIES+ S20 Search modes - Boolean/Phrase S21 S10 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S16 or S17 S20 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S20 Search modes - Boolean/Phrase S21 Search modes - Boolean/Phrase S22 TI (atax*) or AB (atax*) S23 Search modes - Boolean/Phrase	S24		
S22 injur*) S21 TI (nonprogressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S20 TI (non-progressive N2 brain injur*) or AB (nonprogressive N2 brain injur*) S20 MH BRAIN INJURIES+ S21 S1 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 S20 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S20 Search modes - Boolean/Phrase S21 S20 S20 S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S16 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S16 or S17 S20 Search modes - Boolean/Phrase S21 S21 Sarch modes - Boolean/Phrase S22 S21 S21 S21 S21 S21 S21 S21 S21 S21	S23	TI (ABI) or AB (ABI)	
S21 (nonprogressive N2 brain injur*) Boolean/Phrase	S22		
progressive N2 brain injur*) Boolean/Phrase Search modes - Boolean/Phrase S10 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S16 TI (atax*) or AB (atax*) Boolean/Phrase Search modes - Boolean/Phrase Search modes - Boolean/Phrase	S21	, , ,	
S19 MH BRAIN INJURIES+ S1 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 S17 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S18 TI (atax*) or AB (atax*) S19 Boolean/Phrase Search modes - Boolean/Phrase Search modes - Boolean/Phrase	S20	, , , , , , , , , , , , , , , , , , , ,	
S18 S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 TI (upper motor neuron# lesion*) or AB (upper motor neuron# lesion*) S17 TI (atax*) or AB (atax*) Search modes - Boolean/Phrase Search modes - Boolean/Phrase	S19	MH BRAIN INJURIES+	
neuron# lesion*) S16 TI (atax*) or AB (atax*) Boolean/Phrase Search modes - Boolean/Phrase	S18	S10 or S11 or S12 or S13 or S14 or S15 or S16 or	
S16 IT (atax*) or AB (atax*) Boolean/Phrase	S17		
S15 MH ATAXIA Search modes -	S16	TI (atax*) or AB (atax*)	
	S15	MH ATAXIA	Search modes -

		Boolean/Phrase
S14	TI (musc* N3 weak*) or AB (musc* N3 weak*)	Search modes - Boolean/Phrase
S13	MH MUSCLE WEAKNESS	Search modes - Boolean/Phrase
S12	TI (athetos* or athetoid*) or AB (athetos* or athetoid*)	Search modes - Boolean/Phrase
S11	TI (chorea* or choreic* or choreo*) or AB (chorea* or choreic* or choreo*)	Search modes - Boolean/Phrase
S10	MH CHOREA+	Search modes - Boolean/Phrase
S9	TI (dystoni*) or AB (dystoni*)	Search modes - Boolean/Phrase
S8	MH DYSTONIA+	Search modes - Boolean/Phrase
S7	TI (involuntar* N2 mov*) or AB (involuntar* N2 mov*)	Search modes - Boolean/Phrase
S6	TI (abnormal N2 mov*) or AB (abnormal N2 mov*)	Search modes - Boolean/Phrase
S5	TI (dyskinesi*) or AB (dyskinesi*)	Search modes - Boolean/Phrase
S4	MH DYSKINESIAS+	Search modes - Boolean/Phrase
S3	TI (spastic* or spasm* or hyperton*) or AB (spastic* or spasm* or hyperton*)	Search modes - Boolean/Phrase
S2	MH SPASM+	Search modes - Boolean/Phrase
S1	MH MUSCLE SPASTICITY	Search modes - Boolean/Phrase

Question 9 Health economics searches

Ovid MEDLINE(R) 1948 to July Week 1 2011

SPAST_Q9_SDR_economic_medline_200711

#	Searches	Results
1	costs.tw.	95212
2	cost effective\$.tw.	55478
3	economic.tw.	87725
4	or/1-3	206694
5	(metabolic adj cost).tw.	601
6	((energy or oxygen) adj cost).tw.	2324
7	4 not (5 or 6)	206408
8	MUSCLE SPASTICITY/	5871
9	exp SPASM/	7313
10	exp MUSCLE HYPERTONIA/	8051
11	(spastic\$ or spasm\$).ti,ab.	33540
12	hyperton\$.ti,ab.	14231
13	exp DYSKINESIAS/	57717
14	dyskinesi\$.ti,ab.	10567
15	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.	5141
16	exp DYSTONIA/	6916
17	dystoni\$.ti,ab.	9852
18	exp CHOREA/	11223
19	(chorea\$ or choreic\$ or choreo\$).ti,ab.	5530
20	exp ATHETOSIS/	1222
21	(athetos\$ or athetoid).ti,ab.	650
22	MUSCLE WEAKNESS/	4268
23	(musc\$ adj3 weak\$).ti,ab.	10561
24	exp ATAXIA/	13333
25	atax\$.ti,ab.	22468
26	upper motor neuron? lesion\$.ti,ab.	218
27	or/8-26	146939
	exp BRAIN INJURIES/	41729
29	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.	724
30	ABI.ti,ab.	3010
31	static encephalopath\$.ti,ab.	108
32	CEREBRAL PALSY/	13379

33	(cerebral adj3 pals\$).ti,ab.	12007
	exp MENINGITIS/	43505
	(meningitis or meningococcal).ti,ab.	40129
\vdash	exp CRANIOCEREBRAL TRAUMA/	105393
50	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or	100000
37	trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.	76506
38	exp ENCEPHALITIS/	36560
39	encephaliti\$.ti,ab.	24611
40	exp STROKE/	65295
	stroke\$.ti,ab.	111155
42	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.	40816
43	exp CEREBROVASCULAR DISORDERS/	235456
44	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.	14895
45	exp HYDROCEPHALUS/	18030
46	hydrocephal\$.ti,ab.	16744
47	SHAKEN BABY SYNDROME/	363
48	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.	538
49	or/28-48	524951
50	exp PARALYSIS/	64620
51	HEMIPLEGIA/	9591
52	exp PARAPLEGIA/	11021
53	QUADRIPLEGIA/	6720
54	exp PARESIS/	4830
55	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.	13978
56	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.	8430
57	or/50-56	79665
58	and/27,57	9675
59	and/49,57	19486
60	and/27,49	15344
61	or/58-60	37237
62	exp RHIZOTOMY/	688
63	rhizotom\$.ti,ab.	1603
64	((spin\$ or sensor\$) adj3 nerve\$ adj3 interrupt\$).ti,ab.	8
65	or/62-64	1793
66	(dors\$ or posterior\$ or functional).ti,ab.	861358

67	GANGLIA, SPINAL/	14068
68	(gangli\$ adj3 spin\$).ti,ab.	2589
69	or/66-68	866422
70	and/65,69	1213
71	(SDR or SPR or SFDR or SFPR).ti,ab.	4220
72	or/70-71	5321
73	and/61,72	268
74	and/7,73	5

EBM Reviews - Cochrane Central Register of Controlled Trials 3rd Quarter 2011

$SPAST_Q9_SDR_economic_cctr_200711$

#	Searches	Results
1	costs.tw.	6671
2	cost effective\$.tw.	5340
3	economic.tw.	2989
4	or/1-3	11201
5	(metabolic adj cost).tw.	42
6	((energy or oxygen) adj cost).tw.	211
7	4 not (5 or 6)	11187
8	MUSCLE SPASTICITY/	367
9	exp SPASM/	260
10	exp MUSCLE HYPERTONIA/	453
11	(spastic\$ or spasm\$).ti,ab.	2007
12	hyperton\$.ti,ab.	1011
13	exp DYSKINESIAS/	1915
14	dyskinesi\$.ti,ab.	885
15	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.	347
16	exp DYSTONIA/	130
17	dystoni\$.ti,ab.	369
18	exp CHOREA/	154
19	(chorea\$ or choreic\$ or choreo\$).ti,ab.	117
20	exp ATHETOSIS/	14
21	(athetos\$ or athetoid).ti,ab.	16
22	MUSCLE WEAKNESS/	172
23	(musc\$ adj3 weak\$).ti,ab.	345
24	exp ATAXIA/	97
25	atax\$.ti,ab.	250

26	upper motor neuron? lesion\$.ti,ab.	7
27	or/8-26	6651
	exp BRAIN INJURIES/	697
29	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.	77
30	ABI.ti,ab.	126
31	static encephalopath\$.ti,ab.	1
32	CEREBRAL PALSY/	418
33	(cerebral adj3 pals\$).ti,ab.	616
34	exp MENINGITIS/	387
35	(meningitis or meningococcal).ti,ab.	809
36	exp CRANIOCEREBRAL TRAUMA/	1303
37	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.	2197
38	exp ENCEPHALITIS/	153
39	encephaliti\$.ti,ab.	208
40	exp STROKE/	2985
	stroke\$.ti,ab.	13777
42	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.	1223
43	exp CEREBROVASCULAR DISORDERS/	6258
44	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.	908
45	exp HYDROCEPHALUS/	102
46	hydrocephal\$.ti,ab.	157
47	SHAKEN BABY SYNDROME/	4
48	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.	5
49	or/28-48	21555
50	exp PARALYSIS/	903
51	HEMIPLEGIA/	356
52	exp PARAPLEGIA/	141
53	QUADRIPLEGIA/	104
54	exp PARESIS/	240
55	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).ti,ab.	965
56	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.	260
57	or/50-56	1930
58	and/27,57	344

59	and/49,57	937
60	and/27,49	719
61	or/58-60	1512
62	exp RHIZOTOMY/	17
63	rhizotom\$.ti,ab.	29
64	((spin\$ or sensor\$) adj3 nerve\$ adj3 interrupt\$).ti,ab.	1
65	or/62-64	32
66	(dors\$ or posterior\$ or functional).ti,ab.	21711
67	GANGLIA, SPINAL/	11
68	(gangli\$ adj3 spin\$).ti,ab.	14
69	or/66-68	21724
70	and/65,69	26
71	(SDR or SPR or SFDR or SFPR).ti,ab.	44
72	or/70-71	60
73	and/61,72	19
- A	and/7,73	0

EBM Reviews - Health Technology Assessment 3rd Quarter 2011

SPAST_Q9_SDR_economic_hta_200711

#	Searches	Results
1	MUSCLE SPASTICITY/	18
2	exp SPASM/	0
3	exp MUSCLE HYPERTONIA/	19
4	(spastic\$ or spasm\$).tw.	38
5	hyperton\$.tw.	7
6	exp DYSKINESIAS/	27
7	dyskinesi\$.tw.	6
8	((abnormal\$ or involuntar\$) adj2 mov\$).tw.	2
9	exp DYSTONIA/	9
10	dystoni\$.tw.	14
11	exp CHOREA/	0
12	(chorea\$ or choreic\$ or choreo\$).tw.	2
13	exp ATHETOSIS/	0
14	(athetos\$ or athetoid).tw.	0
15	MUSCLE WEAKNESS/	0
16	(musc\$ adj3 weak\$).tw.	2
17	exp ATAXIA/	11
18	atax\$.tw.	15

19	upper motor neuron? lesion\$.tw.	0
	or/1-19	76
21	exp BRAIN INJURIES/	25
22	((non progressive or non?progressive or acquired) adj2 brain injur\$).tw.	4
	ABI.tw.	5
24	static encephalopath\$.tw.	0
	CEREBRAL PALSY/	21
26	(cerebral adj3 pals\$).tw.	33
27	exp MENINGITIS/	5
28	(meningitis or meningococcal).tw.	15
29	exp CRANIOCEREBRAL TRAUMA/	36
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw.	60
31	exp ENCEPHALITIS/	1
32	encephaliti\$.tw.	3
33	exp Cerebrovascular Accident/	1
	stroke\$.tw.	202
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw.	46
36	exp CEREBROVASCULAR DISORDERS/	109
37	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw.	35
38	exp HYDROCEPHALUS/	4
39	hydrocephal\$.tw.	6
40	SHAKEN BABY SYNDROME/	0
41	(shak\$ adj3 (injur\$ or syndrome\$)).tw.	0
42	or/21-41	366
43	exp PARALYSIS/	11
44	HEMIPLEGIA/	0
45	exp PARAPLEGIA/	2
46	QUADRIPLEGIA/	2
47	exp PARESIS/	1
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw.	4
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).tw.	0
50	or/43-49	14
51	and/20,50	2
52	and/42,50	3
53	and/20,42	17

54	or/51-53	18
55	exp RHIZOTOMY/	6
56	rhizotom\$.tw.	6
57	((spin\$ or sensor\$) adj3 nerve\$ adj3 interrupt\$).tw.	0
58	or/55-57	6
59	(dors\$ or posterior\$ or functional).tw.	213
60	GANGLIA, SPINAL/	0
61	(gangli\$ adj3 spin\$).tw.	0
62	or/59-61	213
63	and/58,62	6
64	(SDR or SPR or SFDR or SFPR).tw.	2
65	or/63-64	6
66	and/54,65	4

EBM Reviews - NHS Economic Evaluation Database 3rd Quarter 2011

SPAST_Q9_SDR_economic_nhseed_200711

#	Searches	Results
1	MUSCLE SPASTICITY/	6
2	exp SPASM/	0
3	exp MUSCLE HYPERTONIA/	6
4	(spastic\$ or spasm\$).tw.	23
5	hyperton\$.tw.	7
6	exp DYSKINESIAS/	6
7	dyskinesi\$.tw.	16
8	((abnormal\$ or involuntar\$) adj2 mov\$).tw.	6
9	exp DYSTONIA/	2
10	dystoni\$.tw.	7
11	exp CHOREA/	0
12	(chorea\$ or choreic\$ or choreo\$).tw.	1
13	exp ATHETOSIS/	0
14	(athetos\$ or athetoid).tw.	0
15	MUSCLE WEAKNESS/	0
16	(musc\$ adj3 weak\$).tw.	3
17	exp ATAXIA/	1
18	atax\$.tw.	7
19	upper motor neuron? lesion\$.tw.	0
20	or/1-19	64
21	exp BRAIN INJURIES/	14

22	((non progressive or non?progressive or acquired) adj2 brain injur\$).tw.	2
23	ABI.tw.	7
\vdash	static encephalopath\$.tw.	0
	CEREBRAL PALSY/	7
26	(cerebral adj3 pals\$).tw.	19
	exp MENINGITIS/	24
28	(meningitis or meningococcal).tw.	80
29	exp CRANIOCEREBRAL TRAUMA/	49
30	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).tw.	70
31	exp ENCEPHALITIS/	8
32	encephaliti\$.tw.	19
33	exp Cerebrovascular Accident/	5
	stroke\$.tw.	539
35	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).tw.	60
36	exp CEREBROVASCULAR DISORDERS/	148
37	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).tw.	65
38	exp HYDROCEPHALUS/	9
39	hydrocephal\$.tw.	14
40	SHAKEN BABY SYNDROME/	0
41	(shak\$ adj3 (injur\$ or syndrome\$)).tw.	0
42	or/21-41	815
43	exp PARALYSIS/	12
44	HEMIPLEGIA/	1
45	exp PARAPLEGIA/	1
46	QUADRIPLEGIA/	4
47	exp PARESIS/	0
48	(monoplegi\$ or diplegi\$ or hemiplegi\$ or quadriplegi\$ or tetraplegi\$).tw.	21
49	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).tw.	3
50	or/43-49	31
51	and/20,50	5
52	and/42,50	15
53	and/20,42	17
54	or/51-53	27
55	exp RHIZOTOMY/	2
56	rhizotom\$.tw.	3

((spin\$ or sensor\$) adj3 nerve\$ adj3 interrupt\$).tw.	0
or/55-57	3
(dors\$ or posterior\$ or functional).tw.	401
GANGLIA, SPINAL/	0
(gangli\$ adj3 spin\$).tw.	0
or/59-61	401
and/58,62	2
(SDR or SPR or SFDR or SFPR).tw.	2
or/63-64	4
and/54,65	1
	or/55-57 (dors\$ or posterior\$ or functional).tw. GANGLIA, SPINAL/ (gangli\$ adj3 spin\$).tw. or/59-61 and/58,62 (SDR or SPR or SFDR or SFPR).tw. or/63-64

Embase 1980 to 2011 Week 28

SPAST_Q9_SDR_economic_embase_200711

#	Searches	Results
1	costs.tw.	119758
2	cost effective\$.tw.	70567
3	economic.tw.	105487
4	or/1-3	254865
5	(metabolic adj cost).tw.	648
6	((energy or oxygen) adj cost).tw.	2527
7	4 not (5 or 6)	254554
8	SPASTICITY/	10822
9	exp MUSCLE SPASM/	42124
10	exp MUSCLE HYPERTONIA/	20406
11	(spastic\$ or spasm\$).ti,ab.	39561
12	hyperton\$.ti,ab.	15140
13	DYSKINESIA/	9803
14	dyskinesi\$.ti,ab.	12443
15	((abnormal\$ or involuntar\$) adj2 mov\$).ti,ab.	6192
16	DYSTONIA/	12353
17	dystoni\$.ti,ab.	12025
18	exp CHOREA/	25476
19	CHOREOATHETOSIS/	924
20	ATHETOSIS/	1166
21	(chorea\$ or choreic\$ or choreo\$).ti,ab.	6083
22	(athetos\$ or athetoid).ti,ab.	700
23	exp MUSCLE WEAKNESS/	185441
24	(musc\$ adj3 weak\$).ti,ab.	12801

25	exp ATAXIA/	37101
26	atax\$.ti,ab.	25467
27	upper motor neuron? lesion\$.ti,ab.	231
28	or/8-27	351619
	exp BRAIN INJURY/	89252
30	((non progressive or non?progressive or acquired) adj2 brain injur\$).ti,ab.	1029
31	ABI.ti,ab.	4548
32	static encephalopath\$.ti,ab.	127
33	CEREBRAL PALSY/	18851
34	(cerebral adj3 pals\$).ti,ab.	14777
35	exp MENINGITIS/	58760
36	(meningitis or meningococcal).ti,ab.	44695
	exp HEAD INJURY/	168513
38	((head or brain or skull or cerebral or craniocerebral) adj3 (injur\$ or trauma\$ or damage\$ or disturb\$ or insult\$)).ti,ab.	92509
39	exp ENCEPHALITIS/	59075
40	encephaliti\$.ti,ab.	26681
41	STROKE/	102168
	stroke\$.ti,ab.	145233
43	((brain or cerebral or intra cranial or intra?cranial) adj3 (embolism or aneurysm\$ or isch?emi\$)).ti,ab.	50482
44	exp CEREBROVASCULAR DISEASE/	333658
45	((brain vascular or intra cranial vascular or intra?cranial vascular or cerebrovascular) adj2 (disorder\$ or disease\$ or insufficien\$ or occlusion\$ or damage\$ or disturb\$ or insult\$)).ti,ab.	18415
46	exp HYDROCEPHALUS/	26775
47	hydrocephal\$.ti,ab.	18878
48	SHAKEN BABY SYNDROME/	518
49	(shak\$ adj3 (injur\$ or syndrome\$)).ti,ab.	657
50	or/29-49	703293
51	exp PARALYSIS/ or MONOPLEGIA/ or HEMIPLEGIA/ or PARAPLEGIA/ or QUADRIPLEGIA/	164349
52	SPASTIC PARAPLEGIA/	2348
53	PARESIS/ or MONOPARESIS/ or HEMIPARESIS/	13227
54	SPASTIC PARESIS/	1033
	tetrapiegi\$).ti,ab.	16176
56	(monopares\$ or dipares\$ or hemipares\$ or quadripares\$ or tetrapares\$).ti,ab.	10204

	7-4	.=
57	or/51-56	170606
58	and/28,57	165571
59	and/50,57	49557
60	and/28,50	63391
61	or/58-60	184169
62	exp RHIZOTOMY/	1809
63	rhizotom\$.ti,ab.	1747
64	((spin\$ or sensor\$) adj3 nerve\$ adj3 interrupt\$).ti,ab.	10
65	or/62-64	2402
66	(dors\$ or posterior\$ or functional).ti,ab.	970830
67	SPINAL GANGLION/	13699
68	(gangli\$ adj3 spin\$).ti,ab.	2652
69	or/66-68	974840
70	and/65,69	1396
71	(SDR or SPR or SFDR or SFPR).ti,ab.	4945
72	or/70-71	6196
73	and/61,72	402
74	and/7,73	9

Appendix G Summary of identified studies

Question	Classification	Count
Q1. What is the effectiveness of phinterventions in children with spasticity and	ysiotherapy and occupational dother motor disorders?	therapy
	Number of papers identified	1276
	Number of papers weeded out	1205
	Number of papers requested	63
	Number of papers excluded	49
	Number of papers included	14
Physical therapy economic search		
	Number of papers identified	73
	Number of papers weeded out	66
	Number of papers requested	7
	Number of papers excluded	7
	Number of papers included	0

Q2. What is the effectiveness of orthoses compared to no orthoses at optimising function and movement and preventing or minimizing deformities in children with spasticity, and other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder?

	Number of papers identified	1357
	Number of papers weeded out	1313
	Number of papers requested	41
	Number of papers excluded	35
	Number of papers included	6
Orthoses economic search		
	Number of papers identified	61
	Number of papers weeded out	60
	Number of papers requested	1
	Number of papers excluded	0
	Number of papers included	0

Question	Classification	Count	
Q3. What is the effectiveness of oral medications specifically baclofen, benzodiazepines (diazepam, nitrazepam, clonazepam), levodopa, tizanidine and dantrolene in the management of spasticity and co-existing motor disorders in children and young people with non-progressive brain disorders?			
	Number of papers identified	468	
	Number of papers weeded out	418	
	Number of papers requested	50	
	Number of papers excluded	41	
	Number of papers included	9	
What is the cost-effectiveness of oral medications specifically baclofen, benzodiazepines (diazepam, nitrazepam, clonazepam), levodopa, tizanidine and dantrolene in the management of spasticity and co-existing motor disorders in children and young people with non-progressive brain disorders?			
	Number of papers identified	102	
	Number of papers weeded out	101	
	Number of papers requested	1	
	Number of papers excluded	0	
	Number of papers included	0	
Q4. Botulinum toxin			
	Number of papers identified	1137	
	Number of papers weeded out	1089	
	Number of papers requested	48	
	Number of papers excluded	39	
	Number of papers included	9	
Cost-effectiveness of botulinum toxin			
	Number of papers identified	76	
	Number of papers weeded out	67	
	Number of papers requested	6	
	Number of papers excluded	3	
	Number of papers included	3	
Q5. Does an effective response to a pre-implantation testing of intrathecal baclofen predict an effective long-term response in children with spasticity and with or without other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder?			
(Combined search for Q6)			
	Number of papers identified	1354	
	Number of papers weeded out	1265	
	Number of papers requested	85	
	Number of papers excluded	75	
	Number of papers included	10	

Question	Classification	Count	
ITB HE search (combined search for Q5&6	5)		
	Number of papers identified	57	
	Number of papers weeded out	53	
	Number of papers requested	4	
	Number of papers excluded	0	
	Number of papers included	0	
Q7 & Q8. What is the effectiveness of multilevel and orthopaedic surgery in children with spasticity and other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder?			
	Number of papers identified	2428	
	Number of papers weeded out	2410	
	Number of papers requested	17	
	Number of papers excluded	13	
	Number of papers included	4	
Orthopaedic surgery HE search			
	Number of papers identified	68	
	Number of papers weeded out	68	
	Number of papers requested	0	
	Number of papers excluded	0	
	Number of papers included	0	
	Q9. What is the clinical effectiveness of selective dorsal rhizotomy in children and young people with spasticity caused by a non-progressive brain disorder?		
	Number of papers identified	462	
	Number of papers weeded out	441	
	Number of papers requested	21	
	Number of papers excluded	14	
	Number of papers included	7	

Appendix H Excluded studies

Table G.1 What is the effectiveness of physical therapy (physiotherapy and occupational therapy) interventions in children with spasticity with or without other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non progressive brain disorder?

Bibliographic information	Reason for exclusion
Ackman,J.D., Russman,B.S., Thomas,S.S., Buckon,C.E., Sussman,M.D., Masso,P., Sanders,J., D'Astous,J., Aiona,M.D., Shriners Hospitals,B.T.X., Comparing botulinum toxin A with casting for treatment of dynamic equinus in children with cerebral palsy, Developmental Medicine and Child Neurology, 47, 620-627, 2005	Comparison not relevant to review protocol: BoNT+casting versus BoNT+AFO
Bertoti, D.B., Effect of short leg casting on ambulation in children with cerebral palsy, Physical Therapy, 66, 1522-1529, 1986	No relevant outcomes reported. A better quality paper on this intervention already included in review (McNee 2007)
Bottos,M., Benedetti,M.G., Salucci,P., Gasparroni,V., Giannini,S., Botulinum toxin with and without casting in ambulant children with spastic diplegia: a clinical and functional assessment, Developmental Medicine and Child Neurology, 45, 758-762, 2003	Comparison not relevant to review protocol: BoNT+PT+casting versus BoNT+PT+AFO
Botulinum toxin type A and dynamic equinus in children with cerebral palsy: new indication. Better than repeat casts, Prescrire International, 10, 12-14, 2001	Evidence summary paper on BoNT, not on therapy
Bower,E., Michell,D., Burnett,M., Campbell,M.J., McLellan,D.L., Randomized controlled trial of physiotherapy in 56 children with cerebral palsy followed for 18 months, Developmental Medicine and Child Neurology, 43, 4-15, 2001	The therapists used a mixture of interventions - not controlling was done for one therapy against another
Boyd,R., Sakzewski,L., Ziviani,J., Abbott,D.F., Badawy,R., Gilmore,R., Provan,K., Tournier,J.D., Macdonell,R.A., Jackson,G.D., INCITE: A randomised trial comparing constraint induced movement therapy and bimanual training in children with congenital hemiplegia, BMC Neurology, 10, 4-, 2010	Study protocol. An article reporting results of this study has been included (Sakzewski 2011)
Boyd,R.N., Morris,M.E., Graham,H.K., Management of upper limb dysfunction in children with cerebral palsy: a systematic review. [96 refs], European Journal of Neurology, 8 Suppl 5, 150-166, 2001	It only included 4 randomised studies on interventions not relevant to the review: BoNT and NDT
Bryanton,C., Bosse,J., Brien,M., McLean,J., McCormick,A., Sveistrup,H., Feasibility, motivation, and selective motor control: virtual reality compared to conventional home exercise in children with	Not an RCT.

cerebral palsy, Cyberpsychology and Behavior, 9, 123-128, 2006

Bibliographic information	Reason for exclusion
Dodd,K.J., Foley,S., Partial body-weight-supported treadmill training can improve walking in children with cerebral palsy: a clinical controlled trial, Developmental Medicine and Child Neurology, 49, 101-105, 2007	Not an RCT.
Dodd,K.J., Taylor,N.F., Damiano,D.L., A systematic review of the effectiveness of strength-training programs for people with cerebral palsy. [40 refs], Archives of Physical Medicine and Rehabilitation, 83, 1157-1164, 2002	Only one of the included studies was an RCT and it reported outcomes not relevant to our review: rate of torque development and movement time
Engsberg, J.R., Ross, S.A., Collins, D.R., Increasing ankle strength to improve gait and function in children with cerebral palsy: a pilot study, Pediatric Physical Therapy, 18, 266-275, 2006	Comparison of outcomes across treatment groups is not presented
Gilmore,R., Ziviani,J., Sakzewski,L., Shields,N., Boyd,R., A balancing act: children's experience of modified constraint-induced movement therapy, Developmental neurorehabilitation, 2010 2 p.88-94	No results available for a comparison group (children in the bimanual therapy group were not asked about their experiences).
Hadders-Algra,M., van der Heide,J.C., Fock,J.M., Stremmelaar,E., van Eykern,L.A., Otten,B., Effect of seat surface inclination on postural control during reaching in preterm children with cerebral palsy, Physical Therapy, 87, 861-871, 2007	Not an RCT.
Hahn,M.E., Simkins,S.L., Gardner,J.K., Kaushik,G., A dynamic seating for children with cerebral palsy, Journal of Musculoskeletal Research, 12, 21-30, 2009	Methodologically inadequate: 50% drop out from the control arm of RCT.
Hankinson,J., Morton,R.E., Use of a lying hip abduction system in children with bilateral cerebral palsy: A pilot study, Developmental Medicine and Child Neurology, 44, 177-180, 2002	Not an RCT
Hellweg,S., Johannes,S., Physiotherapy after traumatic brain injury: A systematic review of the literature, Brain Injury, 22, 365-373, 2008	Explicitly excluded children and younger people <12 years. References checked.
Hill,J., The effects of casting on upper extremity motor disorders after brain injury, American Journal of Occupational Therapy, 48, 219-224, 1994	Mainly adults. One group (mean age 24.9, range 9 to 44) and another group all adults
Hoare,Brian J., Wasiak,Jason, Imms,Christine, Carey,Leeanne, Constraint-induced movement therapy in the treatment of the upper limb in children with hemiplegic cerebral palsy, Cochrane Database of Systematic Reviews, -, 2009	It only included 3 trials: one of them was not randomised and the other two included outcomes not relevant to the review: Box and Blocks test, Erhardt Developmental Prehension Assessment, WeeFIM, PMAL, EBS, CAUT and QUEST
Ketelaar,M., Vermeer,A., Hart,H., van Petegem-van,Beek E., Helders,P.J., Effects of a functional therapy program on motor abilities of children with cerebral palsy, Physical Therapy, 81, 1534-1545, 2001	Excluded as review as it included non-comparative studies. Relevant RCTs already retrieved as individual papers

Bibliographic information Reason for exclusion Lannin, N.A., Novak, I., Cusick, A., A systematic review of upper Included studies in adults, non-RCTs extremity casting for children and adults with central nervous system and 2 RCTs in children but motor disorders. [49 refs], Clinical Rehabilitation, 21, 963-976, 2007 comparison excluded as per protocol (NDT + casting versus traditional therapy and versus NDT alone respectively) Leyendecker, C., Electrical stimulation therapy and its effects on the Paper not published in English general activity of motor impaired cerebral palsied children; a comparative study of the Bobath physiotherapy and its combination with the Hufschmidt electrical stimulation therapy (author's transl), Rehabilitation, 14, 150-159, 1975 Makela, P., Hammerbeck, U., Rushton, D.N., Rehabilitation of the Review paper. No references to younger adult stroke patient, Therapy, 3, 273-289, 2006 children found Marshall,S., Teasell,R., Bayona,N., Lippert,C., Chundamala,J., Systematic review that included only Villamere, J., Mackie, D., Cullen, N., Bayley, M., Motor impairment studies in adults or in interventions rehabilitation post acquired brain injury. [70 refs], Brain Injury, 21, 133not relevant to review protocol 160, 2007 McNamara, L., Casey, J., Seat inclinations affect the function of children Systematic review. References with cerebral palsy: a review of the effect of different seat inclines. [28] checked. Included case series and refs], Disability and Rehabilitation Assistive Technology, 2, 309-318, studies comparing children with 2007 cerebral palsy with children without any neurological impairment Miedaner, J.A., Renander, J., The effectiveness of classroom passive On top of the passive stretching stretching programs for increasing or maintaining passive range of programme at school evaluated in motion in non-ambulatory children: An evaluation of frequency, study, children received Physical and Occupational Therapy in Pediatrics, 7, 35-43, 1987 concurrently passive stretching at home, as well as positioning and bracing and these were adequately controlled for. Noronha, J., Bundy, A., Groll, J., The effect of positioning on the hand Outcomes not relevant to review: function of boys with cerebral palsy, American Journal of Occupational Jebsen-Taylor Hand Function Test Therapy, 43, 507-512, 1989 modified Hohlstein's and classification Nwaobi,O.M., Seating orientations and upper extremity function in Not an RCT. children with cerebral palsy, Physical Therapy, 67, 1209-1212, 1987

O'Brien,M., Tsurumi,K., The effect of two body positions on head righting in severely disabled individuals with cerebral palsy, American Journal of Occupational Therapy, 37, 673-680, 1983

Not an RCT. Outcomes not relevant to the review protocol: frequency and duration of head righting during a feeding task by means of a mercury switch system

Odman,P., Krevers,B., Oberg,B., Parents' perceptions of the quality of two intensive training programmes for children with cerebral palsy, Developmental Medicine and Child Neurology, 49, 93-100, 2007

Interventions included not relevant to review protocol: eclectic approach and conductive education (adapted to Swedish circumstances)

Bibliographic information	Reason for exclusion
Park,E.S., Rha,D.W., Botulinum toxin type A injection for management of upper limb spasticity in children with cerebral palsy: a literature review. [45 refs], Yonsei Medical Journal, 47, 589-603, 2006	Intervention not relevant: review is on BoNT, not on therapy
Park,E.S., Rha,D.W., Lee,J.D., Yoo,J.K., Chang,W.H., The short-term effects of combined modified constraint-induced movement therapy and botulinum toxin injection for children with spastic hemiplegic cerebral palsy, Neuropediatrics, 40, 269-274, 2009	Not an RCT. Comparison not relevant for review protocol (BoNT + CIMT versus BoNT)
Pin,T., Dyke,P., Chan,M., The effectiveness of passive stretching in children with cerebral palsy, Developmental Medicine and Child Neurology, 48, 855-862, 2006	Excluded as a review as it included non-comparative studies and studies reporting outcomes not relevant to this review
Pin,T.W., Effectiveness of static weight-bearing exercises in children with cerebral palsy. [34 refs][Erratum appears in Pediatr Phys Ther. 2007 Summer;19(2):172-8], Pediatric Physical Therapy, 19, 62-73, 2007	Excluded as a review as it included non-comparative studies, studies with very small sample size and/or reporting outcomes not relevant to this review
Reid,D.T., The effects of the saddle seat on seated postural control and upper-extremity movement in children with cerebral palsy, Developmental Medicine and Child Neurology, 38, 805-815, 1996	Not an RCT
Reid,S., Hamer,P., Alderson,J., Lloyd,D., Neuromuscular adaptations to eccentric strength training in children and adolescents with cerebral palsy, Developmental Medicine and Child Neurology, 52, 358-363, 2010	Outcomes are not relevant to this review: peak torque and work rates and EMG data
Rogers, A., Furler, B.L., Brinks, S., Darrah, J., A systematic review of the effectiveness of aerobic exercise interventions for children with cerebral palsy: an AACPDM evidence report. [22 refs], Developmental Medicine and Child Neurology, 50, 808-814, 2008	Excluded as review as it included non comparative studies and interventions not relevant to our review. References checked
Scholtes, V.A., Becher, J.G., Comuth, A., Dekkers, H., Van, Dijk L., Dallmeijer, A.J., Effectiveness of functional progressive resistance exercise strength training on muscle strength and mobility in children with cerebral palsy: a randomized controlled trial, Developmental Medicine and Child Neurology, 52, e107-e113, 2010	Excluded as per protocol: conventional physical therapy programme in the control group not described. Better trials already included for this type of intervention
Scholtes, V.A., Dallmeijer, A.J., Rameckers, E.A., Verschuren, O., Tempelaars, E., Hensen, M., Becher, J.G., Lower limb strength training in children with cerebral palsya randomized controlled trial protocol for functional strength training based on progressive resistance exercise principles, BMC Pediatrics, 8, 41-, 2008	Study protocol only
Scianni,A., Butler,J.M., Ada,L., Teixeira-Salmela,L.F., Muscle strengthening is not effective in children and adolescents with cerebral palsy: a systematic review. [35 refs], Australian Journal of Physiotherapy, 55, 81-87, 2009	Excluded as a review as it included studies on interventions not relevant (electrical stimulation). Relevant RCTs already retrieved as individual papers

Bibliographic information	Reason for exclusion
Shamsoddini,A.R., Hollisaz,M.T., Effect of sensory integration therapy on gross motor function in children with cerebral palsy, Iranian Journal of Child Neurology, 3, 43-48, 2009	Intervention not included in review protocol
Tremblay,F., Malouin,F., Richards,C.L., Dumas,F., Effects of prolonged muscle stretch on reflex and voluntary muscle activations in children with spastic cerebral palsy, Scandinavian Journal of Rehabilitation Medicine, 22, 171-180, 1990	Outcomes reported not relevant to review: torque and EMG outcomes
Van den Berg-Emons RJ, Van Baak,M.A., Speth,L., Saris,W.H., Physical training of school children with spastic cerebral palsy: effects on daily activity, fat mass and fitness, International Journal of Rehabilitation Research, 21, 179-194, 1998	Intervention included a mix of activities not relevant to review protocol. Outcomes reported not relevant to review either (Anthropometry, level of daily PA, and physical fitness)
Verschuren,O., Ketelaar,M., Takken,T., Helders,P.J.M., Gorter,J.W., Exercise programs for children with cerebral palsy: A systematic review of the literature, American Journal of Physical Medicine and Rehabilitation, 87, 404-417, 2008	Excluded as review as it included non-comparative studies. Relevant RCTs already retrieved as individual papers
Volman, M.J.M., Wijnroks, A., Vermeer, A., Effect of task context on reaching performance in children with spastic hemiparesis, Clinical Rehabilitation, 16, 684-692, 2002	Not an RCT.
Wallen,M., O'Flaherty,S.J., Waugh,M.C., Functional outcomes of intramuscular botulinum toxin type a and occupational therapy in the upper limbs of children with cerebral palsy: a randomized controlled trial, Archives of Physical Medicine and Rehabilitation, 88, 1-10, 2007	Comparison not relevant to review protocol: BoNT + therapy versus therapy alone. One of the remaining comparisons already included in the BoNT review.
Weindling,A.M., Cunningham,C.C., Glenn,S.M., Edwards,R.T., Reeves,D.J., Additional therapy for young children with spastic cerebral palsy: A randomised controlled trial, Health Technology Assessment, 11, iii-55, 2007	Study protocol only
Weindling,A.M., Intervention after brain injury to reduce disability. [31 refs], Seminars in Neonatology, 5, 53-60, 2000	Excluded as review as it mostly included papers on not relevant interventions (NDT) and other reporting non relevant outcomes. References checked.
Wiart,L., Darrah,J., Kembhavi,G., Stretching with children with cerebral palsy: What do we know and where are we going?, Pediatric Physical Therapy, #20, 173-178, 2008	Excluded as a review as it included non-comparative studies. References checked
Williams,H., Pountney,T., Effects of a static bicycling programme on the functional ability of young people with cerebral palsy who are non- ambulant, Developmental Medicine and Child Neurology, 49, 522-527, 2007	Not an RCT.

Table G.2 What is the effectiveness of orthotic interventions (for example, ankle-foot orthoses, knee splints, and upper limb orthoses) as compared to no orthoses to optimise movement and function, to prevent or treat contractures in children with spasticity and with or without other motor disorders caused by a non-progressive brain disorder?

Bibliographic information	Reason for exclusion
Balaban,B., Yasar,E., Dal,U., Yazicioglu,K., Mohur,H., Kalyon,T.A., The effect of hinged ankle-foot orthosis on gait and energy expenditure in spastic hemiplegic cerebral palsy, Disability and Rehabilitation, 29, 139-144, 2007	comparison not relevant hinged orthoses versus none
Bjornson,K.F., Schmale,G.A., damczyk-Foster,A., McLaughlin,J., The effect of dynamic ankle foot orthoses on function in children with cerebral palsy, Journal of Pediatric Orthopaedics, 26, 773-776, 2006	RCT - Comparison not requested (DAFO versus no DAFO)
Blair, E., Ballantyne, J., Horsman, S., Chauvel, P., A study of a dynamic proximal stability splint in the management of children with cerebral palsy, Developmental Medicine and Child Neurology, 37, 544-554, 1995	Not randomised
Boyd,R.N., Dobson,F., Parrott,J., Love,S., Oates,J., Larson,A., Burchall,G., Chondros,P., Carlin,J., Nattrass,G., Graham,H.K., The effect of botulinum toxin type A and a variable hip abduction orthosis on gross motor function: a randomized controlled trial, European Journal of Neurology, 8 Suppl 5, 109-119, 2001	Comparison not relevant - current treatment versus current treatment + BoNT + SWASH
Brunner,R., Meier,G., Ruepp,T., Comparison of a stiff and a spring- type ankle-foot orthosis to improve gait in spastic hemiplegic children, Journal of Pediatric Orthopaedics, 18, 719-726, 1998	Not randomised
Centre for Reviews and Dissemination., A review of the efficacy of lower-limb orthoses used for cerebral palsy (Structured abstract), Database of Abstracts of Reviews of Effects, -, 2010	Systematic review already identified
Crenshaw,S., Herzog,R., Castagno,P., Richards,J., Miller,F., Michaloski,G., Moran,E., The efficacy of tone-reducing features in orthotics on the gait of children with spastic diplegic cerebral palsy, Journal of Pediatric Orthopaedics, 20, 210-216, 2000	Comparison not relevant - hinged AFO versus rigid TR footplate versus SMO versus SMO footplate versus barefoot
Desloovere K, Molenaers G, Van Gestel L, Huenaerts C, Van Campenhout A, Callewaert B, Van de Walle P, Seyler J. How can push-off be preserved during use of an ankle foot orthosis in children with hemiplegia? A prospective controlled study.Gait Posture. 2006 Oct;24(2):142-51	No relevant comparison - PLS versus dual carbon fibre spring AFO versus barefoot and shoes
Elliott C, Reid S, Hamer P, Alderson J, Elliott B. Lycra(®) arm splints improve movement fluency in children with cerebral palsy, Gait Posture. 2011 Feb;33(2):214-9. Epub 2010 Dec 4.	Outcomes are not relevant to this review
Exner, C.E. & Bonder, B.R. (1983). Comparative effects of three hand splints on bilateral hand use, grasp, and arm-hand posture in hemiplegic children: A pilot study, The Occupational Therapy Journal of Research, 3, 75-92.	No comparator group
Figueiredo, E.M., Ferreira, G.B., Maia, Moreira R, Kirkwood, R.N., Fetters, L., Efficacy of ankle-foot orthoses on gait of children with cerebral palsy: systematic review of literature, Pediatric Physical	Systematic review - checked for relevant references and excluded

Therapy, #20, -223, 2008

Bibliographic information	Reason for exclusion
Flegle, J.H., Leibowitz, J.M., Improvement in grasp skill in children with hemiplegia with the MacKinnon splint, Research in Developmental Disabilities, 9, 145-151, 1988	Comparison across groups not presented
Graham,H.K., Boyd,R., Carlin,J.B., Dobson,F., Lowe,K., Nattrass,G., Thomason,P., Wolfe,R., Reddihough,D., Does botulinum toxin a combined with bracing prevent hip displacement in children with cerebral palsy and "hips at risk"? A randomized, controlled trial, Journal of Bone and Joint Surgery - American Volume, 90, 23-33, 2008	Comparison does not distinguish between the effects of BoNT and hip brace (BoNT + hip brace versus no treatment)
Hainsworth,F., Harrison,M.J., Sheldon,T.A., Roussounis,S.H., A preliminary evaluation of ankle orthoses in the management of children with cerebral palsy, Developmental Medicine and Child Neurology, 39, 243-247, 1997	No relevant outcomes reported versus no daytime orthoses
Han SH, Kim T, Jang SH, Kim MJ, Park SB, Yoon SI, Choi BK, Lee MY, Lee KH. The effect of an arm sling on energy consumption while walking in hemiplegic patients: a randomized comparison, Clin Rehabil. 2011 Jan;25(1):36-42.	Study conducted in an adult population
Hazneci,B., Tan,A.K., Guncikan,M.N., Dincer,K., Kalyon,T.A., Comparison of the efficacies of botulinum toxin A and Johnstone pressure splints against hip adductor spasticity among patients with cerebral palsy: a randomized trial, Military Medicine, 171, 653-656, 2006	Comparison not relevant - BoNT versus Johnstone Pressure Splints
Kerem,M., Livanelioglu,A., Topcu,M., Effects of Johnstone pressure splints combined with neurodevelopmental therapy on spasticity and cutaneous sensory inputs in spastic cerebral palsy, Developmental Medicine and Child Neurology, 43, 307-313, 2001	Not randomised
Lam,W.K., Leong,J.C.Y., Li,Y.H., Hu,Y., Lu,W.W., Biomechanical and electromyographic evaluation of ankle foot orthosis and dynamic ankle foot orthosis in spastic cerebral palsy, Gait and Posture, 22, 189-197, 2005	No acclimatisation period for use of AFO prior to testing
Lannin,N., Scheinberg,A., Clark,K., AACPDM systematic review of the effectiveness of therapy for children with cerebral palsy after botulinum toxin A injections, Developmental Medicine and Child Neurology, 48, 533-539, 2006	Systematic review - checked for relevant references and excluded
Maltais, D., Bar-Or, O., Galea, V., Pierrynowski, M., Use of orthoses lowers the O(2) cost of walking in children with spastic cerebral palsy, Medicine and Science in Sports and Exercise, 33, 320-325, 2001	Comparison not relevant hinged AFO versus shoes
Morris, C., A review of the efficacy of lower-limb orthoses used for cerebral palsy, Developmental Medicine and Child Neurology, 44, -211, 2002	Systematic review - checked for relevant references and excluded
Mossberg,K.A., Linton,K.A., Friske,K., Ankle-foot orthoses: Effect on energy expenditure of gait in spastic diplegic children, Archives of Physical Medicine and Rehabilitation, 71, 490-494, 1990	no acclimatisation period for use of AFO

Bibliographic information	Reason for exclusion
Nicholson, J.H., Morton, R.E., Attfield, S., Rennie, D., Assessment of upper-limb function and movement in children with cerebral palsy wearing lycra garments, Developmental Medicine and Child Neurology, 43, 384-391, 2001	Case series
Ounpuu S, Bell KJ, Davis RB 3rd, DeLuca PA. An evaluation of the posterior leaf spring orthosis using joint kinematics and kinetics. J Pediatr Orthop. 1996 May-Jun;16(3):378-84.	Retrospective study
Park ES, Park CI, Chang HJ, Choi JE, Lee DS.The effect of hinged ankle-foot orthoses on sit-to-stand transfer in children with spastic cerebral palsy. Arch Phys Med Rehabil. 2004 Dec;85(12):2053-7.	Comparison is not relevant to this review : hinged AFO versus barefoot
Radtka,S.A., Skinner,S.R., Dixon,D.M., Johanson,M.E., A comparison of gait with solid, dynamic, and no ankle-foot orthoses in children with spastic cerebral palsy, Physical Therapy, 77, 395-409, 1997	not randomised
Reid DT, Sochaniwskyj A. Influences of a hand positioning device on upper-extremity control of children with cerebral palsy, Int J Rehabil Res. 1992;15(1):15-29.	Outcomes are not relevant to this review
Ridgewell,E., Dobson,F., Bach,T., Baker,R., A systematic review to determine best practice reporting guidelines for AFO interventions in studies involving children with cerebral palsy, Prosthetics and Orthotics International, 34, 129-145, 2010	Systematic review - checked for relevant references and excluded
Romkes J, Brunner R. Comparison of a dynamic and a hinged ankle-foot orthosis by gait analysis in patients with hemiplegic cerebral palsy, Gait Posture. 2002 Feb;15(1):18-24.	Randomisation not confirmed
Smiley SJ, Jacobsen FS, Mielke C, Johnston R, Park C, Ovaska GJ. A comparison of the effects of solid, articulated, and posterior leaf-spring ankle-foot orthoses and shoes alone on gait and energy expenditure in children with spastic diplegic cerebral palsy, Orthopedics. 2002 Apr;25(4):411-5	Randomisation within study not confirmed
Smith,P.A., Hassani,S., Graf,A., Flanagan,A., Reiners,K., Kuo,K.N., Roh,J.Y., Harris,G.F., Brace evaluation in children with diplegic cerebral palsy with a jump gait pattern, Journal of Bone and Joint Surgery - American Volume, 91, 356-365, 2009	Comparison not relevant - DAFO, HAFO, Control, barefoot
Suzuki N, Shinohara T, Kimizuka M, Yamaguchi K, Mita K. Energy expenditure of diplegic ambulation using flexible plastic ankle foot orthoses, Bull Hosp Jt Dis. 2000;59(2):76-80.	Comparison not relevant - flexible plastic AFO versus shoes
utti-Ramo,I., Suoranta,J., Anttila,H., Malmivaara,A., Makela,M., Effectiveness of upper and lower limb casting and orthoses in children with cerebral palsy: An overview of review articles, American Journal of Physical Medicine and Rehabilitation, 85, 89-103, 2006	Systematic review - checked for relevant references and excluded
Wesdock, Kimberly A., Edge, Annabel M., Effects of Wedged Shoes and Ankle-Foot Orthoses on Standing Balance and Knee Extension in Children with Cerebral Palsy Who Crouch, Pediatric Physical Therapy, 15, -, 2003	Not randomised

Table G.3 What is the effectiveness of oral medications including baclofen, benzodiazepines (diazepam, nitrazepam, clonazepam), tizanidine, dantrolene, clonidine, trihexyphenidyl, tetrabenazine and levodopa in the treatment of spasticity and other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder in babies, children and young people?

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Bibliographic information	Reason for exclusion
Andersen, John, Hartling, Lisa, Tjosvold, Lisa, Oral baclofen for the management of spasticity in children with cerebral palsy, Cochrane Database of Systematic Reviews, -, 2009	Protocol only.
Basmajian, J.V., Shankardass, K., Russell, D., Yucel, V., Ketazolam treatment for spasticity: double-blind study of a new drug, Archives of Physical Medicine and Rehabilitation, 65, 698-701, 1984	Adults only.
Basmajian, J.V., Super, G.A., Dantrolene sodium in the treatment of spasticity, Archives of Physical Medicine and Rehabilitation, Arch Phys Med Rehabil, 54, 61-64, 1973	Adults only.
Bes,A., Eyssette,M., Pierrot-Deseilligny,E., Rohmer,F., Warter,J.M., A multi-centre, double-blind trial of tizanidine, a new antispastic agent, in spasticity associated with hemiplegia, Current Medical Research and Opinion, 10, 709-718, 1988	Adults only.
Cardoso,E.S., Rodrigues,B.M., Barroso,M., Menezes,C.J., Lucena,R.S., Nora,D.B., Melo,A., Botulinum toxin type A for the treatment of the spastic equinus foot in cerebral palsy, Pediatric Neurology, 34, 106-109, 2006	Study looks at BoNT-A not oral medications.
Carter, C.H., A CONTROLLED EVALUATION OF TWO BENZODIAZEPINE DERIVATES IN THE MANAGEMENT OF MENTALLY RETARDED, CEREBRAL-PALSIED PATIENTS, Medical Times, 92, 796-798, 1964	Diazepam versus non-included drug (LA I).
Carter, C.H., Evaluation of diazepam in skeletal muscle hypertonicity in cerebral palsy, Archives of Physical Medicine and Rehabilitation, 49, 519-523, 1968	Intramuscular not oral administration of diazepam.
Chyatte, S.B., Basmajian, J.V., Dantrolene sodium: long-term effects in severe spasticity, Archives of Physical Medicine and Rehabilitation, 54, 311-315, 1973	Case series
Chyatte, S.B., Birdsong, J.H., Bergman, B.A., The effects of dantrolene sodium on spasticity and motor performance in hemiplegia, Southern Medical Journal, South. Med. J., 64, 180-185, 1971	Adults only.
Chyatte,S.B., Birdsong,J.H., Roberson,D.L., Dantrolene sodium in athetoid cerebral palsy, Archives of Physical Medicine and Rehabilitation, 54, 365-368, 1973	Adults and children combined; results for children not separated.
Chyatte, S.B., Birdsong, J.H., The use of dantrolene sodium in disorders of the central nervous system, Southern Medical Journal, South. Med.J., 64, 830-834, 1971	Adults only.
Dahlin,M., Knutsson,E., Nergardh,A., Treatment of spasticity in children with low dose benzodiazepine, Journal of the Neurological Sciences, 117, 54-60, 1993	Intramuscular not oral administration of clonazepam.
Dai,A.I., New approach to cerebral palsy with spastic equinus foot; oral tizanidine and high dose intramuscular botulinum toxin type A, Neurology Psychiatry and Brain Research, 13, 151-154, 2006	Retrospective case series.

Bibliographic information	Reason for exclusion
Dai,A.I., Wasay,M., Awan,S., Botulinum toxin type A with oral baclofen versus oral tizanidine: a nonrandomized pilot comparison in patients with cerebral palsy and spastic equinus foot deformity, Journal of Child Neurology, 23, 1464-1466, 2008	No relevant drug comparisons.
Glass, A., Hannah, A., A comparison of dantrolene sodium and diazepam in the treatment of spasticity, Paraplegia, 12, 170-174, 1974	Adults only.
Goldstein,M., The treatment of cerebral palsy: What we know, what we don't know. [25 refs], Journal of Pediatrics, 145, S42-S46, 2004	Narrative review.
Gormley,Jr, Management of spasticity in children: Part 2: Oral medications and intrathecal baclofen, Journal of Head Trauma Rehabilitation, 14, -209, 1999	Narrative review.
Groves,L., Shellenberger,M.K., Davis,C.S., Tizanidine treatment of spasticity: a meta-analysis of controlled, double-blind, comparative studies with baclofen and diazepam, Advances in Therapy, 15, 241-251, 1998	Adults only.
Heggarty,H., Wright,T., Tetrabenazine in athetoid cerebral palsy, Developmental Medicine and Child Neurology, 16, 137-142, 1974	Participants had athetosis and no description of any co-existing spasticity given
Howard, Delyth Catrin, Anti Spastic Medication for Spasticity in Cerebral Palsy, Cochrane Database of Systematic Reviews, -, 2009	Protocol only.
Lee,Y.S., Kim,C.H., Byun,S.D., Lee,M.Y., International 7: treatment of athetosis in cerebral plasy [sic] patients with low dose clonazepam, American Journal of Physical Medicine & Rehabilitation, 85, 287-287, 2006	Abstract only.
Lopez,S.I., Troncoso,S.M., De,L.A.A.B., Clunes,C.A., Hernandez,C.M., Baclofen in spastic cerebral palsy. <original> EFECTIVIDAD DE BACLOFENO EN EL TRATAMIENTO DE ESPASTICIDAD DE ORIGEN CEREBRAL, Revista Chilena De Pediatria, 67, 206-211, 1996</original>	Spanish language paper.
Lubsch,L., Habersang,R., Haase,M., Luedtke,S., Oral baclofen and clonidine for treatment of spacticity in children, Journal of Child Neurology, 21, 1090-1092, 2006	Retrospective case series.
Meythaler, J.M., Clayton, W., Davis, L.K., Guin-Renfroe, S., Brunner, R.C., Orally delivered baclofen to control spastic hypertonia in acquired brain injury, Journal of Head Trauma Rehabilitation, 19, 101-108, 2004	Adults and children; results not separated for children.
Minford,A.M.B., Brown,J.K., Minns,R.A., The effect of baclofen on the gait of hemiplegic children assessed by means of polarised light goniometry, Scottish Medical Journal, 25, S-S, 1980	Not a trial.
Montane, E., Vallano, A., Laporte, J.R., Oral antispastic drugs in nonprogressive neurologic diseases: a systematic review. [33 refs], Neurology, 63, 1357-1363, 2004	Inclusion criteria do not match review question protocol.
Mooney, J.F., III, Koman, L.A., Smith, B.P., Pharmacologic management of spasticity in cerebral palsy, Journal of Pediatric Orthopedics, 23, 679-686, 2003	Narrative review.

Bibliographic information	Reason for exclusion
Nogen,A.G., Effect of dantrolene sodium on the incidence of seizures in children with spasticity, Child's Brain, 5, 420-425, 1979	irrelevant population
Nogen,A.G., Medical treatment for spasticity in children with cerebral palsy, Child's Brain, 2, 304-308, 1976	Comparison of dantrolene versus diazepam not included.
O'Donnell,M., Armstrong,R., Pharmacologic interventions for management of spasticity in cerebral palsy, Mental Retardation and Developmental Disabilities Research Reviews, 3, -211, 1997	Narrative review.
Patel, D.R., Soyode, O., Pharmacologic interventions for reducing spasticity in cerebral palsy. [21 refs], Indian Journal of Pediatrics, 72, 869-872, 2005	Narrative review.
Pinder,R.M., Brogden,R.N., Speight,T.M., Avery,G.S., Dantrolene sodium: a review of its pharmacological properties and therapeutic efficacy in spasticity. [62 refs], Drugs, 13, 3-23, 1977	Non-systematic review.
Sanger, T.D., Bastian, A., Brunstrom, J., Damiano, D., Delgado, M., Dure, L., Gaebler-Spira, D., Hoon, A., Mink, J.W., Sherman-Levine, S., Welty, L.J., Child Motor Study Group., Prospective open-label clinical trial of trihexyphenidyl in children with secondary dystonia due to cerebral palsy, Journal of Child Neurology, 22, 530-537, 2007	no comparative group
Shankaran, S., Prevention, diagnosis, and treatment of cerebral palsy in near-term and term infants, Clinical Obstetrics and Gynecology, 51, 829-839, 2008	Narrative review.
Tariq,M., Akhtar,N., Ali,M., Rao,S., Badshah,M., Irshad,M., Eperisone compared to physiotherapy on muscular tone of stroke patients: a prospective randomized open study, JPMA - Journal of the Pakistan Medical Association, 55, 202-204, 2005	Comparison not covered in protocol.
Tilton,A.H., Management of Spasticity in Children with Cerebral Palsy, Seminars in Pediatric Neurology, 11, 58-65, 2004	Narrative review.
van Doornik, J., Kukke,S., McGill,K., Rose,J., Sherman-Levine,S., Sanger,T.D., Oral baclofen increases maximal voluntary neuromuscular activation of ankle plantar flexors in children with spasticity due to cerebral palsy, Journal of Child Neurology, 23, 635-639, 2008	Physiological outcomes.
Vargus-Adams,J.N., Michaud,L.J., Kinnett,D.G., McMahon,M.A., Cook,F.E., 'Effects of oral baclofen on children with cerebral palsy', Developmental Medicine and Child Neurology,Dev.Med.Child Neurol., 46, 787-, 2004	Uncontrolled clinical trial.
Vasquez-Briceno,A., rellano-Saldana,M.E., Leon-Hernandez,S.R., Morales-Osorio,M.G., [The usefulness of tizanidine. A one-year follow-up of the treatment of spasticity in infantile cerebral palsy], Revista de neurologia, 43, 132-136, 2006	Spanish language paper.
Young, J.A., Clinical experience in the use of baclofen in children with spastic cerebral palsy: A further report, Scottish Medical Journal, Scott. Med. J., 25, S-S, 1980	Uncontrolled clinical trial.
Young,R.R., Delwaide,P.J., Spasticity: I, New England Journal of Medicine, 304, 28-33, 1981	Background information only.

Table G.4 What is the effectiveness of the long-term use of Intramuscular Botulinum toxin A or B (BoNT) in combination with other interventions (physiotherapy/occupational therapy/orthoses) as compared to other interventions at reducing spasticity, maintaining motor function and preventing secondary complications in children with spasticity and with or without other motor disorders (dystonia, muscle weakness and choreoathetosis) caused by a non-progressive brain disorder?

Bibliographic information	Reason for exclusion
Abolfazli,R., Olyaei,G.R., Talebian,S., Ansari,N., Sheikh,M., Comparative study of neurodevelopment treatment with and without Dysport injection in the management of spasticity of hemiplegic patients, European Journal of Neurology, 14, 155, 2007-, 2007	Included adults only
Baird,M.W., Vargus-Adams,J., Outcome measures used in studies of botulinum toxin in childhood cerebral palsy: A systematic review, Journal of Child Neurology, 25, 721-727, 2010	Systematic review of outcomes
Baker,R., Jasinski,M., iag-Tymecka,I., Michalowska-Mrozek,J., Bonikowski,M., Carr,L., MacLean,J., Lin,J.P., Lynch,B., Theologis,T., Wendorff,J., Eunson,P., Cosgrove,A., Botulinum toxin treatment of spasticity in diplegic cerebral palsy: a randomized, double-blind, placebo-controlled, dose-ranging study, Developmental Medicine and Child Neurology, 44, 666-675, 2002	Comparison irrelevant : dose comparison
Blackmore,A.M., Boettcher-Hunt,E., Jordan,M., Chan,M.D.Y., A systematic review of the effects of casting on equinus in children with cerebral palsy: An evidence report of the AACPDM, Developmental Medicine and Child Neurology, 49, 781-790, 2007	Checked for relevant studies and excluded
Botulinum toxin type A and dynamic equinus in children with cerebral palsy. Better than repeat casts, Prescrire International, 10, 12-14, 2001	Review : checked for relevant studies and excluded
Boyd, R. N., The central and peripheral effects of botulinum toxin A in children with cerebral palsy, Doctor of Philosophy thesis, Victoria: Schools of Human Biosciences and Physiotherapy, Faculty of Health Sciences, La Trobe University,2004	Included in Hoare systematic review
Boyd,R.N., Dobson,F., Parrott,J., Love,S., Oates,J., Larson,A., Burchall,G., Chondros,P., Carlin,J., Nattrass,G., Graham,H.K., The effect of botulinum toxin type A and a variable hip abduction orthosis on gross motor function: a randomized controlled trial, European Journal of Neurology, 8 Suppl 5, 109-119, 2001	Comparison not relevant : BoNT + current treatment + SWASH versus current treatment
Boyd,R.N., Hays,R.M., Current evidence for the use of botulinum toxin type A in the management of children with cerebral palsy: a systematic review, European journal of neurology: the official journal of the European Federation of Neurological Societies, 8 Suppl 5, -20, 2001	Checked for relevant studies and excluded
Corry,I.S., Cosgrove,A.P., Duffy,C.M., McNeill,S., Taylor,T.C., Graham,H.K., Botulinum toxin A compared with stretching casts in the treatment of spastic equinus: a randomised prospective trial, Journal of Pediatric Orthopedics, 18, 304-311, 1998	Comparison irrelevant : BoNT versus casting
Detrembleur, C., Lejeune, T.M., Renders, A., Van Den Bergh, P.Y., Botulinum toxin and short-term electrical stimulation in the treatment of equinus in cerebral palsy, Movement Disorders, 17, 162-169, 2002	Therapy intervention (electrical stimulation) not requested by GDG

Bibliographic information	Reason for exclusion
Fazzi, E., Maraucci, I., Torrielli, S., Motta, F., Lanzi, G., Factors predicting the efficacy of botulinum toxin-A treatment of the lower limb in children with cerebral palsy, Journal of Child Neurology, 20, 661-666, 2005	Non comparative results
Fehlings,D., Rang,M., Glazier,J., Steele,C., An evaluation of botulinum-A toxin injections to improve upper extremity function in children with hemiplegic cerebral palsy, Journal of Pediatrics, 137, 331-337, 2000	Included in Hoare systematic review
Figgitt, D.P., Noble, S., Botulinum toxin B: A review of its therapeutic potential in the management of cervical dystonia, Drugs, 62, 705-722, 2002	Constituent trials for relevant comparisons were conducted in adults
Flett,P.J., Stern,L.M., Waddy,H., Connell,T.M., Seeger,J.D., Gibson,S.K., Botulinum toxin A versus fixed cast stretching for dynamic calf tightness in cerebral palsy, Journal of Paediatrics and Child Health, 35, 71-77, 1999	Comparison irrelevant : BoNT versus casting
Gordon,M.F., Barron,R., Effectiveness of repeated treatment with botulinum toxin type A across different conditions, Southern Medical Journal, 99, 853-861, 2006	Out of date systematic review about broader use of BoNT
Graham,H.K., Boyd,R., Carlin,J.B., Dobson,F., Lowe,K., Nattrass,G., Thomason,P., Wolfe,R., Reddihough,D., Does botulinum toxin a combined with bracing prevent hip displacement in children with cerebral palsy and "hips at risk"? A randomized, controlled trial, Journal of Bone and Joint Surgery - American Volume, 90, 23-33, 2008	Comparison irrelevant : BoNT + therapy + SWASH versus normal treatment
Hazneci,B., Tan,A.K., Guncikan,M.N., Dincer,K., Kalyon,T.A., Comparison of the efficacies of botulinum toxin A and Johnstone pressure splints against hip adductor spasticity among patients with cerebral palsy: a randomized trial, Military Medicine, 171, 653-656, 2006	Comparison irrelevant: BoNT + Bobath technique versus Johnstone Pressure Splint and Bobath technique
Houltram,J., Noble,I., Boyd,R.N., Corry,I., Flett,P., Graham,H.K., Botulinum toxin type A in the management of equinus in children with cerebral palsy: an evidence-based economic evaluation, European journal of neurology: the official journal of the European Federation of Neurological Societies, 8 Suppl 5, -202, 2001	Australian study not applicable to UK setting
Kanellopoulos,A.D., Mavrogenis,A.F., Mitsiokapa,E.A., Panagopoulos,D., Skouteli,H., Vrettos,S.G., Tzanos,G., Papagelopoulos,P.J., Long lasting benefits following the combination of static night upper extremity splinting with botulinum toxin A injections in cerebral palsy children, European journal of physical and rehabilitation medicine., 45, 501-506, 2009	Comparison of use of a splint, not BoNT and occupational therapy versus occupational therapy
Kawamura, A., Campbell, K., Lam-Damji, S., Fehlings, D., A randomized controlled trial comparing botulinum toxin A dosage in the upper extremity of children with spasticity, Developmental Medicine and Child Neurology, 49, 331-337, 2007	Comparison against placebo
Lowe,K., Novak,I., Cusick,A., Low-dose/high-concentration localized botulinum toxin A improves upper limb movement and function in children with hemiplegic cerebral palsy, Developmental Medicine and Child Neurology, 48, 170-175, 2006	Included in Hoare systematic review

Bibliographic information	Reason for exclusion
Lowe K, Novak I, Cusick A. Repeat injection of botulinum toxin A is safe and effective for upper limb movement and function in children with cerebral palsy,	No comparative group
Dev Med Child Neurol. 2007 Nov;49(11):823-9.	
Lukban,M.B., Rosales,R.L., Dressler,D., Effectiveness of botulinum toxin A for upper and lower limb spasticity in children with cerebral palsy: A summary of evidence, Journal of Neural Transmission, 116, 319-331, 2009	Checked for relevant studies and excluded
Mulligan, D., Bologna, R., Botulinum toxin: Historical perspective and treatment of neurogenic and idiopathic overactive bladder, Therapy, 6, 165-175, 2009	Checked for relevant studies and excluded
Paul,S.M., Siegel,K.L., Malley,J., Jaeger,R.J., Evaluating interventions to improve gait in cerebral palsy: A meta-analysis of spatiotemporal measures, Developmental Medicine and Child Neurology, 49, 542-549, 2007	Checked for relevant studies and excluded
Polak,F., Morton,R., Ward,C., Wallace,W.A., Doderlein,L., Siebel,A., Double-blind comparison study of two doses of botulinum toxin A injected into calf muscles in children with hemiplegic cerebral palsy, Developmental Medicine and Child Neurology, 44, 551-555, 2002	Comparison irrelevant : Dose comparison
Rameckers, E.A., Duysens, J., Speth, L.A., Vles, H.J., Smits-Engelsman, B.C., Effect of addition of botulinum toxin-A to standardized therapy for dynamic manual skills measured with kinematic aiming tasks in children with spastic hemiplegia, Journal of Rehabilitation Medicine, 42, 332-338, 2010	No relevant outcomes
Russo,R.N., Crotty,M., Miller,M.D., Murchland,S., Flett,P., Haan,E., Upper-limb botulinum toxin A injection and occupational therapy in children with hemiplegic cerebral palsy identified from a population register: a single-blind, randomized, controlled trial, Pediatrics, 119, e1149-e1158, 2007	Included in Hoare systematic review
Satila,H., Pietikainen,T., lisalo,T., Lehtonen-Raty,P., Salo,M., Haataja,R., Koivikko,M., utti-Ramo,I., Botulinum toxin type A injections into the calf muscles for treatment of spastic equinus in cerebral palsy: a randomized trial comparing single and multiple injection sites, American Journal of Physical Medicine and Rehabilitation, 87, 386-394, 2008	Comparison irrelevant : single versus multiple injection sites
Scholtes, V.A., Dallmeijer, A.J., Knol, D.L., Speth, L.A., Maathuis, C.G., Jongerius, P.H., Becher, J.G., Effect of multilevel botulinum toxin a and comprehensive rehabilitation on gait in cerebral palsy, Pediatric Neurology, 36, 30-39, 2007	Comparison irrelevant : BoNT and Therapy versus usual care
Scholtes, V.A., Dallmeijer, A.J., Knol, D.L., Speth, L.A., Maathuis, C.G., Jongerius, P.H., Becher, J.G., The combined effect of lower-limb multilevel botulinum toxin type a and comprehensive rehabilitation on mobility in children with cerebral palsy: a randomized clinical trial, Archives of Physical Medicine and Rehabilitation, 87, 1551-1558, 2006	Comparison irrelevant : BoNT and Therapy versus usual care
Simpson, D.M., Clinical trials of botulinum toxin in the treatment of spasticity, Muscle & nerve, 6, -175, 1997	Checked for relevant studies and excluded

Bibliographic information	Reason for exclusion
Speth,L.A.W.M., Leffers,P., Janssen-Potten,Y.J.M., Vles,J.S.H., Botulinum toxin A and upper limb functional skills in hemiparetic cerebral palsy: A randomized trial in children receiving intensive therapy, Developmental Medicine and Child Neurology, 47, 468-473, 2005	Included in Hoare systematic review
Wallen,M., O'Flaherty,S.J., Waugh,M.C., Functional outcomes of intramuscular botulinum toxin type a and occupational therapy in the upper limbs of children with cerebral palsy: a randomized controlled trial, Archives of Physical Medicine and Rehabilitation, 88, 1-10, 2007	Included in Hoare systematic review
Wang,Y., Gao,B., A dose - Response relationship research on botulinum toxin type A local intramuscular injections of lower extremity spasticity in children with cerebral palsy, Child's Nervous System, 24, 545-547, 2008	Comparison irrelevant : Dose comparison
Wissel,J., Heinen,F., Schenkel,A., Doll,B., Ebersbach,G., Muller,J., Poewe,W., Botulinum toxin A in the management of spastic gait disorders in children and young adults with cerebral palsy: a randomized, double-blind study of "high-dose" versus "low-dose" treatment, Neuropediatrics, 30, 120-124, 1999	Comparison irrelevant : Dose comparison
Wong, V., Evidence-based approach of the use of Botulinum toxin type A (BTX) in cerebral palsy, Pediatric Rehabilitation, 6, 85-96, 2003	Checked for relevant papers and excluded
Zier,J.L., Rivard,P.F., Krach,L.E., Wendorf,H.R., Effectiveness of sedation using nitrous oxide compared with enteral midazolam for botulinum toxin A injections in children, Developmental Medicine and Child Neurology, 50, 854-858, 2008	Comparison irrelevant : sedation techniques

Table G.5 In children and young people with spasticity due to a non-progressive brain disorder does an intrathecal baclofen test help to identify those likely to benefit from pump-administered continuous intrathecal baclofen (CITB)? **And** In children and young people with spasticity due to a non-progressive brain disorder what are the benefits and risks of continuous intrathecal baclofen therapy (CITB)?

Bibliographic information	Reason for exclusion
Albright,A.L., Awaad,Y., Muhonen,M., Boydston,W.R., Gilmartin,R., Krach,L.E., Turner,M., Zidek,K.A., Wright,E., Swift,D., Bloom,K., Performance and complications associated with the synchromed 10-ml infusion pump for intrathecal baclofen administration in children, Journal of Neurosurgery, 101, 64-68, 2004	Better quality studies included
Albright,A.L., Barron,W.B., Fasick,M.P., Polinko,P., Janosky,J., Continuous intrathecal baclofen infusion for spasticity of cerebral origin, JAMA: Journal of the American Medical Association, 270, 2475-2477, 1993	Better quality studies included reporting those outcomes
Albright, A.L., Barry, M.J., Fasick, M.P., Janosky, J., Effects of continuous intrathecal baclofen infusion and selective posterior rhizotomy on upper extremity spasticity, Pediatric Neurosurgery, 23, 82-85, 1995	Poorly reporting of outcomes. The only outcomes reported are upper extremity Ashworth scores, whereas range of movement and function mobility are only reported in narrative way. There are better quality studies already included reporting those outcomes
Albright,A.L., Barry,M.J., Painter,M.J., Shultz,B., Infusion of intrathecal baclofen for generalized dystonia in cerebral palsy, Journal of Neurosurgery, 88, 73-76, 1998	Study conducted in a population of all ages; results for children and young people not presented separately and it is unclear how many were included
Albright,A.L., Barry,M.J., Shafton,D.H., Ferson,S.S., Intrathecal baclofen for generalized dystonia, Developmental Medicine and Child Neurology, 43, 652-657, 2001	Excluded as per protocol. Authors stated that only 33/86 patients had spasticity coexisting with dystonia. GDG stipulated that this proportion should be at least 60%-70%
Albright,A.L., Cervi,A., Singletary,J., Intrathecal baclofen for spasticity in cerebral palsy, JAMA, 265, 1418-1422, 1991	The authors claimed that this was the testing phase of a follow-up study where the pump was implanted, but there are more patients included in the follow up and it is unclear where they came from. Because of the previous it is not possible to establish predictability of the outcomes for the testing. besides, adverse effects during the placebo periods were not reported
Armstrong,R.W., Steinbok,P., Cochrane,D.D., Kube,S.D., Fife,S.E., Farrell,K., Intrathecally administered baclofen for treatment of children with spasticity of cerebral origin, Journal of Neurosurgery, 87, 409-414, 1997	No outcomes for effectiveness of the testing are reported.
Becker,R., Alberti,O., Bauer,B.L., Continuous intrathecal baclofen	Adult population

infusion in severe spasticity after traumatic or hypoxic brain injury,

Journal of Neurology, 244, 160-166, 1997

Bibliographic information	Reason for exclusion
Bensmail, D., Ward, A.B., Wissel, J., Motta, F., Saltuari, L., Lissens, J., Cros, S., Beresniak, A., Cost-effectiveness modeling of intrathecal baclofen therapy versus other interventions for disabling spasticity, Neurorehabilitation and Neural Repair, 23, 546-552, 2009	No data on effectiveness
Bjornson,K.F., McLaughlin,J.F., Loeser,J.F., Nowak-Cooperman,K.M., Russel,M., Bader,K.A., Desmond,S.A., Oral motor, communication, and nutritional status of children during intrathecal baclofen therapy: a descriptive pilot study, Archives of Physical Medicine & Rehabilitation, 84, 500-506, 2003	Excluded as per protocol. Cross sectional study. Better studies available for relevant outcomes reported
Borowski,A., Littleton,A.G., Borkhuu,B., Presedo,A., Shah,S., Dabney,K.W., Lyons,S., McMannus,M., Miller,F., Complications of intrathecal baclofen pump therapy in pediatric patients, Journal of Pediatric Orthopedics, 30, 76-81, 2010	Better quality studies included
Borowski,A., Shah,S.A., Littleton,A.G., Dabney,K.W., Miller,F., Baclofen pump implantation and spinal fusion in children: techniques and complications, Spine, 33, 1995-2000, 2008	Posterior spinal fusion out of the guideline scope
Bottanelli, M., Rubini, G., Venturelli, V., Cosentino, A., Rossato, G., Vicentini, S., Romito, S., Rizzuto, N., Bertolasi, L., 'Weight and height gain after intrathecal baclofen pump implantation in children with spastic tetraparesis', Developmental Medicine and Child Neurology, 46, 788-789, 2004	Retrospective case series
Brennan,P.M., Whittle,I.R., Intrathecal baclofen therapy for neurological disorders: a sound knowledge base but many challenges remain., British Journal of Neurosurgery, 22, 508-519, 2008	Excluded as review as it included conditions other than non-progressive brain disorders. References checked
Brochard,S., Lempereur,M., Filipetti,P., Remy-Neris,O., Changes in gait following continuous intrathecal baclofen infusion in ambulant children and young adults with cerebral palsy, Developmental Neurorehabilitation, 12, 397-405, 2009	
Brochard, S., Remy-Neris, O., Filipetti, P., Bussel, B., Intrathecal baclofen infusion for ambulant children with cerebral palsy, Pediatric Neurology, 40, 265-270, 2009	Retrospective case series with fewer than 50 patients
Buonaguro, V., Scelsa, B., Curci, D., Monforte, S., Iuorno, T., Motta, F., Epilepsy and intrathecal baclofen therapy in children with cerebral palsy, Pediatric Neurology, 33, 110-113, 2005	Retrospective case series
Burn,S.C., Zeller,R., Drake,J.M., Do baclofen pumps influence the development of scoliosis in children?, Journal of Neurosurgery, Pediatrics 5, 195-199, 2010	Retrospective case series
Butler, C., Campbell, S., Evidence of the effects of intrathecal baclofen for spastic and dystonic cerebral palsy. AACPDM Treatment Outcomes Committee Review Panel. [33 refs], Developmental Medicine and Child Neurology, 42, 634-645, 2000	Excluded as systematic review as their inclusion criteria different from ours. References checked

Bibliographic information	Reason for exclusion
Campbell,W.M., Ferrel,A., McLaughlin,J.F., Grant,G.A., Loeser,J.D., Graubert,C., Bjornson,K., Long-term safety and efficacy of continuous intrathecal baclofen, Developmental Medicine & Child Neurology, 44, 660-665, 2002	Retrospective case series
Ceulemans,B., van,Rhijn J., Kenis,S., Krols,R., Laridon,A., Van,Havenbergh T., Opisthotonus and intrathecal treatment with baclofen (ITB) in children, European Journal of Pediatrics, 167, 641-645, 2008	Retrospective case series
Creedon,S.D., Dijkers,M.P.J.M., Hinderer,S.R., Intrathecal baclofen for severe spasticity: A meta-analysis, International Journal of Rehabilitation and Health, 3, 171-185, 1997	The vast majority of the papers included were conducted in adult population. Individual references have been checked and studies in children considered for inclusion in our review
Damiano, D.L., Gilgannon, M.D., Abel, M.F., Responsiveness and uniqueness of the pediatric outcomes data collection instrument compared to the gross motor function measure for measuring orthopaedic and neurosurgical outcomes in cerebral palsy, Journal of Pediatric Orthopedics, 25, 641-645, 2005	Comparison of assessment tools (GMFM and PODCI)
de,Lissovoy G., Matza,L.S., Green,H., Werner,M., Edgar,T., Cost-effectiveness of intrathecal baclofen therapy for the treatment of severe spasticity associated with cerebral palsy, Journal of Child Neurology, 22, 49-59, 2007	US study. Not enough detail in the paper to allow the analysis to be adapted for the UK.
Delhaas, E.M., Beersen, N., Redekop, W.K., Klazinga, N.S., Long-term outcomes of continuous intrathecal baclofen infusion for treatment of spasticity: A prospective multicenter follow-up study, Neuromodulation, 11, 227-236, 2008	Mostly adult population and 70% of participants had either multiple sclerosis or spinal cord injury.
Ethans,K.D., Schryvers,O.I., Nance,P.W., Casey,A.R., Intrathecal drug therapy using the Codman Model 3000 Constant Flow Implantable Infusion Pumps: experience with 17 cases, Spinal Cord, 43, 214-218, 2005	Only one patient had cerebral palsy. The remaining patients had spinal cord injuries or multiple sclerosis
Fares,Y., Khazim,R.M., del Barrio,E.R., Burzaco,J.A., Dosage of intrathecal baclofen maintenance therapy in the spastic syndromes, Journal Medical Libanais - Lebanese Medical Journal, 52, 13-18, 2004	BL unable to supply paper. We do not feel we need to pursue in the search as we think from the abstract that this paper is on adult population
Fitzgerald,J.J., Tsegaye,M., Vloeberghs,M.H., Treatment of childhood spasticity of cerebral origin with intrathecal baclofen: a series of 52 cases, British Journal of Neurosurgery, 18, 240-245, 2004	Audit study. Outcomes for effectiveness only reported in a narrative way, no figures reported (Reduction in spasticity, Improvement in range of movement, Improvement in walking and slower progression of mobile deformities). Authors recommended that an RCT should be conducted. For adverse effects better quality studies are available
Fulkerson, D.H., Boaz, J.C., Luerssen, T.G., Interaction of	Retrospective case series

ventriculoperitoneal shunt and baclofen pump, Child's Nervous

System, 23, 733-738, 2007

Bibliographic information	Reason for exclusion
Gerszten, P.C., Albright, A.L., Barry, M.J., Effect on ambulation of continuous intrathecal baclofen infusion, Pediatric Neurosurgery, 27, 40-44, 1997	Study conducted in a population of all ages; results for children and young people not presented separately and it is unclear how many were included
Gerszten, P.C., Albright, A.L., Johnstone, G.F., Intrathecal baclofen infusion and subsequent orthopedic surgery in patients with spastic cerebral palsy, Journal of Neurosurgery, 88, 1009-1013, 1998	Retrospective case series
Ginsburg, G.M., Lauder, A.J., Progression of scoliosis in patients with spastic quadriplegia after the insertion of an intrathecal baclofen pump, Spine, 32, 2745-2750, 2007	Retrospective case series
Gooch,J.L., Oberg,W.A., Grams,B., Ward,L.A., Walker,M.L., Care provider assessment of intrathecal baclofen in children, Developmental Medicine & Child Neurology, 46, 548-552, 2004	Better quality studies included
Grabb, P.A., Guin-Renfroe, S., Meythaler, J.M., Midthoracic catheter tip placement for intrathecal baclofen administration in children with quadriparetic spasticity, Neurosurgery, 45, 833-836, 1999	Intervention is not relevant to this review
Guillaume, D., Van, Havenbergh A, Vloebergh S, M., Vidal, J., Roeste, G., A clinical study of intrathecal baclofen using a programmable pump for intractable spasticity, Archives of Physical Medicine and Rehabilitation, 86, 2165-2171, 2005	Only 37/138 patients younger than 18 years (27%) and no subgroup analysis performed by age
Hagglund,G., Andersson,S., Duppe,H., Lauge-Pedersen,H., Nordmark,E., Westbom,L., Prevention of severe contractures might replace multilevel surgery in cerebral palsy: results of a population-based health care programme and new techniques to reduce spasticity, Journal of Pediatric Orthopaedics, Part B, 14, 269-273, 2005	Population-based study, no specific outcomes reported for ITB
Hoving,M.A., Evers,S.M., Ament,A.J., van Raak,E.P., Vles,J.S., Dutch Study Group on Child Spasticity., Intrathecal baclofen therapy in children with intractable spastic cerebral palsy: a cost-effectiveness analysis, Developmental Medicine and Child Neurology, 50, 450-455, 2008	Dutch study. Not enough detail in the paper to convert analysis to UK setting.
Hoving,M.A., van Kranen-Mastenbroek,V.H., van Raak,E.P., Spincemaille,G.H., Hardy,E.L., Vles,J.S., On Behalf Of The Dutch Study Group On Child Spasticity., Placebo controlled utility and feasibility study of the H-reflex and flexor reflex in spastic children treated with intrathecal baclofen, Clinical Neurophysiology, 117, 1508-1517, 2006	Reports mainly electrophysiological outcomes of a study already included
Kofler,M., Matzak,H., Saltuari,L., The impact of intrathecal baclofen on gastrointestinal function, Brain Injury, 16, 825-836, 2002	Study conducted in a mainly adult population; results for children and young people not presented separately

Bibliographic information	Reason for exclusion
Kolaski,K., Logan,L.R., A review of the complications of intrathecal baclofen in patients with cerebral palsy., Neurorehabilitation, 22, 383-395, 2007	Review. References checked: included single case reports and small case series
Krach,L.E., Kriel,R.L., Gilmartin,R.C., Swift,D.M., Storrs,B.B., Abbott,R., Ward,J.D., Bloom,K.K., Brooks,W.H., Madsen,J.R., McLaughlin,J.F., Nadell,J.M., GMFM 1 year after continuous intrathecal baclofen infusion, Pediatric Rehabilitation, 8, 207-213, 2005	Better quality studies already included for outcomes reported in this paper
Krach,L.E., Kriel,R.L., Nugent,A.C., Complex Dosing Schedules for Continuous Intrathecal Baclofen Infusion, Pediatric Neurology, 37, 354-359, 2007	Retrospective case series
Krach,L.E., Nettleton,A., Klempka,B., Satisfaction of individuals treated long-term with continuous infusion of intrathecal baclofen by implanted programmable pump, Pediatric Rehabilitation, 9, 210-218, 2006	Study conducted in a population of all ages; results for children and young people not presented separately
Marshall,S., Teasell,R., Bayona,N., Lippert,C., Chundamala,J., Villamere,J., Mackie,D., Cullen,N., Bayley,M., Motor impairment rehabilitation post acquired brain injury, Brain Injury, 21, 133-160, 2007	Excluded as review as it included interventions other than ITB and also children and adults. References checked
McCoy,A.A., Fox,M.A., Schaubel,D.E., Ayyangar,R.N., Weight gain in children with hypertonia of cerebral origin receiving intrathecal baclofen therapy, Archives of Physical Medicine & Rehabilitation, 87, 1503-1508, 2006	Retrospective case series
McCoy,R.N., Blasco,P.A., Russman,B.S., O'Malley,J.P., Validation of a care and comfort hypertonicity questionnaire, Developmental Medicine and Child Neurology, 48, 181-187, 2006	Validation of an assessment tool
Meythaler, J.M., DeVivo, M.J., Hadley, M., Prospective study on the use of bolus intrathecal baclofen for spastic hypertonia due to acquired brain injury, Archives of Physical Medicine and Rehabilitation, 77, 461-466, 1996	Adult population
Meythaler, J.M., Guin-Renfroe, S., Brunner, R.C., Hadley, M.N., Intrathecal baclofen for spastic hypertonia from stroke, Stroke, 32, 2099-2109, 2001	Study conducted in a mainly adult population; results for children and young people not presented separately
Meythaler, J.M., Guin-Renfroe, S., Grabb, P., Hadley, M.N., Long-term continuously infused intrathecal baclofen for spastic-dystonic hypertonia in traumatic brain injury: 1-year experience. [Erratum appears in Arch Phys Med Rehabil 1999 Apr; 80(4):474], Archives of Physical Medicine and Rehabilitation, 80, 13-19, 1999	Study conducted in a mainly adult population; results for children and young people not presented separately
Meythaler, J.M., Guin-Renfroe, S., Law, C., Grabb, P., Hadley, M.N., Continuously infused intrathecal baclofen over 12 months for spastic	Study conducted in a mainly adult population; results for children and

hypertonia in adolescents and adults with cerebral palsy, Archives of young

Physical Medicine & Rehabilitation, 82, 155-161, 2001

people

separately

not

presented

Bibliographic information	Reason for exclusion
Meythaler, J.M., McCary, A., Hadley, M.N., Prospective assessment of continuous intrathecal infusion of baclofen for spasticity caused by acquired brain injury: a preliminary report, Journal of Neurosurgery, 87, 415-419, 1997	Study conducted in a mainly adult population; results for children and young people not presented separately
Minford,A.M.B., Brown,J.K., Minns,R.A., The effect of baclofen on the gait of hemiplegic children assessed by means of polarised light goniometry, Scottish Medical Journal, 25, S-S, 1980	This study is on oral baclofen
Motta,F., Antonello,C.E., Stignani,C., Upper limbs function after intrathecal baclofen therapy in children with secondary dystonia, Journal of Pediatric Orthopedics, 29, 817-821, 2009	Unclear whether study population had co-existing spasticity.
Motta,F., Buonaguro,V., Stignani,C., The use of intrathecal baclofen pump implants in children and adolescents: safety and complications in 200 consecutive cases, Journal of Neurosurgery, 107, 32-35, 2007	Better quality studies included
Motta,F., Stignani,C., Antonello,C.E., Upper limb function after intrathecal baclofen treatment in children with cerebral palsy, Journal of Pediatric Orthopedics, 28, 91-96, 2008	Better quality studies included
Murphy, N.A., Irwin, M.C., Hoff, C., Intrathecal baclofen therapy in children with cerebral palsy: efficacy and complications, Archives of Physical Medicine and Rehabilitation, 83, 1721-1725, 2002	Better quality studies included
Ordia, J.I., Fischer, E., Adamski, E., Spatz, E.L., Continuous intrathecal baclofen infusion delivered by a programmable pump for the treatment of severe spasticity following traumatic brain injury, Neuromodulation, 5, 103-107, 2002	
Penn,R.D., Gianino,J.M., York,M.M., Intrathecal baclofen for motor disorders, Movement Disorders, 10, 675-677, 1995	Study conducted in a mainly adult population; results for children and young people not presented separately
Quality Standards Subcommittee of the American Academy of Neurology and the Practice Committee of the Child Neurology Society, Delgado,M.R., Hirtz,D., Aisen,M., Ashwal,S., Fehlings,D.L., McLaughlin,J., Morrison,L.A., Shrader,M.W., Tilton,A., Vargus-Adams,J., Practice parameter: pharmacologic treatment of spasticity in children and adolescents with cerebral palsy (an evidence-based review): report of the Quality Standards Subcommittee of the American Academy of Neurology and the Practice Committee of the Child Neurology Society. [40 refs], Neurology, 74, 336-343, 2010	Excluded as review as it included interventions other than ITB. References checked
Radensky,P.W., Archer,J.W., Dournaux,S.F., O'Brien,C.F., The estimated cost of managing focal spasticity: a physician practice patterns survey, Neurorehabilitation and Neural Repair, 15, 57-68, 2001	Paper on health economics only
Rifici, C., Kofler, M., Kronenberg, M., Kofler, A., Bramanti, P., Saltuari, L., Intrathecal baclofen application in patients with supraspinal spasticity secondary to severe traumatic brain injury, Functional Neurology, 9, 29-34, 1994	Study conducted in a mainly adult population; results for children and young people not presented separately

Bibliographic information	Reason for exclusion
Steinbok,P., Daneshvar,H., Evans,D., Kestle,J.R.W., Cost analysis of continuous intrathecal baclofen versus selective functional posterior rhizotomy in the treatment of spastic quadriplegia associated with cerebral palsy, Pediatric Neurosurgery, 22, 255-265, 1995	
Stempien, L., Tsai, T., Intrathecal baclofen pump use for spasticity: A clinical survey, American Journal of Physical Medicine and Rehabilitation, 79, 536-541, 2000	No subgroup analysis performed for children
Stokic, D.S., Yablon, S.A., Hayes, A., Comparison of clinical and neurophysiologic responses to intrathecal baclofen bolus administration in moderate-to-severe spasticity after acquired brain injury, Archives of Physical Medicine and Rehabilitation, 86, 1801-1806, 2005	Mostly adult population (mean age 31 years)
Turner, M.S., Early use of intrathecal baclofen in brain injury in pediatric patients, Acta Neurochirurgica - Supplement, 87, 81-83, 2003	Retrospective case series
Van,Schaeybroeck P., Nuttin,B., Lagae,L., Schrijvers,E., Borghgraef,C., Feys,P., Intrathecal baclofen for intractable cerebral spasticity: a prospective placebo-controlled, double-blind study, Neurosurgery, 46, 603-609, 2000	Study conducted in a mainly adult population; results for children and young people not presented separately
Vender, J.R., Hester, S., Waller, J.L., Rekito, A., Lee, M.R., Identification and management of intrathecal baclofen pump complications: a comparison of pediatric and adult patients, Journal of Neurosurgery, 104, 9-15, 2006	Better quality studies included
Vloeberghs,M., Keetley,R., Morton,R., Intrathecal baclofen in the management of spasticity due to cerebral palsy, Pediatric Rehabilitation, 8, 172-179, 2005	Not a research paper but audit data. Better quality studies available
Von, KochC, Park, T.S., Steinbok, P., Smyth, M., Peacock, W.J., Selective posterior rhizotomy and intrathecal baclofen for the treatment of spasticity, Pediatric Neurosurgery, 35, 57-65, 2001	Non systematic review
Ward,A., Hayden,S., Dexter,M., Scheinberg,A., Continuous intrathecal baclofen for children with spasticity and/or dystonia: Goal attainment and complications associated with treatment, Journal of Paediatrics and Child Health, 45, 720-726, 2009	of children clearly had spasticity (and
Wiens,H.D., Spasticity in children with cerebral palsy: a retrospective review of the effects of intrathecal baclofen, Issues in Comprehensive Pediatric Nursing, 21, 49-61, 1998	Retrospective case series
Wunderlich, C.A., Krach, L.E., Gram-negative meningitis and infections in individuals treated with intrathecal baclofen for spasticity: a retrospective study, Developmental Medicine & Child Neurology, 48, 450-455, 2006	Retrospective case series

Table G.6 In children and young people with spasticity due to a non-progressive brain disorder what are the benefits and risks of continuous intrathecal baclofen therapy (CITB) ?

List of excluded studies for Q6 merged with list of excluded studies for Q5 in Table G.5

Table G.7 What is the effectiveness of orthopaedic surgery in preventing or treating musculoskeletal deformity in children with spasticity caused by a non-progressive brain disorder? **And** What is the effectiveness of single event multilevel orthopaedic surgery (SEMLS) in managing musculoskeletal deformity in children with spasticity caused by a non-progressive brain disorder?

Bibliographic information	Reason for exclusion
A 2-year follow-up of outcomes following orthopedic surgery or selective dorsal rhizotomy in children with spastic diplegia	Outcomes are too poorly presented to extract data
Thomas,S.S., Buckon,C.E., Piatt,J.H., Aiona,M.D., Sussman,M.D. 2004. Journal of Pediatric Orthopaedics Part B	
Changes in pelvic rotation after soft tissue and bony surgery in ambulatory children with cerebral palsy. Kay,R.M., Rethlefsen,S., Reed,M., Do,K.P., Skaggs,D.L., Wren,T.A. 2004	Outcomes not requested : retrospective review comparing FDRO + soft tissue surgery versus soft tissue surgery alone. Outcomes
Journal of Pediatric Orthopedics	are pre-post op pelvic rotation, hip rotation, foot progression.
Experiences of Use of the Cerebral Palsy Hemiplegic Hand in Young Persons Treated with Upper Extremity Surgery. Skold,A., Josephsson,S., Fitinghoff,H., Eliasson,A.C. 2007	Case series - Qualitative review of experiences of 10 young people 5 years after upper extremity surgery
Journal of Hand Therapy	
Functional gains after surgical procedures in spastic upper extremity: A comparative study between children and adults. Malizos,K.N., Liantsis,A.K., Varitimidis,S.E., Dailiana,Z.H., Rigopoulos,N.S. 2010. Journal of Pediatric Orthopaedics Part B	Case series
Hip displacement in cerebral palsy	Conducted using register data
Soo,B., Howard,J.J., Boyd,R.N., Reid,S.M., Lanigan,A., Wolfe,R., Reddihough,D., Graham,H.K. 2006. Journal of Bone and Joint Surgery - Series A	
Hip surveillance in Tasmanian children with cerebral palsy. Connelly,A., Flett,P., Graham,H.K., Oates,J. 2009. Journal of Paediatrics and Child Health	Conducted using register data
Improving calf muscle strength in patients with spastic equinovarus deformity by transfer of the long toe flexors to the Os calcis	Mainly adult population
Keenan,M.A., Lee,G.A., Tuckman,A.S., Esquenazi,A. 1999. Journal of Head Trauma Rehabilitation	
Outcomes of combined hamstring lengthening and rectus femoris transfer in children versus adolescents. Perkins,C., Scarborough,N., Sullivan,E., Scott,A.C. 2009. Developmental Medicine and Child Neurology	Retrieval abandoned - conference abstract
Prevention of dislocation of the hip in children with cerebral palsy. The first ten years of a population-based prevention programme	Conducted using register data
Hagglund,G., Andersson,S., Duppe,H., Lauge-Pedersen,H., Nordmark,E., Westbom,L. 2005	
Journal of Bone and Joint Surgery - Series B	
Recurrence of equinus foot deformity in cerebral palsy patients following surgery: a review	Systematic review of case series
Koman,L.A., Smith,B.P., Barron,R. 2003.	

Bibliographic information	Reason for exclusion
Journal of the Southern Orthopaedic Association	
Surgical treatment for the thumb-in-palm deformity in patients with cerebral palsy	Systematic review of case series
Smeulders,Mark J.C., Coester,Annemieke, Kreulen,Michiel. 2009. Cochrane Database of Systematic Reviews	
Functional outcomes following single-event multilevel surgery of the upper extremity for children with hemiplegic cerebral palsy.	Outcomes are not relevant to this review
Smitherman JA, Davids JR, Tanner S, Hardin JW, Wagner LV, Peace LC, Gidewall MA.	
J Bone Joint Surg Am. 2011 Apr 6;93(7):655-61.	
The unstable paralytic hip: treatment by combined pelvic and femoral osteotomy and transiliac psoas transfer. Molloy,M.K. 1986.	Case series
Journal of Pediatric Orthopedics	

Table G.9 What is the clinical effectiveness of Selective Dorsal Rhizotomy in children and young people with spasticity caused by a non-progressive brain disorder?

Bibliographic information	Reason for exclusion
Abbott,R., Johann-Murphy,M., Shiminski-Maher,T., Quartermain,D., Forem,S.L., Gold,J.T., Epstein,F.J., Selective dorsal rhizotomy: outcome and complications in treating spastic cerebral palsy, Neurosurgery, 33, 851-857, 1993	Fuller report of the same patient population already included (Abbott 1992)
Australian Medical Services Advisory Committee, Selective Dorsal Rhizotomy (SDR): Assessment for Nationally Funded Centre Status, -, 2006	Systematic review - included studies list checked and then the review was excluded.
Golan, J.D., Hall, J.A., O'Gorman, G., Poulin, C., Benaroch, T.E., Cantin, M.A., Farmer, J.P., Spinal deformities following selective dorsal rhizotomy, Journal of Neurosurgery, 106, 441-449, 2007	Case series (n=98 children) excluded as per protocol
Grunt,S., Becher,J.G., Vermeulen,R.J. Systematic review of long term outcomes and adverse effects following SDR, Developmental Medicine and Child Neurology, 53(6):490-8 2011	Systematic review of long term outcomes and adverse effects following SDR. Includes case series (n=18, none with sample size>200) and comparative studies (n=3, previously excluded)
Kan,P., Gooch,J., Amini,A., Ploeger,D., Grams,B., Oberg,W., Simonsen,S., Walker,M., Kestle,J., Surgical treatment of spasticity in children: comparison of selective dorsal rhizotomy and intrathecal baclofen pump implantation, Childs Nervous System, 24, 239-243, 2008	Non randomised observational retrospective comparative study with historical controls
Langerak,N.G., Lamberts,R.P., Fieggen,A.G., Peter,J.C., Peacock,W.J., Vaughan,C.L., Functional Status of Patients With Cerebral Palsy According to the International Classification of Functioning, Disability and Health Model: A 20-Year Follow-Up Study After Selective Dorsal Rhizotomy, Archives of Physical Medicine and Rehabilitation, 90, 994-1003, 2009	Case series (n=14 children) excluded as per protocol
Langerak, N.G., Vaughan, C.L., Hoffman, E.B., Figaji, A.A., Fieggen, A.G., Peter, J.C., Incidence of spinal abnormalities in patients with spastic diplegia 17 to 26 years after selective dorsal rhizotomy, Childs Nervous System, 25, 1593-1603, 2009	Case series (n=30 children) excluded as per protocol
Li,Z., Zhu,J., Liu,X., Deformity of lumbar spine after selective dorsal rhizotomy for spastic cerebral palsy, Microsurgery, 28, 10-12, 2008	Case series (n=61 children) excluded as per protocol
Macwilliams,B.A., Johnson,B.A., Shuckra,A.L., D'Astous,J.L. Functional decline in children undergoing selective dorsal rhizotomy after age 10, Developmental Medicine and Child Neurology, 53(8):717-23,. 2011	Retrospective study
Maenpaa, H, Salokorpi,T., Jaakkola,R., Blomstedt,G., Sainio,K., Merikanto,J., von,Wendt L., Follow-up of children with cerebral palsy after selective posterior rhizotomy with intensive physiotherapy or physiotherapy alone, Neuropediatrics, 34, 67-71, 2003	Non-randomised observational comparative study. No comparative data reported for only available outcome prioritised by the GDG (Modified Ashworth)

McLaughlin, J., Bjornson, K., Temkin, N., Steinbok, P., Wright, V., Reiner, A., Roberts, T., Drake, J., O'Donnell, M., Rosenbaum, P., Barber, J., Ferrel, A., Selective dorsal rhizotomy: meta-analysis of three randomized controlled trials, Developmental Medicine and Child Neurology, 44, 17-25, 2002

The guideline protocol included a greater number of outcomes than had been extracted for this meta-analysis and so the systematic review was checked for relevant papers and excluded and the original studies were used.

Steinbok,P., Hicdonmez,T., Sawatzky,B., Beauchamp,R., Wickenheiser,D., Spinal deformities after selective dorsal rhizotomy for spastic cerebral palsy, Journal of Neurosurgery, 102, 363-373, 2005

Case series (n=105 children) excluded as per protocol

Steinbok,P., Tidemann,A.J., Miller,S., Mortenson,P., Bowen-Roberts,T., Electrophysiologically guided versus non-electrophysiologically guided selective dorsal rhizotomy for spastic cerebral palsy: a comparison of outcomes, Childs Nervous System, 25, 1091-1096, 2009

Comparison (Electrophysiological versus non-electrophysiological guidance during SDR) not stipulated in protocol

Wong,A.M., Pei,Y.C., Lui,T.N., Chen,C.L., Wang,C.M., Chung,C.Y., Comparison between botulinum toxin type A injection and selective posterior rhizotomy in improving gait performance in children with cerebral palsy, Journal of Neurosurgery, 102, 385-389, 2005

Non-randomised observational comparative study. Only pre-post treatment comparison given. No comparisons made across groups

Appendix I Evidence tables

The evidence tables are presented in a separate file.

Appendix J Forest plots

The forest plots are presented in a separate file.

Appendix K GRADE tables

These are the complete GRADE tables which accompany the abbreviated versions in the full guideline. These include details of the quality assessment and additional footnoted information which accompanies the main findings.

Chapter 4 Physical therapy (physiotherapy and/or occupational therapy)

Table K.4.1 Evidence profile for active use therapy compared with no active use therapy in children with unilateral spasticity; joint movement assessment

Quality ass	rocemont						Summar	y of finding	gs		
Quality ass	essille iii						No. of pa	itients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Active use therapy	No active use therapy	Relative (95% CI)	Absolute (95% CI)	Quality
Active rang	ge of moveme	nt (AROM) wri	st extension at w	eek 9 (Better in	ndicated by hig	her values)	1	1			
1 study (Aarts 2011)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	28	22	-	MD 4.5 higher (4.29 lower to 13.29 higher)*	Moderate
AROM wris	t extension at	week 17 (Bet	ter indicated by h	nigher values)							
1 study (Aarts 2011)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ²	none	28	22	-	MD 3.1 higher (10.68 lower to 16.88 higher)*	Moderate

0 114							Summar	y of finding	js .		
Quality ass	sessment						No. of pa	itients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Active use therapy	No active use therapy	Relative (95% CI)	Absolute (95% CI)	Quality
Passive ran	nge of movem	ent (PROM) w	rist extension at	week 9 (Better	indicated by h	igher values)					
1 study (Aarts 2011)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ³	none	28	22	-	MD 3.6 higher (0.46 lower to 7.66 higher)*	Moderate
PROM wris	t extension at	week 17 (Bett	ter indicated by h	igher values)							
1 study (Aarts 2011)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ²	none	28	22	-	MD 3.9 higher (0.57 lower to 8.37 higher)*	Moderate
AROM elbo	w extension a	at week 9 (Bet	ter indicated by h	nigher values)			-	1			
1 study (Aarts 2011)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ⁴	none	28	22	-	MD 2.9 higher (2.72 lower to 8.52 higher)*	Moderate
AROM elbo	w extension a	at week 17 (Be	tter indicated by	higher values)				1			
1 study (Aarts 2011)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ²	none	28	22	-	MD 5.2 higher (0.52 lower to 10.92 higher)*	Moderate

Quality ass	ocemont						Summary	y of finding	js		
Quality ass	essille iii						No. of pa	tients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Active use therapy	No active use therapy	Relative (95% CI)	Absolute (95% CI)	Quality
PROM elbo	w extension a	at week 9 (Bett	er indicated by h	igher values)							
1 study (Aarts 2011)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ⁵	none	28	22	-	MD 1.4 higher (1.76 lower to 4.56 higher)*	Moderate
PROM elbo	w extension a	at week 17 (Be	tter indicated by	higher values)							
1 study (Aarts 2011)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	28	22	-	MD 3.6 higher (0.76 to 6.44 higher)	High

CI confidence interval, MD mean difference

^{*} Calculated by the NCC-WCH

¹ Total population is under 400, 95% confidence interval crosses null effect and is wide. Effect size is reported as 0.25

² Total population is under 400, 95% confidence interval crosses null effect and is wide

³ Total population is under 400, 95% confidence interval crosses null effect and is wide. Effect size is reported as 0.33

⁴ Total population is under 400, 95% confidence interval crosses null effect and is wide. Effect size is reported as 0.17

⁵ Total population is under 400, 95% confidence interval crosses null effect and is wide. Effect size is reported as 0.15

Table K.4.2 Evidence profile for active use therapy compared with no active use therapy in children with unilateral or bilateral spasticity; functioning assessment

Ouglity agai	acomont.						Summary	of findings			
Quality asse	essment						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Active use therapy	No active use therapy	Relative (95% CI)	Absolute (95% CI)	Quality
Assisting h	and assessme	ent (AHA) sco	re at week 9 (rang	ge 0 to 100, cha	inge from base	line) (Better indic	ated by hig	her values)			
1 study (Aarts 2010)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	28 ²	22 ³	-	MD 4.3 higher (0.28 to 8.32 higher)*	Moderate
AHA score	at week 17 (ra	nge 0 to 100,	change from bas	eline) (Better in	dicated by hig	her values)					
1 study (Aarts 2010)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	28 ⁴	22 ⁵	-	MD 4.70 higher (1.58 to 7.82 higher)*	Moderate
Goal attainr	ment scaling (GAS) score at	week 9 (% child	ren who showe	d an increase of	of 2 point or more	compared	to baseline)		
1 study (Aarts 2010)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	23/28* (82%)	5/22* (23%)	RR 3.61 (1.64 to 7.96)*	59 more per 100 (from 15 more to 100 more)*	High
GAS score	at week 17 (%	children who	showed an incre	ase of 2 point of	or more compa	red to baseline)					
1 study (Aarts 2010)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	24/28* (86%)	8/22* (36%)	RR 2.36 (1.33 to 4.18)*	49 more per 100 (from 12 more to 100 more)*	High

Ovelity cos							Summary	of findings			
Quality asso	essment						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Active use therapy	No active use therapy	Relative (95% CI)	Absolute (95% CI)	Quality
GAS T-scor	e at week 8 - 4	week Occupa	tional therapy ho	me programm	e (OTHP) group	o (Better indicated	d by higher	values)			•
1 study (Novak 2009)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	11	12	-	_6	High
GAS T-scor	e at week 8 - 8	Bweek OTHP g	roup (Better indi	cated by highe	r values)						
1 study (Novak 2009)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	12	12	-	_7	High
GAS T-scor	e at week 8 -	4week versus	8week OTHP gro	oup (Better indi	cated by highe	r values)				•	_
1 study (Novak 2009)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ⁸	none	11	12 ⁹	-	_10	Moderate
Canadian o	ccupational pe	erformance m	easure - perform	ance (COPM-P)	score at week	8 - 4week OTHP	group (Bett	er indicated	d by higher va	alues)	
1 study (Novak 2009)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	11	12	-	_11	High
COPM-P sc	ore at week 8	- 8week OTHP	group (Better in	dicated by high	ner values)			•		•	
1 study (Novak 2009)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	12	12	-	_12	High

Quality asse	ncomont						Summary	of findings			
Quality asse	essment						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Active use therapy	No active use therapy	Relative (95% CI)	Absolute (95% CI)	Quality
COPM-P sc	ore at week 8	- 4week versu	s 8week OTHP g	roup (Better inc	dicated by high	ner values)					
1 study (Novak 2009)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ⁸	none	11	12 ⁹	-	-13	Moderate
COPM-P sc	ore at week 9	(range 0 to 10) (Better indicate	d by higher val	ues)						
1 study (Aarts 2010)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	28 ¹⁴	22 ¹⁵	-	_16	High
COPM-P at	week 17 (rang	e 0 to 10, cha	nge from baselin	e) (Better indic	ated by higher	values)					
1 study (Aarts 2010)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	28 ¹⁷	22 ¹⁸	-	MD 2.00 higher (1.20 to 2.80 higher)*	High
Walking spe	eed at 6 weeks	s (change fron	n baseline, m/s) (10m walk test)	(Better indicat	ed by higher value	es)				
1 study (Katz- Leurer 2009)	randomised trials	serious ¹⁹	no serious inconsistency	no serious indirectness	serious ⁸	none	10 ²⁰	10 ²¹	-	MD 0.03 higher (0.06 lower to 0.12 higher)	Low

CI confidence interval, MD mean difference, RR relative risk

^{*} Calculated by the NCC-WCH

¹ Total population less than 400, 95% confidence interval does not cross null effect but is wide. Small effect size (Cohen's d = 0.43) reported at week 9.

² Change from baseline at week 9 Mean (standard deviation; SD) = 6.8 (8.2)

³ Change from baseline at week 9 Mean (SD) = 2.5 (6.3)

⁴ Change from baseline at week 17 Mean (SD) = 6.4 (5.7)

⁵ Change from baseline at week 17 Mean (SD) = 1.7 (5.5)

- 6 Results for comparison of 4 week OHTP versus no program reported as an effect size of 37.8 95% CI (26.9 to 48.8) p=0.01
- 7 Results for comparison of 8 week OHTP versus no program reported as an effect size of 17.9 95% CI (12.4 to 23.4) p=0.01
- 8 Total population less than 400, 95% confidence interval crosses null effect and is wide
- 9 Comparison is 4 weeks OHTP versus 8 weeks OHTP group, not to "no program" group
- 10 Results for comparison of 4 week OHTP versus 8 week OHTP reported as an effect size of 0.5 95% CI(-13.4 to 14.4) p=0.94
- 11 Results for comparison of 4 week OHTP versus no program reported as an effect size of 2.4 (0.7 to 4.2) p=0.01
- 12 Results for comparison of 8 week OHTP versus no program reported as an effect size of 1.4 (0.6 to 2.2) p=0.01
- 13 Results for comparison of 4 week OHTP versus 8 week OHTP reported as an effect size of 0.7 (-1.2 to 2.6) p=0.45
- 14 Change from baseline at week 9 Mean (SD) = 3.5 (1.3)
- 15 Change from baseline at week 9 Mean (SD) = 1.2 (1.1)
- 16 Mean difference (95% CI) reported as 2.1 (1.43 2.72) effect size reported as 1.31
- 17 Change from baseline at week 17 Mean (SD) = 3.6 (1.6)
- 18 Change from baseline at week 17 Mean (SD) = 1.6 (1.3)
- 19 Unclear if outcome assessors were blinded to treatment allocation
- 20 Change scores after 6 weeks Mean (SD) = 0.04 (0.1)
- 21 Change scores after 6 weeks Mean (SD) = 0.01 (0.1)

Table K.4.3 Evidence profile for active use therapy compared with no active use therapy in children with unilateral or bilateral spasticity; treatment acceptability assessment

Quality as	ssessment						Summary	of finding	s		
quanty at						No. of pat	ients	Effect			
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	use	No active use therapy		Absolute	Quality
	-		leasure – Satisfact ated by higher valu	•	core at week 8 -	4week Occupationa	l therapy h	nome prog	ramme (O	ΓHP) group (range 0 to
,		no serious Iimitations			no serious imprecision	none	11	12	-	_1	High
COPM-S	score at week	8 - 8week OTHF	group (range 0 to	10, change from	n baseline) (Bet	ter indicated by high	ner values)				
1	randomised trials	no serious limitations			no serious imprecision	none	12	12	-	_2	High

Quality as	ssessment						Summary	of finding	s		
Quality ac	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	use	No active use therapy	Relative (95% CI)	Absolute	Quality
COPM-S	score at week	B - 4week OTHF	versus 8 week OT	HP (Better indic	ated by higher	values)					
1		no serious limitations		no serious indirectness	serious ³	none	12	12 ⁴	-	_5	Moderate
COPM-S	score at week	(range 0 to 10	, change from base	eline) (Better ind	icated by highe	r values)					
_		no serious Iimitations			no serious imprecision	none	28 ⁶	22 ⁷	-	_8	High
COPM-S	score at week	17 (range 0 to 1	0, change from ba	seline) (Better in	dicated by high	er values)	•				
,		no serious limitations			no serious imprecision	none	28 ⁹	22 ¹⁰	-	MD 2.00 higher (1.20 to 2.80 higher)*	

CI confidence interval, MD mean difference

- * Calculated by the NCC-WCH
- 1 Results for comparison of 4 weeks OHTP versus no program reported as an effect size of 2.5 (0.8 to 4.3) p=0.01
- 2 Results for comparison of 8 weeks OHTP versus no program reported as an effect size of 1.5 (0.3 to 2.6) p=0.01
- 3 Total population less than 400, 95% confidence interval crosses null effect and is wide
- 4 Comparison is 4 weeks OHTP versus 8 weeks OHTP group, not to "no program" group
- 5 Results for comparison of 4 weeks OHTP versus 8 weeks OHTP reported as an effect size of 0.8 (-1.1 to 2.8) p=0.40
- 6 Change from baseline at week 9 Mean (standard deviation; SD) = 3.7 (1.6)
- 7 Change from baseline at week 9 Mean (SD) = 1.4 (1.1)
- 8 Mean difference (95% CI) reported as 2.2 (1.51 2.86) effect size reported as 1.32
- 9 Change from baseline at week 17 Mean (SD) = 3.6 (1.6)
- 10 Change from baseline at week 17 Mean (SD) = 1.6 (1.3)

Table K.4.4 Evidence profile for Occupational therapy home programme for 4 or 8 weeks compared with no occupational therapy home programme in children with unilateral or bilateral spasticity; adverse events

Quality a	ssessment						Summary of find	dings			
Quality a	336331116111						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	llmprecision	Other considerations	Occupational therapy home	No occupational therapy home programme	Relative (95% CI)	Absoluto	Quality
Adverse	events										
-	Randomised trial	serious ¹	no serious inconsistency	no serious indirectness	serious ²			0/12 (0%)	-	_3	Low

CI confidence interval

Table K.4.5 Evidence profile for constraint-induced movement therapy versus bimanual therapy in children and young people with spasticity; functioning assessment

Quality ass	sessment						Summary of find	dings			
					No. of patients						
No. of studies	Design	Limitations	Inconsistency	Indirectness	llmprecision	Other considerations			Relative (95% CI)	Absolute	Quality
Assisting F	land Assess	ment (AHA) a	t 3 weeks (chang	e from baselin	e) (Better indi	cated by higher va	alues)				
1 study (Sakzewski 2011)		no serious limitations		no serious indirectness	serious ¹	none	31	31		MD 1.2 higher (1.2 lower to 3.5 higher)	

¹ No details reported of adverse events sought

² Total number of events is under 300, 95% confidence interval crosses null effect

³ No adverse events reported in either group

Quality ass	essment						Summary of find	dings			
Quality ass	essillelli						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Constraint- induced movement therapy	Bimanual training	Relative (95% CI)	Absolute	Quality
AHA at 26 v	weeks (chanç	ge from basel	ine) (Better indic	ated by higher	values)	'		1			
1 study (Sakzewski 2011)		no serious limitations		no serious indirectness	serious ¹	none	28	30	-	MD 0.7 lower (3.1 lower to 10.3 higher)	
Melbourne	Assessmen	t of Unilateral	Upper Limb Fun	ction (MAUUL	F) at 3 weeks	(change from bas	eline) (Better ind	icated by high	er values)	
1 study (Sakzewski 2011)		no serious limitations		no serious indirectness	serious ¹	none	31	31	-	MD 1.8 higher (0.3 lower to 4.0 higher)	Moderate
MAUULF at	t 26 weeks (c	hange from b	aseline) (Better i	ndicated by high	gher values)						
1 study (Sakzewski 2011)		no serious limitations		no serious indirectness	serious ¹	none	28	30	-	MD 4.4 higher (2.2 to 6.7 higher)	

CI confidence interval, MD mean difference

¹ Total population less than 400

Table K.4.6 Evidence profile for child-focused intervention compared with context-focused intervention in children with spasticity; joint movement assessment

Ouglity							Summary of find	lings			
Quality a	issessment						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Child-focused intervention	focused	Relative (95% CI)	Absolute	Quality
Range o	f movement i	right hip abdu	ction at 6 months	(final score) (Better indicate	ed by higher value	s)	•			
•	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 0.98 lower (5.56 lower to 3.6 higher)*	Low
Range o	f movement i	right hip abdu	ction at 9 months	(final score) (Better indicate	ed by higher value	s)	•		•	'
,	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	71	57		MD 1.3 higher (3.07 lower to 5.67 higher)*	Low
Range o	f movement l	eft hip abduc	tion at 6 months	(final score) (B	etter indicated	by higher values)					
	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 1.65 lower (6.08 lower to 2.78 higher)*	Low

Quality a	ssessment						Summary of find	lings			
							No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Child-focused	focused	Relative (95% CI)	Absolute	Quality
Range of	f movement I	eft hip abduct	tion at 9 months	(final score) (B	etter indicated	by higher values))				
	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 1.42 higher (2.95 lower to 5.79 higher)*	Low
Range of	f movement r	ight hip exter	sion at 6 months	(final score) (I	Better indicate	d by higher value	s)				
,	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 0.39 higher (0.3 lower to 1.08 higher)*	
Range of	f movement r	ight hip exten	sion at 9 months	(final score) (I	Better indicate	d by higher value	s)				
	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 0.16 higher (0.16 lower to 0.48 higher)*	Low

Ouglity	ssessment						Summary of find	lings			
Quality a	1336331116111						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Child-focused intervention	focused	Relative (95% CI)	Absolute	Quality
Range o	f movement I	eft hip extens	ion at 6 months (final score) (Be	etter indicated	by higher values)					
,	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 0.62 higher (0.18 lower to 1.42 higher)*	Low
Range o	f movement l	eft hip extens	ion at 9 months (final score) (Be	etter indicated	by higher values)					
,	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 0.03 lower (0.31 lower to 0.25 higher)*	Low
Range o	f movement r	ight popliteal	angle at 6 month	s (final score)	(Better indica	ted by higher value	es)				
	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 1.48 higher (4.43 lower to 7.39 higher)*	Low

Ouglity s	occoment						Summary of find	lings			
Quality a	issessment						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Child-focused intervention	Context- focused intervention	Relative (95% CI)	Absolute	Quality
Range o	f movement i	right popliteal	angle at 9 month	s (final score)	(Better indica	ted by higher value	es)		•		
-	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 0.29 lower (7.06 lower to 6.48 higher)*	Low
Range o	f movement l	eft popliteal a	ngle at 6 months	(final score) (E	Better indicate	d by higher values	5)			•	
	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 3.54 higher (2.65 lower to 9.73 higher)*	Low
Range o	f movement l	eft popliteal a	ngle at 9 months	(final score) (E	Better indicate	d by higher values	5)			•	
	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 2.67 higher (3.87 lower to 9.21 higher)*	Low

Ouglity	osossmont						Summary of find	lings			
auanty a	ssessment						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Child-focused intervention	Context- focused intervention	Relative (95% CI)	Absolute	Quality
Range of	f movement r	ight ankle do	rsiflexion at 6 mo	nths (final sco	re) (Better ind	cated by higher v	alues)		•		
,	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 0.58 lower (5.86 lower to 4.7 higher)*	Low
Range of	f movement r	ight ankle do	rsiflexion at 9 mo	nths (final sco	re) (Better ind	cated by higher v	alues)				
-	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 0.78 higher (4.98 lower to 6.54 higher)*	l ow
Range of	f movement I	eft ankle dors	iflexion at 6 mon	ths (final score) (Better indic	ated by higher val	lues)				
	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 0.32 lower (5.8 lower to 5.16 higher)*	

Quality a	ssessment				Summary of findings						
Quality a	336331116111						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	llmprecision		Child-focused	focused	Relative (95% CI)	Absolute	Quality
Range of	f movement l	eft ankle dors	iflexion at 9 mon	ths (final score) (Better indic	ated by higher val	ues)				
,	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 0.6 higher (4.83 lower to 6.03 higher)*	Low

CI confidence interval, MD mean difference

Table K.4.7 Evidence profile for child-focused intervention compared with context-focused intervention in children with spasticity; functioning assessment

Quality a	ssessment						Summary of findings					
							No. of patients		Effect			
No. of studies	Design	Limitations	Inconsistency	Indirectness	llmprecision		lintervention	focused	Relative (95% CI)	Absolute	Quality	
Pediatric	evaluation o	of disability in	ventory (PEDI) Se	elf care Function	onal skills at 6	months (final sco	re) (Better indicat	ted by higher	values)			
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	71	57		MD 2.49 higher (3.25 lower to 8.23 higher)*	Low	

^{*} Calculated by the NCC-WCH

¹ Due to insufficient recruitment and loss to follow up this study was underpowered and the sizes of treatment groups were unbalanced

² Total population less than 400

Ouglity	ssessment						Summary of find	lings			
Quality a	1336331116111						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Child-focused intervention	focused	Relative (95% CI)	Absolute	Quality
PEDI Sel	f care Functi	onal skills at	9 months (final so	core) (Better in	dicated by hig	her values)					
,	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 0.11 higher (6.22 lower to 6.44 higher)*	Low
PEDI Mo	bility Functio	nal skills at 6	months (final sc	ore) (Better ind	licated by high	ner values)					
,	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 1.17 higher (7.27 lower to 9.61 higher)*	Low
PEDI Mo	bility Functio	nal skills at 9	months (final sc	ore) (Better ind	licated by high	ner values)		•		•	
1	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 1.52 higher (7.26 lower to 10.3 higher)*	Low

Quality a	ssessment						Summary of find	lings			
Quality a	330331110111						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Ilmprecision	Other considerations	Child-focused intervention	Context- focused intervention	Relative (95% CI)	Absolute	Quality
PEDI Sel	f care Caregi	ver assistanc	e at 6 months (fir	nal score) (Bett	er indicated by	y higher values)					
,	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 0.58 lower (9.2 lower to 8.04 higher)*	
PEDI Sel	f care Caregi	ver assistanc	e at 9 months (fir	nal score) (Bett	er indicated by	y higher values)					
, ,	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 1.28 higher (7.78 lower to 10.34 higher)*	Low
PEDI Mo	bility Caregiv	er assistance	at 6 months (fina	al score) (Bette	r indicated by	higher values)					
	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	None	71	57	-	MD 0.42 higher (9.64 lower to 10.48 higher)*	Low

Ouglity	.aaaaamant						Summary of find	dings			
Quality a	ssessment						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Child-focused intervention	Context- focused intervention	Relative (95% CI)	Absolute	Quality
PEDI Mo	bility Caregiv	er assistance	at 9 months (fin	al score) (Bette	er indicated by	higher values)	•		<u> </u>	•	
-	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 3.18 higher (7.25 lower to 13.61 higher)* ³	l ow
Gross m	otor function	measure (GM	MFM)-66 overall a	t 6 months (fina	al score) (Bett	er indicated by hig	gher values)		1	•	
-	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 1.17 higher (3.64 lower to 5.98 higher)*	Low
GMFM-6	6 overall at 9	months (final	score) (Better in	dicated by high	ner values)						
	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	71	57	-	MD 2.73 higher (2.33 lower to 7.79 higher)*	Low

CI confidence interval, MD mean difference

^{*} Calculated by the NCC-WCH

¹ Due to insufficient recruitment and loss to follow up this study was underpowered and the sizes of treatment groups were unbalanced.

² Total population less than 400

³ The study authors reported a small but unquantified statistically significant change from baseline to 9 months, reflecting an increase in the child-focused group and a decrease in the context-focused group at 9-months' follow-up

Table K.4.8 Evidence profile for strengthening programmes (progressive resistive exercises) compared with usual care in children with unilateral or bilateral spasticity; functioning assessment

Quality a							Summary of find	ings			
auanty a	ssessment						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Strengthening	Usual care	Relative (95% CI)	Absolute	Quality
Gross mo	otor function	measure (GMF	M) -88: Goal dime	ension score at	6 weeks (chan	ge from baseline) (Better indicated b	y highe	r values)		
,	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	10 ³	10 ⁴	-	MD 8.6 higher* ⁵	Low
GMFM (v	ersion not rep	oorted): Dimen	sion D (Standing)	score at 6 wee	ks (change fro	m baseline) (Better	indicated by high	her valu	es)		
	randomised trials	no serious limitations		no serious indirectness	serious ²	none	9 ⁶	8 ⁷	_	MD 0.6 lower* ⁸	Moderate
_	randomised trials	no serious limitations		no serious indirectness	serious ²	none	11 ⁹	10 ¹⁰	-	MD 1 lower*	Moderate
GMFM (v	ersion not rep	oorted): Dimen	sion D (Standing)	score at 18 we	eks (change fr	om baseline) (Bette	er indicated by hig	gher val	ues)		
	randomised trials	no serious limitations		no serious indirectness	serious ²	none	11 ¹¹	9 ¹²	-	MD 0.9 lower* ¹³	Moderate
3MFM (v	ersion not rep	oorted): Dimen	sion E (Walking, r	unning and jun	nping) score a	6 weeks (change	rom baseline) (Be	etter inc	licated by	higher value	es)
,	randomised trials	no serious Iimitations		no serious indirectness	serious ²	none	9 ¹⁴	8 ¹⁵	_	MD 1 higher*	Moderate

Ouglity							Summary of find	ings			
Quality as	ssessment						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Strengthening	Usual care	Relative (95% CI)	Absolute	Quality
,	randomised trials	no serious limitations		no serious indirectness	serious ²	none	11 ¹⁶	10 ¹⁷	-	MD 3.2 higher*	Moderate
GMFM (v	ersion not rep	oorted): Dimen	sion E (Walking, r	running and jun	nping) score a	t 18 weeks (change	e from baseline) (E	Better in	dicated by	higher valu	ues)
,	randomised trials	no serious Iimitations		no serious indirectness	serious ²	none	11 ¹⁸	9 ¹⁹	-	MD 5.9 higher*	Moderate
GMFM-66	3: Total score	(change from	baseline at 12 we	eks) (Better ind	icated by high	er values)	<u>'</u>		•		
,	randomised trials	no serious Iimitations		no serious indirectness	serious ²	none	29 ²¹	29 ²²	-	MD 0.7 higher*	Moderate
GMFM (v	ersion not rep	oorted): Total s	core at 6 weeks (change from ba	ıseline) (Better	r indicated by high	er values)				
,	randomised trials	no serious limitations		no serious indirectness	serious ²	none	9 ²⁴	8 ²⁵	-	MD 0 higher*	Moderate
,	randomised trials	no serious limitations		no serious indirectness	serious ²	none	11 ²⁶	10 ²⁷	-	MD 1.2 higher*	Moderate
GMFM (v	ersion not rep	oorted): Total s	core at 18 weeks	(change from b	paseline) (Bette	er indicated by hig	her values)				
,	randomised trials	no serious Iimitations	no serious inconsistency	no serious indirectness	serious ²	none	11 ²⁸	9 ²⁹	-	MD 2 higher*	Moderate

aaaaamant						Summary of find	lings			
ssessment						No. of patients		Effect		
Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Strengthening	Usual care	Relative (95% CI)	Absolute	Quality
speed (metres	s/minute) at 6 v	weeks (change fro	om baseline) (B	etter indicated	by higher values)					<u> </u>
randomised trials	serious ¹			serious ²	none	10 ³⁰	10 ³¹	-	MD 9.2 higher* ³²	Low
speed (centin	netres/second)	at 6 weeks (chan	ge from baselir	ne) (Better indi	cated by higher val	ues)	1	1	•	•
randomised trials				serious ²	none	9 ³³	8 ³⁴	-	MD 25.5 higher ³⁵	Moderate
speed (metres	s/minute) at 6 v	weeks (10m walk t	test) (change fr	om baseline) (I	Better indicated by	higher values)				
randomised trials	no serious limitations			serious ²	none	11 ³⁶	10 ³⁷	-	MD 0.4 lower*	Moderate
speed (millim	etres/second)	at 8 weeks (chanç	ge from baselin	e) (Better indic	ated by higher valu	ies)				
randomised trials	serious ¹			serious ²	none	24 ³⁸	13 ³⁹	-	MD 0.3 higher	Low
speed (30-sec	ond walk test)	Change from bas	seline at 12 wee	ks (Better indi	cated by higher val	lues)				
randomised trials	no serious limitations			serious ²	none	27 ⁴⁰	28 ⁴¹	-	MD 2.2 higher* ⁴²	Moderate
	speed (metres randomised trials speed (centin randomised trials speed (metres randomised trials speed (millim randomised trials speed (30-sec	Design Limitations speed (metres/minute) at 6 variands randomised trials speed (centimetres/second) randomised no serious limitations speed (metres/minute) at 6 variands randomised no serious limitations speed (millimetres/second) randomised serious speed (millimetres/second) randomised serious speed (30-second walk test) randomised no serious	Design Limitations Inconsistency speed (metres/minute) at 6 weeks (change from processing trials and processing trials are remarked to the following trials ar	Design Limitations Inconsistency Indirectness speed (metres/minute) at 6 weeks (change from baseline) (B randomised trials	Design Limitations Inconsistency Indirectness Imprecision speed (metres/minute) at 6 weeks (change from baseline) (Better indicated randomised trials speed (centimetres/second) at 6 weeks (change from baseline) (Better indicated inconsistency indirectness) speed (centimetres/second) at 6 weeks (change from baseline) (Better indicated inconsistency indirectness) speed (metres/minute) at 6 weeks (10m walk test) (change from baseline) (Indirectness) speed (metres/minute) at 6 weeks (10m walk test) (change from baseline) (Indirectness) speed (millimetres/second) at 8 weeks (change from baseline) (Better indicated inconsistency indirectness) speed (millimetres/second) at 8 weeks (change from baseline) (Better indicated inconsistency indirectness) speed (30-second walk test) Change from baseline at 12 weeks (Better indicated inconsistency indirectness) speed (30-second walk test) Change from baseline at 12 weeks (Better indicated inconsistency indirectness)	Design Limitations Inconsistency Indirectness Imprecision Other considerations speed (metres/minute) at 6 weeks (change from baseline) (Better indicated by higher values) randomised trials no serious no serious serious serious serious none speed (centimetres/second) at 6 weeks (change from baseline) (Better indicated by higher values) randomised no serious no serious no serious serious serious serious serious none speed (metres/minute) at 6 weeks (10m walk test) (change from baseline) (Better indicated by trials limitations inconsistency indirectness indirectness serious	Design Limitations Inconsistency Indirectness Imprecision Other considerations speed (metres/minute) at 6 weeks (change from baseline) (Better indicated by higher values) randomised trials serious no serious no serious serious serious none inconsistency indirectness none randomised no serious no serious no serious serious serious none randomised limitations inconsistency indirectness none speed (metres/minute) at 6 weeks (change from baseline) (Better indicated by higher values) randomised no serious no serious no serious serious serious none randomised no serious no serious no serious no serious serious none randomised limitations inconsistency indirectness none limitations inconsistency indirectness none 11136 speed (millimetres/second) at 8 weeks (change from baseline) (Better indicated by higher values) randomised serious no serious no serious serious serious none randomised serious no serious no serious serious none 11136 speed (30-second walk test) Change from baseline at 12 weeks (Better indicated by higher values) randomised no serious no serious no serious serious none 2438 speed (30-second walk test) Change from baseline at 12 weeks (Better indicated by higher values) randomised no serious no serious no serious serious serious none	Design Limitations Inconsistency Indirectness Imprecision Other considerations speed (metres/minute) at 6 weeks (change from baseline) (Better indicated by higher values) randomised trials serious no serious no serious serious linconsistency indirectness no serious serious no serious serious? randomised no serious no serious no serious no serious serious? randomised limitations inconsistency indirectness none randomised serious no serious no serious serious serious? randomised serious no serious no serious serious serious? randomised serious no serious no serious serious serious serious 2 none 2438 1339 speed (30-second walk test) Change from baseline at 12 weeks (Better indicated by higher values) randomised no serious no serious no serious serious serious 2 none	Design Limitations Inconsistency Indirectness Imprecision Other considerations Strengthening Usual care (95% CI) speed (metres/minute) at 6 weeks (change from baseline) (Better indicated by higher values) randomised trials no serious no serious no serious serious none 10³0 10³1 - speed (centimetres/second) at 6 weeks (change from baseline) (Better indicated by higher values) randomised no serious no serious no serious serious none 10³0 10³1 - speed (metres/minute) at 6 weeks (change from baseline) (Better indicated by higher values) randomised no serious no serious no serious serious none 9³3 8³4 - speed (metres/minute) at 6 weeks (10m walk test) (change from baseline) (Better indicated by higher values) randomised no serious no serious no serious serious none 11³6 10³7 - speed (millimetres/second) at 8 weeks (change from baseline) (Better indicated by higher values) randomised serious no serious no serious none 24³8 13³9 - speed (30-second walk test) Change from baseline at 12 weeks (Better indicated by higher values) randomised no serious no serious no serious serious serious serious none 24³8 13³9 - speed (30-second walk test) Change from baseline at 12 weeks (Better indicated by higher values)	Design Limitations Inconsistency Indirectness Imprecision Other considerations Strengthening Usual care (95% CI) Absolute speed (metres/minute) at 6 weeks (change from baseline) (Better indicated by higher values) randomised trials imitations inconsistency indirectness indire

Quality as	ssessment						Summary of findi	ngs			
Quality a.	33c33illeilt						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Strengthening	Usual care	Relative (95% CI)	Absolute	Quality
Walking s	speed (metres	/minute) at 18	weeks (10m walk	test) (change f	rom baseline)	Better indicated by	y higher values)				
-		no serious Iimitations		no serious indirectness	serious ²	none	11 ⁴³	9 ⁴⁴	-	MD 0.7 lower*	Moderate
Timed sta	air (s) at 6 wee	eks (change fr	om baseline) (Bet	ter indicated by	lower values)						
		no serious Iimitations		no serious indirectness	serious ²	none	11 ⁴⁵	9 ⁴⁶	-	MD 5.6 lower* ⁴⁷	Moderate
Timed sta	air (s) at 18 we	eeks (change f	rom baseline) (Be	etter indicated b	y lower values)					
		no serious Iimitations		no serious indirectness	serious ²	none	11 ⁴⁸	9 ⁴⁹	-	MD 0.4 lower*	Moderate

- * Calculated by the NCC-WCH
- 1 Allocation concealment details unclear
- 2 Total population less than 400, 95% confidence interval not calculable
- 3 Pre-training score = 76.6 (standard error; SE 4.4), Adjusted post-training = 82.7 (SE 0.7)
- 4 Pre-training score = 83.1 (SE 3.2), Adjusted post-training = 80.6 (SE 0.7)
- 5 Analysis of covariance (ANCOVA) of post strengthening training scores: P (1 tailed) = 0.02 reported
- 6 Pre-training: 73.5±25.7, at 6 weeks = 73.8±26.6
- 7 Pre-training: 74.5 ± 23.7 , at 6 weeks = 75.4 ± 22.7
- 8 p=NS reported
- 9 Baseline score = 75.2 (14.4), at 6 weeks = 80.1 (13.7)
- 10 Baseline score = 74.6 (20.9), at 6 weeks = 80.5 (12.6)
- 11 Baseline score = 75.2 (14.4), at 18 weeks = 80.4 (13.2)
- 12 Baseline score = 74.6 (20.9), at 18 weeks = 80.7 (15.0)
- 13 NS (p value not reported)

14 Pre-training score: 61.6 ± 34.1 , at 6 weeks = 63.0 ± 34.4 15 Pre-training score: 61.4 ± 33.9 , at 6 weeks = 61.8 ± 34 16 Baseline score = 52.8 (31.3, at 6 weeks = 57.2 (29.7) 17 Baseline score = 68.3 (30.1), at 6 weeks = 69.5 (27.9) 18 Baseline score = 52.8 (31.3), at 18 weeks = 58.2 (31.3) 19 Baseline score = 68.3 (30.1), at 18 weeks = 67.8 (28.6) 20 NS (p value not reported) 21 Change from baseline (mean (95% CI)) Cycling group = 1.2 (0.5 to 1.8) 22 Change from baseline (mean (95% CI)) Control group = 0.5 (-0.2 to 1.3) 23 The value of the difference of the mean change scores between groups was not reported in the paper, although a p-value of 0.23 is given 24 Pre-training score = 86.5 ± 13.3 , Follow up at 6 weeks = 87 ± 13.5 25 Pre-training score = 85.2 ± 13.4 , Follow up at 6 weeks = 85.7 ± 13.3 26 Baseline score = 64.2 (27.8), at 6 weeks = 69.0 (21.4) 27 Baseline score = 71.7 (24.9), at 6 weeks = 75.3 (21.3) 28 Baseline score = 64.2 (27.8), at 18 weeks = 69.6 (21.4) 29 Baseline score = 71.7 (24.9), at 18 weeks = 74.3 (21.4) 30 Pre-training speed m/min = 56.9 (SE 5.1) Adjusted post-training speed 61.3 (1.7) 31 Pre-training speed m/min = 63.8 (SE 3.0) Adjusted post-training speed 59.0 (1.7) 32 ANCOVA of post strengthening training scores: P (1 tailed =: 0.18 (NS) reported 33 Pre-training speed cm/s = 54.7 ± 30.7 , at 6 weeks: 78.2 ± 39.3 34 Post training speed cm/s = 74.6 ± 38.7 , at 6 weeks: 67.8 ± 37.2 35 p<0.05 when compared to control group 36 Baseline speed (m/min) = 47.4 (23.3), at 6 weeks = 48.0 (21.2) 37 Baseline speed (m/min) = 49.5 (24.5), at 6 weeks = 50.5 (20.8) 38 Pre-training speed mm/s = 1075.6 (235.4) Post-training = 1119.3 (232.5) 39 Pre-training speed mm/s = 1128 (132.0) Post-training = 1171.4 (141.9) 40 Change from baseline (mean (95% CI)) Cycling group: 1.2 (-3.9 to 6.2) 41 Change from baseline (mean (95% CI)) Control group: 3.4 (-1.7 to 8.4) 42 p = 0.52 reported43 Walking speed (m/min) at baseline = 47.4 (23.3), at 18 weeks = 48.6 (23.3) 44 Walking speed (m/min) at baseline = 49.5 (24.5), at 18 weeks = 51.4 (16.5) 45 Timed stair, s, at baseline = 27.4 (34.7), at 6 weeks = 21.1 (25.6) 46 Timed stair, s, at baseline = 22.4 (20.5), at 6 weeks = 21.7 (21.5) 47 p=0.10 reported 48Timed stair (s) at baseline = 27.4 (34.7), at 18 weeks = 25.1 (33.6) 49 Timed stair (s) at baseline = 22.4 (20.5), at 18 weeks = 19.7 (15.2)

Table K.4.9 Evidence profile for strengthening programmes (progressive resistive exercises) compared with usual care in children with unilateral or bilateral spasticity; quality of life

Quality as	ssessment						Summary of findir	ngs			
Quality as	556551116111						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Strenathenina	Usual care	Relative (95% CI)	Absolute	Quality
Self-perc	eption of funct	ional compete	ence at 8 weeks (co	mposite score/2	25) (change fro	m baseline) (Better	indicated by highe	r value:	s)		
1 study (Unger 2006)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	24 ³	13 ⁴	-	MD 0.1 lower* ⁵	Low
Self-perc	eption of body	image at 8 we	eks (composite sc	ore/25) (change	from baseline)	(Better indicated b	y higher values)		•	•	
_	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	24 ⁶	13 ⁷	-	MD 2.9 higher* ⁸	Low
Self-perc	eption (Global	self-worth) at	18 weeks (score 0	to 4) (Better ind	icated by lower	values)				•	
1 study (Dodd 2004)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	10 ⁹	6 ¹⁰	-	MD 0.02 higher* ¹¹	Low

^{*} Calculated by the NCC-WCH

¹ Allocation concealment details unclear

² Total population less than 400, 95% confidence interval not calculable

³ Pre-training score = 19.9 (3.4), Post-training score = 21.3 (3.3)

⁴ Pre-training score = 19.0 (3.2), Post-training score = 20.5 (3.3)

⁵ p = NS reported

⁶ Pre-training score = 23.9 (4.1), Post-training score = 25.9 (3.4)

⁷ Pre-training score = 23.2 (4.6), Post-training score = 22.3 (4.7)

⁸ p < 0.05 reported

⁹ Baseline score = 3.41 (0.38), Follow up at 18 weeks = 3.57 (0.45)

¹⁰ Baseline score = 3.27 (0.52), Follow up at 18 weeks = 3.41 (0.49)

¹¹ p=NS reported

Table K.4.10 Evidence profile for strengthening programmes (progressive resistive exercises) compared with usual care in children with unilateral or bilateral spasticity; adverse events

Quality as	ssessment						Summary of find	ings			
Quality as	o o o o o o o o o o o o o o o o o o o						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Strengthening	Usual care	Relative (95% CI)	Absolute	Quality
Adverse (effects: pressi	re on shoulde	r, mild foot and an	kle discomfort		•			•	•	
	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	3/11 (27.3%) ³	0/9 (0%)	-	-	Low
Adverse (effects: mild p	ain, soreness	or muscle crampin	g						•	1
_	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	17/29 (58.6%)	0/29 (0%)	-	-	Low
Adverse (effects: obser	ved falls				1					
_	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	6/29 (20.6%)	0/29 (0%)	-	-	Low
Adverse (effects: skin ra	ash				•	_		'	•	
	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	1/29 (3.4%) ⁴	0/29 (0%)	-	-	Low

CI confidence interval

^{*} Calculated by the NCC-WCH

¹ Assessment details unclear

² Total population less than 400, 95% confidence interval not calculable

³ Three adverse events were reported in the strengthening group. One participant reported pressure on the shoulders from the backpack. As a result, weights were carried in a home-made vest to distribute the load more evenly. Two participants reported mild foot and ankle discomfort during the heel raise exercise. To alleviate this, the physiotherapy trainer modified the exercise so that ankle dorsiflexion did not exceed the plantargrade position. This modification enabled these participants to continue without incident.

⁴ One child with a skin rash related to the HR sensor

Table K.4.11 Evidence profile for serial casting compared with usual care in children with unilateral or bilateral spasticity; joint movement assessment

Quality as	sessment						Summary	of find	ings		
Quality as	sessment						No. of pa	tients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision		Serial casting	OSuai	Relative (95% CI)	Absolute	Quality
Passive ra	ange of moven	nent (PROM) an	kle dorsiflexion (k	nee flexed) (cha	nge from basel	ine at 12 weeks) (Be	etter indic	ated by	higher val	ues)	
1 study (McNee 2007)	randomised trials	serious ^{1,2}	no serious inconsistency		no serious imprecision	none	9	9	-	MD 11.66 higher (4.17 to 19.15 higher)	Moderate
PROM-an	kle dorsiflexio	n (knee extende	ed) (change from b	paseline at 12 we	eks) (Better inc	licated by higher va	lues)				
1 study (McNee 2007)	randomised trials	serious ^{1,2}	no serious inconsistency	no serious indirectness	serious ³	none	9	9	-	MD 1.45 higher (2.84 lower to 5.75 higher)	Low

¹ Small sample size and no calculation performed

² Unclear who measured the outcomes

³ Difference between groups not statistically significant

Table K.4.12 Evidence profile for serial casting compared with usual care in children with unilateral or bilateral spasticity; functioning assessment

Ouality as	sessment						Summary	of findi	ngs		
Quality as	36331116111						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision			Usual care	Relative (95% CI)	Absolute	Quality
Walking s	peed (metres/s	econd, tridime	nsional gait analysis	s) (Change from I	paseline at 12 w	eeks) (Better indicat	ed by high	er value	es)		
1 study (McNee 2007)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	9 ³	9 ⁴	-	MD 0.03 lower (0.18 lower to 0.13 higher) ⁵	

¹ Randomisation, allocation concealment and outcome assessor details not provided

² Total population less than 400, 95% confidence interval crosses null effect and is wide

³ Change from baseline at 12 weeks mean (standard deviation; SD) = -0.01 (0.1)

⁴ Change from baseline at 12 weeks mean (SD) = 0.02 (0.2)

⁵ p=NS reported

Table K.4.13 Evidence profile for early casting after botulinum toxin compared with delayed casting after botulinum toxin in children with unilateral or bilateral spasticity; tone and joint movement assessment

Quality asse	neemont						Summary of	findings			
Quality assi	essinem						No. of patien	ts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Early casting post botulinum toxin (BoNT)	post	Relative (95% CI)	Absolute	Quality
Modified Ta	rdieu scale so	core; gastrosol	eus spasticity at 3	months after ca	sting (Better i	ndicated by lower	values)				
1 study (Newman 2007)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	6 ³	64	-	MD 9.20 higher (1.37 to 17.03 higher) ⁵	Low
			nonths after castin			ralues)				_	
1 study (Newman 2007)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ⁶	none	6 ⁷	6 ⁸	-	MD 2.00 higher (6.76 lower to 10.76 higher) ⁹	rLow
Modified Ta	rdieu scale so	core; gastrosol	eus spasticity at 6	months after ca	sting (Better i	ndicated by lower	values)				
1 study (Newman 2007)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	6 ¹⁰	6 ¹¹	-	MD 15.00 higher (4.42 to 25.58 higher) ¹²	Low

Quality acco	ocmont						Summary of	findings			
Quality asse	:551116111						No. of patien	ts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	casting post	post	Relative (95% CI)	Absolute	Quality
PROM 6 mo	nths after cas	ting (Better ind	licated by higher v	/alues)							
-	randomised trials		no serious inconsistency	no serious indirectness	serious ⁶	none	6 ¹³	6 ¹⁴	-	MD 0.40 lower (10.39 lower to 9.59 higher) ¹⁵	Low

- 1 Outcomes assessor not blinded to group allocation, potential bias introduced by children concurrently receiving non described routine physiotherapy
- 2 Total population less than 400, 95% confidence interval does not cross null effect but is wide
- 3 Change from baseline at 3 months = -7.0 (6.7)
- 4 Change from baseline at 3 months = -16.2 (5.4)
- 5 p = 0.007 reported
- 6 Total population less than 400, 95% confidence interval crosses null effect and is wide
- 7 Change from baseline at 3 months = 9.8(8.1) p = 0.012 from baseline
- 8 Change from baseline at 3 months = 7.8 (5.2) p = 0.002 from baseline
- 9 p = 0.556 reported
- 10 Change from baseline at 6 months = 2.9 (9.9)
- 11 Change from baseline at 6 months = -12.1 (6.1)
- 12 p = 0.002 reported
- 13 Change from baseline at 6 months = 6.0 (9.2) p = 0.108 from baseline
- 14 Change from baseline at 6 months = 6.4 (6.0) p = 0.013 from baseline
- 15 p = 0.907 reported

Table K.4.14 Evidence profile for early casting after botulinum toxin compared with delayed casting after botulinum toxin in children with unilateral or bilateral spasticity; adverse events

Quality asse	essment						Summary of t	indings			
Luami, acco							No of patients	S	Effect		
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	casting post	post	Relative (95% CI)	Absolute	Quality
Pain in firs	t 48 hours of	cast applica	tion requiring re	-casting							
1 study (Newman 2007)	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	3/6 (50%) ³	0/6 (0%)	_4	-	Low

CI confidence interval

¹ Outcomes assessor not blinded to group allocation, potential bias introduced by children concurrently receiving non described routine physiotherapy

² Total population less than 400, 95% confidence interval not calculable

³ Three children complained of pain that required recasting

⁴ Chi-squared, p=0.08

Chapter 5 Orthoses

Table K.5.1 Evidence profile for solid ankle orthosis compared with no treatment in children with diplegia; lower limb; joint movement assessment

Ouglity ages	acmont.						Summary	of findin	gs		
Quality asse	essment						No. of pat	tients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Solid ankle- foot orthosis (SAFO)	No SAFO	Relative (95% CI)	Absolute (95% CI)	Quality
Ankle dorsif	lexion Initial of	contact (Bette	er indicated by hi	gher values) Re	thlefsen 1999			'			
1 study (Rethlefsen 1999)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	42 limbs ³	42 limbs ⁴	-	MD = 3.6 higher (1.42 higher to 5.78 higher)*	Low
Ankle dorsif	lexion Initial o	contact (Bette	r indicated by hi	gher values)					1		
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	16 ⁵	16 ⁶	-	MD = 12.20 higher (5.46 higher to 18.94 higher)*	Moderate
Ankle dorsi/	plantarflexion	at initial cont	act - post hoc an	alysis (Better i	ndicated by hig	gher values)			1		
1 study (Radtka 2005)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision ⁷	selective outcome reporting ⁸	12 ⁹	-12 ¹⁰	-	MD = 15.23 higher (11.02 higher to 19.44)*	Low

Ovelity coo							Summary	of findin	gs		
Quality asse	essment						No. of pat	tients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Solid ankle- foot orthosis (SAFO)	No SAFO	Relative (95% CI)	Absolute (95% CI)	Quality
Ankle dorsit	lexion, termin	nal stance (Be	tter indicated by	higher values)							
1 study (Rethlefsen 1999)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{2,11}	none	42 limbs ¹²	42 limbs ¹³	-	MD = 0.00 higher (2.71 lower to 2.71 higher)*	Low
Ankle dorsit	lexion, termin	al stance - po	st hoc analysis (Better indicate	d by higher val	ues)					
1 study (Radtka 2005)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision ⁷	selective outcome reporting ⁸	12 ^{1,14}	12 ¹⁵	-	MD = 12.80 higher (8.35 higher to 17.25 higher)*	Low
Peak dorsifl	exion stance	(Better indica	ted by higher val	ues)							
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious 11	none	16 ¹⁶	16 ¹⁷	-	MD = 6.80 higher (0.03 lower to 13.63 higher)*	Low
Peak dorsifl	exion time, %	(Better indica	ted by higher val	lues)						•	
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ¹¹	none	16 ¹⁸	16 ¹⁹	-	MD = 9.00 higher (0.36 lower to 18.36 higher)*	Low

Ovelity coo							Summary	of findin	ıgs		
Quality asse	essment						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Solid ankle- foot orthosis (SAFO)	No SAFO	Relative (95% CI)	Absolute (95% CI)	Quality
Peak dorsifl	exion swing (Better indicate	ed by higher valu	es)					_		
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	16 ²⁰	16 ²¹	-	MD = 10.80 higher (3.46 higher to 18.14 higher)*	Moderate
Range (Bett	er indicated b	y higher value	es)								
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	16 ²²	16 ²³	-	MD = 19.10 lower (26.59 lower to 11.61 lower)*	Moderate
Ankle range	Dorsiflexion	knee extensio	n, degree (Better	indicated by h	igher values)		l				
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious 11	none	16 ²⁴	16 ²⁵	-	MD = 0.00 higher (3.46 lower to 3.46 higher)*	Low
Dorsiflexion	knee flexion,	(degrees) (Be	tter indicated by	higher values)							
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious 11	none	16 ²⁶	16 ²⁷	-	MD = 2.00 higher (7.30 lower to 3.30 higher)*	Low

Quality asse	esmont						Summary	of findin	gs		
Quality asse	essinent						No. of pat	tients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Solid ankle- foot orthosis (SAFO)	No SAFO	Relative (95% CI)	Absolute (95% CI)	Quality
Knee, initial	contact (degr	ees) (Better in	dicated by highe	er values)							
1 study (Rethlefsen 1999)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ¹¹		42 limbs ²⁸	42 limbs ²⁹	-	MD = 1.00 lower (6.15 lower to 4.15 higher)*	Low
Knee, termii	nal stance (de	grees) (Better	indicated by hig	her values)							
1 study (Rethlefsen 1999)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ¹¹		42 limbs ³⁰	42 limbs ³¹		MD = 1.00 lower (5.28 lower to 3.28 higher)*	Low

- 2 Total population less than 400, 95% confidence interval for mean difference does not cross null hypothesis, however analysis is by limb.
- 3 Mean final score ± standard deviation (SD) reported as 3 ± 4
- 4 Mean final score ± SD reported as -0.6 ± 6
- 5 Mean final score \pm SD reported as 5.0 \pm 4.5
- 6 Mean final score \pm SD reported as -7.2 \pm 13
- 7 P < 0.05 (reported)
- 8 Post hoc analysis of data
- 9 Mean final score ± SD reported as 7.09 ± 5.06
- 10 Mean final score ± SD reported as -8.14 ± 5.46
- 11 Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and confidence intervals are wide
- 12 Mean final score ± SD reported as 8 ± 4
- 13 Mean final score ± SD reported as 8 ± 8

^{*} Calculated by the NCC-WCH

¹ All outcomes have serious limitations as although randomisation was performed, no details are given, blinding of assessors and caregivers was not carried out and the means presented are not "mean changes from baseline" but are "mean values from observations made in a given treatment period".

- 14 Mean final score ± SD reported as 11.50 ± 4.28
- 15 Mean final score ± SD reported as -1.30 ± 6.59
- 16 Mean final score ± SD reported as 12.5 ± 5.3
- 17 Mean final score ± SD reported as 5.7 ± 12.9
- 18 Mean final score ± SD reported as 36 ± 13
- 19 Mean final score ± SD reported as 27 ± 14
- 20 Mean final score ± SD reported as 7.2 ± 5.6
- 21 Mean final score \pm SD reported as -3.6 ± 13.9
- 22 Mean final score \pm SD reported as 10.6 \pm 3.8
- 23 Mean final score ± SD reported as 29.7 ± 14.8
- 24 Mean final score ± SD reported as 8 ± 5
- 25 Mean final score ± SD reported as 8 ± 5
- 26 Mean final score ± SD reported as 15 ± 6
- 27 Mean final score ± SD reported as 17 ± 9
- 28 Mean final score ± SD reported as 26 ± 11
- 29 Mean final score ± SD reported as 27 ± 13
- 30 Mean final score ± SD reported as 11 ± 10
- 31 Mean final score \pm SD reported as 12 \pm 10

Table K.5.2 Evidence profile for solid ankle orthosis compared with no treatment in children with hemiplegia; lower limb; joint movement assessment

. ".							Summary	of findin	gs		
Quality ass	sessment						No. of pa	tients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Solid ankle- foot orthosis (SAFO)	No SAFO	Relative (95% CI)	Absolute (95% CI)	Quality
Ankle dors	iflexion Initial	contact (Bette	er indicated by hi	gher values)			I		- I		
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision		29 ²	29 ³		MD = 13.00 higher (10.42 higher to 15.58 higher)*	Moderate
Peak dorsi	flexion stance	(Better indica	ted by higher va	lues)							
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision		29 ⁴	29 ⁵		MD = 5.00 higher (2.47 higher to 7.53 higher)*	Moderate
Ankle dors	iflexion Dynar	nic Range (Be	tter indicated by	higher values)							
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision		29 ⁶	29 ⁷		MD = 15.00 lower (17.73 lower to 12.27 lower)*	Moderate
Ankle rang	e Dorsiflexion	knee extensi	on, degree (Bette	r indicated by	higher values)		•	,	•		
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ⁸	none	29 ⁹	29 ¹⁰	-	MD = 1.00 higher (1.58 lower to 3.58 higher)*	Low

Ouglity and	accment						Summary	of finding	gs		
Quality ass	essment						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Solid ankle- foot orthosis (SAFO)	No SAFO	Relative (95% CI)	Absolute (95% CI)	Quality
Dorsiflexio	n knee flexion	, degrees (Be	tter indicated by	higher values)							
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ⁸	none	29 ¹¹	29 ¹²		MD = 1.00 higher (1.58 lower to 3.58 higher)*	Low

- 2 Mean final score ± standard deviation (SD) reported as 2 ± 4
- 3 Mean final score \pm SD reported as -11 ± 6
- 4 Mean final score ± SD reported as 11 ± 5
- 5 Mean final score \pm SD reported as 6 \pm 5
- 6 Mean final score \pm SD reported as 11 \pm 3
- 7 Mean final score ± SD reported as 26 ± 7
- 8 Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and confidence intervals are wide
- 9 Mean final score ± SD reported as 6 ± 4
- 10 Mean final score \pm SD reported as 5 ± 6
- 11 Mean final score ± SD reported as 13 ± 4
- 12 Mean final score ± SD reported as 12 ± 6

^{*} Calculated by the NCC-WCH

¹ All outcomes have serious limitations as although randomisation was performed, no details are given, blinding of assessors and caregivers was not carried out and the means presented are not "mean changes from baseline" but are "mean values from observations made in a given treatment period".

 Table K.5.3 Evidence profile for solid ankle orthosis compared with no treatment in children with diplegia; functioning assessment

Ovelity see							Summary	of finding	S		
Quality ass	essment						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Solid ankle- foot orthosis (SAFO)	No SAFO	Relative (95% CI)	Absolute (95% CI)	Quality
Gross moto	r function me	asure (GMFM)	(version not rep	orted): Dimens	ion D (Standin	g) score (Better in	ndicated by	higher val	ues)		
1 study (Buckon 2004a)	randomised trials	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ³	16 ⁴	-	MD = 0.40 higher (1.51 lower to 2.31 higher)*	Low
GMFM (vers	sion not repor	ted): Dimensio	on E (Walking, ru	nning and jum	ping) score (Be	etter indicated by	higher value	es)			
1 study (Buckon 2004a)	randomised trials	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ⁵	16 ⁶	-	MD = 3.50 higher (4.31 lower to 11.31 higher)*	Low
Pediatric ev	aluation of di	sability invent	ory (PEDI) : Fund	tional skills sc	ale, Mobility do	omain score (Bett	er indicated	by higher	values)		
1 study (Buckon 2004a)	randomised trials	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ⁷	16 ⁸	-	MD = 1.40 higher (0.65 lower to 3.45 higher)*	Low
PEDI: Careo	giver assistan	ce scale, Mobi	lity domain score	e (Better indica	ted by higher v	values)	1		'	'	1
1 study (Buckon 2004a)	randomised trials	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ⁹	16 ¹⁰	-	MD = 0.30 higher (0.64 lower to 1.24 higher)*	Low

Quality asse	esmont						Summary	of findings			
Quality asse	, someth						No. of pati	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Solid ankle- foot orthosis (SAFO)	No SAFO	Relative (95% CI)	Absolute (95% CI)	Quality
Velocity, me	etres/second (Better indicate	ed by higher valu	ies)							
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ¹¹	16 ¹²	-	MD = 0.04 lower (0.18 lower to 0.10 higher)*	Low
Velocity (ce	ntimetres/sec	ond) (Better in	ndicated by highe	er values)							
1 study (Radtka 2005)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²		40 limbs ¹³	40 limbs ¹⁴		MD = 0.40 higher (-4.03 lower to 4.83 higher)*	Low

- 3 Mean final score \pm standard deviation (SD) reported as 35.8 \pm 2.8
- 4 Mean final score \pm SD reported as 35.4 \pm 2.7
- 5 Mean final score \pm SD reported as 60.6 ± 10.5
- 6 Mean final score \pm SD reported as 57.1 \pm 12
- 7 Mean final score \pm SD reported as 52.6 \pm 3.2
- 8 Mean final score ± SD reported as 51.2 ± 2.7
- 9 Mean final score \pm SD reported as 34.4 ± 1.3
- 10 Mean final score ± SD reported as 34.1 ± 1.4
- 11 Mean final score ± SD reported as 1.04 ± 0.18
- 12 Mean final score \pm SD reported as 1.08 \pm 0.22
- 13 Mean final score ± SD reported as 63.6 ± 12
- 14 Mean final score ± SD reported as 63.2 ± 8.4

^{*} Calculated by the NCC-WCH

¹ All outcomes have serious limitations as although randomisation was performed, no details are given, blinding of assessors and caregivers was not carried out and the means presented are not "mean changes from baseline" but are "mean values from observations made in a given treatment period".

² Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and confidence intervals are wide

Table K.5.4 Evidence profile for solid ankle orthosis compared with no treatment in children with hemiplegia; functioning assessment

Ovelity cos							Summary	of findings	3		
Quality asso	essment						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Solid ankle- foot orthosis (SAFO)	No SAFO	Relative (95% CI)	Absolute (95% CI)	Quality
Gross moto	r function me	asure (GMFM)	(version not rep	orted): Dimens	ion D (Standin	g) score (Better in	ndicated by	higher valu	ies)		I.
1 study (Buckon 2001)	randomised trials	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ³	29 ⁴	-	MD = 0.40 higher (0.40 lower to 1.20 higher)*	Low
GMFM (vers	sion not repor	ted): Dimensio	on E (Walking, ru	nning and jump	oing) score (Be	etter indicated by	higher value	es)			
1 study (Buckon 2001)	randomised trials	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ⁶	29 ⁷	-	MD = 0.50 higher (1.79 lower to 2.79 higher)*	Low
Pediatric ev	aluation of di	sability invent	ory (PEDI): Func	tional skills sca	ale, Mobility do	main score (Bette	er indicated	by higher	values)		
1 study (Buckon 2001)	randomised trials	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ⁵	none	298	29 ⁹	-	MD = 1.40 higher (0.39 higher to 2.41 higher)*	Low
PEDI: Item 5	54, Ascent (pr	oportion of ch	ildren who keep	up with peers)	score (Better i	ndicated by highe	er values)				
1 study (Sienko- Thomas 2002)	randomised trials	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{2,10}	none	9/19	6/19	1.50 (0.66 to 3.39)	RD = 0.16 (0.15 lower to 0.46 higher)*	Low

0							Summary	of finding	S		
Quality ass	essment						No. of pat	tients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Solid ankle- foot orthosis (SAFO)	No SAFO	Relative (95% CI)	Absolute (95% CI)	Quality
PEDI: Item	59, Descent (p	proportion of c	hildren who kee	p up with peers) score (Better	indicated by high	er values)				
1 study (Sienko- Thomas 2002)	randomised trials	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{2,10}	none	7/19	5/19	1.40 (0.54 to 3.64)	RD = 0.11 (0.19 lower to 0.40 higher)*	Low
Velocity, m	etres/second	(Better indicat	ed by higher valu	ues)							
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ⁸	none	29 ¹¹	29 ¹²		MD = 0.04 higher (0.06 lower to 0.14 higher)*	Low
Velocity as	cent (time for	distance stair	1 to stair 3)								
1 study (Sienko- Thomas 2002)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{8,13}	none	19 ¹⁴	19 ¹⁵	lo lo	MD = 0.01 Lower (0.05 ower to 0.03 igher)*	ow
Velocity de	scent (time fo	r distance stai	r 3 to stair 1)				-				
1 study (Sienko- Thomas 2002)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{8,13}	none	19 ¹⁶	19 ¹⁷	h	MD = 0.04 Ligher (0.02 bwer to 0.09 ligher)*	ow

CI confidence interval, MD mean difference, RD risk difference

^{*} Calculated by the NCC-WCH

Spasticity in children and young people with non-progressive brain disorders (appendices)

- 1 All outcomes have serious limitations as although randomisation was performed, no details are given, blinding of assessors and caregivers was not carried out and the means presented are not "mean changes from baseline" but are "mean values from observations made in a given treatment period".
- 2 Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and confidence intervals are wide
- 3 Mean final score ± standard deviation (SD) reported as 38.0 ± 1
- 4 Mean final score ± SD reported as 37.6 ± 2
- 5 Total population less than 400, 95% confidence interval for mean difference does not cross null hypothesis but is wide
- 6 Mean final score ± SD reported as 67.6 ± 4
- 7 Mean final score \pm SD reported as 67.1 \pm 5
- 8 Mean final score \pm SD reported as 56.8 \pm 2
- 9 Mean final score ± SD reported as 55.4 ± 2
- 10 P = No significant difference (reported)
- 11 Mean final score ± SD reported as 1.11 ± 0.17
- 12 Mean final score ± SD reported as 1.07 ± 0.22
- 13 P = no significant difference (reported)
- 14 Mean final score ± SD reported as 0.270 ± 0.07
- 15 Mean final score ± SD reported as 0.280 ± 0.06
- 16 Mean final score ± SD reported as 0.296 ± 0.10
- 17 Mean final score ± SD reported as 0.259 ± 0.06

Table K.5.5 Evidence profile for hinged ankle foot orthosis with plantarflexion stop compared with solid ankle foot orthosis in children with diplegia; lower limb; joint movement assessment

0							Summary	of findings	3		
Quality asse	essment						No. of pat	tients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Hinged ankle- foot orthosis (HAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Ankle dorsi	flexion Initial of	contact (Bette	r indicated by hig	her values)							
1 study (Rethlefsen 1999)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	42 limbs ³	42 limbs ⁴	-	MD = 1.00 higher (0.94 lower to 2.94 higher)*	Low
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ⁵	16 ⁶	-	MD = 0.20 lower (3.03 lower to 2.63 higher)*	Low
Ankle dorsi/	plantarflexion	at initial conf	act - post hoc an	alysis (Better i	ndicated by hi	gher values)	L			L	
1 study (Radtka 2002)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	selective outcome reporting ⁷	12 ⁸	12 ⁹	-	MD = 1.72 lower (6.61 lower to 3.17 higher)*	Low
Ankle dorsit	flexion, termin	al stance (Be	ter indicated by	higher values)							
1 study (Rethlefsen 1999)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ¹⁰	none	42 limbs	42 limbs	-	MD = 5.00 higher (2.82 higher to 7.18 higher)*	Low

Quality ages							Summary	of finding	S		
Quality asse	essment						No. of pat	tients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Hinged ankle- foot orthosis (HAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
1 study (Radtka 2002)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{13,14}	selective outcome reporting ⁷	12 ¹⁵	12 ¹⁶	-	MD = 4.63 higher (0.38 higher to 8.88 higher)*	Low
Peak dorsifl	exion stance	(Better indicat	ed by higher valu	ues)							
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	16 ¹⁷	16 ¹⁸	-	MD = 6.10 higher (1.27 higher to 10.93 higher)*	Moderate
Peak dorsifl	exion time, %	(Better indica	ted by higher val	lues)				<u> </u>	<u> </u>		
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	16 ¹⁹	16 ²⁰	-	MD = 10.00 higher (3.18 higher to 16.82 higher)*	Moderate
Peak dorsifl	exion swing (Better indicate	ed by higher valu	es)							
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ²¹	16 ²²	-	MD = 1.10 higher (2.75 lower to 4.95 higher)*	Low

Ovality coop							Summary	of findings	S		
Quality asse	essment						No. of pat	tients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Hinged ankle- foot orthosis (HAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Range (Bett	er indicated b	y higher value	es)								
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	16 ²³	16 ²⁴	-	MD = 5.90 higher (2.54 higher to 9.26 higher)*	Moderate
Ankle range	Dorsiflexion	knee extensio	n, degree (Better	indicated by h	igher values)						
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ²⁵	16 ²⁶	-	MD = 2.00 higher (2.22 lower to 6.22 higher)*	Low
Dorsiflexion	knee flexion,	degrees (Bett	er indicated by h	igher values)							
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ²⁷	16 ²⁸	-	MD = 4.00 higher (0.90 lower to 8.90 higher)*	Low
Knee, initial	contact (degr	ees) (Better in	ndicated by highe	er values)							
1 study (Rethlefsen 1999)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²		42 limbs ²⁹	42 limbs ³⁰		MD = 2.00 higher (2.92 lower to 6.92 higher)*	Low

Quality asse	esmont				Summary of findings						
Quality asse	Quality assessment							No. of patients		Effect	
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Hinged ankle- foot orthosis (HAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Knee, termi	nal stance (de	grees) (Better	indicated by hig	her values)							
1 study (Rethlefsen 1999)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²		42 limbs ³¹	42 limbs ³²		MD = 2.00 higher (2.28 lower to 6.28 higher)*	Low

- 2 Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and confidence intervals are wide
- 3 Mean final score ± standard deviation (SD) reported as 4 ± 5
- 4 Mean final score ± SD reported as 3 ± 4
- 5 Mean final score \pm SD reported as 4.8 ± 4.6
- 6 Mean final score \pm SD reported as 5.0 \pm 4.5
- 7 Post hoc analysis of data
- 8 Mean final score ± SD reported as 5.37 ± 7.00
- 9 Mean final score ± SD reported as 7.09 ± 5.06
- 10 Total population less than 400, 95% confidence interval for mean difference does not cross null hypothesis, however analysis is by limb.
- 11 Mean final score ± SD reported as 13 ± 6
- 12 Mean final score ± SD reported as 8 ± 4
- 13 Total population less than 400, 95% confidence interval for mean difference does not cross null hypothesis but is wide
- 14 P < 0.05 (reported)
- 15 Mean final score ± SD reported as 16.13 ± 6.17
- 16 Mean final score ± SD reported as 11.50 ± 4.28
- 17 Mean final score ± SD reported as 18.6 ± 8.3
- 18 Mean final score \pm SD reported as 12.5 \pm 5.3
- 19 Mean final score ± SD reported as 46 ± 5

^{*} Calculated by the NCC-WCH

¹ All outcomes have serious limitations as although randomisation was performed, no details are given, blinding of assessors and caregivers was not carried out and the means presented are not "mean changes from baseline" but are "mean values from observations made in a given treatment period".

- 20 Mean final score ± SD reported as 36 ±13
- 21 Mean final score ± SD reported as 8.3 ± 5.5
- 22 Mean final score ± SD reported as 7.2 ± 5.6
- 23 Mean final score ± SD reported as 16.5 ± 5.7
- 24 Mean final score ± SD reported as 10.6 ± 3.8
- 25 Mean final score ± SD reported as 10 ± 7
- 26 Mean final score ± SD reported as 8 ± 5
- 27 Mean final score ± SD reported as 19 ± 8
- 28 Mean final score ± SD reported as 15 ± 6
- 29 Mean final score ± SD reported as 28 ± 12
- 30 Mean final score ± SD reported as 26 ± 11
- 31 Mean final score \pm SD reported as 13 \pm 10
- 32 Mean final score ± SD reported as 11 ± 10

Table K.5.6 Evidence profile for hinged ankle foot orthosis with plantarflexion stop compared with solid ankle foot orthosis in children with hemiplegia; lower limb; joint movement assessment

Ovelity				Summary							
Quality ass	sessment						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Hinged ankle- foot orthosis (HAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Ankle dors	iflexion Initial	contact (Bette	er indicated by hi	gher values)						_	
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ³	29 ⁴	-	MD = 1.00 higher (1.02 lower to 3.02 higher)*	Low
Peak dorsi	flexion stance	(Better indica	ted by higher va	lues)						1	
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	29 ⁵	29 ⁶	-	MD = 5.00 higher (2.21 higher to 7.79 higher)*	Moderate
Ankle dors	iflexion dynan	nic range (Bet	ter indicated by I	nigher values)							
1 study (Buckon 2001)	randomised study	serious limitations1	no serious inconsistency	no serious indirectness	no serious imprecision	none	29 ⁷	29 ⁸	-	MD = 5.00 higher (3.21 higher to 6.79 higher)*	Moderate

Quality ass	accmont						Summary	Summary of findings					
Quality ass	essille iit						No. of patients		Effect				
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Hinged ankle- foot orthosis (HAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality		
Ankle rang	e dorsiflexion	knee extension	on, degree (Bette	r indicated by h	nigher values)								
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ⁹	29 ¹⁰	-	MD = 1.00 higher (1.29 lower to 3.29 higher)*	Low		
Dorsiflexio	n knee flexion	, degrees (Be	tter indicated by	higher values)									
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ¹¹	29 ¹²	-	MD = 1.00 higher (1.58 lower to 3.58 higher)*	Low		

- 2 Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and confidence intervals are wide
- 3 Mean final score ± standard deviation (SD) reported as 3 ± 4
- 4 Mean final score ± SD reported as 2 ± 4
- 5 Mean final score \pm SD reported as 16 \pm 6
- 6 Mean final score ± SD reported as 11 ± 5
- 7 Mean final score ± SD reported as 16 ± 4
- 8 Mean final score \pm SD reported as 11 \pm 3
- 9 Mean final score ± SD reported as 7 ± 5
- 10 Mean final score ± SD reported as 6 ± 4
- 11 Mean final score ± SD reported as 14 ± 6
- 12 Mean final score ± SD reported as 13 ± 4

^{*} Calculated by the NCC-WCH

¹ All outcomes have serious limitations as although randomisation was performed, no details are given, blinding of assessors and caregivers was not carried out and the means presented are not "mean changes from baseline" but are "mean values from observations made in a given treatment period".

Table K.5.7 Evidence profile for hinged ankle foot orthosis with plantarflexion stop compared with solid ankle foot orthosis in children with diplegia; functioning assessment

Quality asse	naamant						Summary	of findings			
Quality asse	essment						No. of pati	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Hinged ankle- foot orthosis (HAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Gross moto	r function me	asure (GMFM)	(version not rep	orted): Dimens	ion D (Standin	g) score (Better in	ndicated by	higher valu	es)		
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ³	16 ⁴	-	MD = 0.30 lower (2.31 lower to 1.71 higher)*	Low
GMFM (vers	sion not repor	ted): Dimensio	on E (Walking, ru	nning and jum	ping) score (Be	etter indicated by	higher value	es)			
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ⁵	16 ⁶	-	MD = 0.40 higher (7.02 lower to 7.82 higher)*	Low
Pediatric ev	aluation of di	sability invent	ory (PEDI) : Fund	tional skills sc	ale, Mobility do	omain score (Bet	ter indicated	by higher	values)		
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ⁷	16 ⁸	-	MD = 0.70 lower (2.78 lower to 1.38 higher)*	Low
PEDI: Careo	giver assistan	ce scale, Mobi	lity domain score	e (Better indica	ted by higher v	values)					
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ⁹	16 ¹⁰	-	MD = 0.10 higher (0.73 lower to 0.93 higher)*	Low

Quality asse	eemont						Summary of findings					
Quality asse	:SSIIIeIIL						No. of patients		Effect			
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Hinged ankle- foot orthosis (HAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality	
Velocity, (m	etres/second)	(Better indica	ited by higher va	lues) (diplegia)								
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ¹¹	16 ¹²		MD = 0.06 lower (0.20 lower to 0.08 higher)*	Low	
Velocity (ce	ntimetres/sec	ond) (Better in	ndicated by higher	er values)			1		<u>'</u>			
1 study (Radtka 2002)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	12 ¹³	12 ¹⁴		MD = 4.93 higher (12.12 lower to 21.98 higher)*	Low	
Velocity, (m	etres/minute)	(Better indica	ted by higher val	ues) (diplegia)								
1 study (Rethlefsen 1999)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	None	40 limbs ¹⁵	40 limbs ¹⁶		MD = 0.90 higher (3.75 lower to 5.55 higher)*	Low	

^{*} Calculated by the NCC-WCH

¹ All outcomes have serious limitations as although randomisation was performed, no details are given, blinding of assessors and caregivers was not carried out and the means presented are not "mean changes from baseline" but are "mean values from observations made in a given treatment period".

² Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and confidence intervals are wide

³ Mean final score \pm standard deviation (SD) reported as 35.5 \pm 3.0

⁴ Mean final score ± SD reported as 35.8 ± 2.8

⁵ Mean final score ± SD reported as 61.0 ± 10.9

⁶ Mean final score \pm SD reported as 60.6 ± 10.5

Spasticity in children and young people with non-progressive brain disorders (appendices)

- 7 Mean final score ± SD reported as 51.9 ± 2.8
- 8 Mean final score \pm SD reported as 52.6 \pm 3.2
- 9 Mean final score ± SD reported as 34.5 ± 1.1
- 10 Mean final score ± SD reported as 34.4 ± 1.3
- 11 Mean final score ± SD reported as 0.98 ± 0.21
- 12 Mean final score ± SD reported as 1.04 ± 0.18
- 13 Mean final score ± SD reported as 99.63 ± 20.53
- 14 Mean final score ± SD reported as 94.70 ± 22.07
- 15 Mean final score ± SD reported as 64.5 ± 9
- 16 Mean final score ± SD reported as 63.6 ± 12

Table K.5.8 Evidence profile for hinged ankle foot orthosis with plantarflexion stop compared with solid ankle foot orthosis in children with hemiplegia; functioning assessment

Ovelity sees							Summary	of findings			
Quality asse	essment						No. of pati	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Hinged ankle- foot orthosis (HAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Gross moto	r function me	asure (GMFM)	(version not rep	orted): Dimens	ion D (Standin	g) score (Better ir	ndicated by	higher valu	es)		
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ³	29 ⁴	-	MD = 0.10 lower (0.61 lower to 0.41 higher)*	Low
GMFM (vers	ion not repor	ted): Dimensio	on E (Walking, ru	nning and jump	oing) score (Be	etter indicated by	higher value	es)			
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ⁵	29 ⁶	-	MD = 1.00 higher (0.79 lower to 2.79 higher)*	Low
Pediatric ev	aluation of di	sability invent	ory (PEDI): Funct	tional skills sca	ale, Mobility do	main score (Bett	er indicated	by higher	values)		
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ⁷	29 ⁸	-	MD = 0.10 lower (1.11 lower to 0.91 higher)*	Low
PEDI: Item 5	54, Ascent (pr	oportion of ch	ildren who keep	up with peers)	score (Better i	ndicated by highe	er values)				
1 study (Sienko- Thomas 2002)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{2,9}	none	12/19	9/19	1.33 (0.74 to 2.39)	RD = 0.16 higher (0.15 lower to 0.47 higher)*	Low

Ovelity and							Summary	of findings			
Quality ass	essment						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Hinged ankle- foot orthosis (HAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
PEDI: Item	59, Descent (p	proportion of o	children who keep	o up with peers	•	indicated by high	ner values)				
1 study (Sienko- Thomas 2002)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{2,9}	none	10/19	7/19	1.43 (0.69 to 2.96)	RD = 0.16 higher (0.15 lower to 0.47 higher)*	
Velocity, mo	etres/second	(Better indicat	ed by higher valu	ues)		<u>'</u>					
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ¹⁰	29 ¹¹		MD = 0.03 I higher (0.05 lower to 0.11 higher)*	LOW
Velocity as	cent (time for	distance stair	1 to stair 3)								
1 study (Sienko- Thomas 2002)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{2,12}	none	19 ¹³	19 ¹⁴		MD = 0.01 l higher (0.03 lower to 0.06 higher)*	LOW
Velocity des	scent (time fo	r distance sta	ir 3 to stair 1)								
1 study (Sienko- Thomas 2002)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{2,12}	none	19 ¹⁵		significant difference (reported)	MD = 0.02 I lower (0.07 lower to 0.04 higher)*	LOW

CI confidence interval, MD mean difference, RD risk difference

- * Calculated by the NCC-WCH
- 1 All outcomes have serious limitations as although randomisation was performed, no details are given, blinding of assessors and caregivers was not carried out and the means presented are not "mean changes from baseline" but are "mean values from observations made in a given treatment period".
- 2 Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and confidence intervals are wide
- 3 Mean final score \pm standard deviation (SD) reported as 37.9 \pm 1.0
- 4 Mean final score ± SD reported as 38.0 ± 1.0
- 5 Mean final score \pm SD reported as 68.1 \pm 3
- 6 Mean final score ± SD reported as 67.6 ± 4
- 7 Mean final score ± SD reported as 56.7 ± 2
- 8 Mean final score \pm SD reported as 56.8 ± 2
- 9 P = No significant difference (reported)
- 10 Mean final score \pm SD reported as 1.14 \pm 0.16
- 11 Mean final score ± SD reported as 1.11 ± 0.17
- 12 P = No significant difference (reported)
- 13 Mean final score ± SD reported as 0.281 ± 0.07
- 14 Mean final score ± SD reported as 0.270 ± 0.07
- 15 Mean final score ± SD reported as 0.280 ± 0.08
- 16 Mean final score ± SD reported as 0.296 ± 0.10

Table K.5.9 Evidence profile for posterior leaf spring ankle foot orthosis compared with solid ankle foot orthosis in children with diplegia; lower limb; joint movement assessment

Quality ass	occmont.						Summary o	of findings			
Quality ass	essille III						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Posterior leaf spring ankle- foot orthosis (PLSAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Ankle dors	iflexion Initial	contact (Bette	er indicated by hi	gher values)							
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ³	16 ⁴	-	MD = 0.20 lower (3.35 lower to 2.95 higher)*	Low
Peak dorsi	flexion stance	(Better indica	ted by higher val	lues)							
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ⁵	16 ⁶	-	MD = 2.30 higher (2.12 lower to 6.72 higher)*	Low
Peak dorsi	flexion time, %	6 (Better indic	ated by higher va	lues)							
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ⁷	16 ⁸	-	MD = 2.00 higher (7.01 lower to 11.01 higher)*	Low

Ovelity and							Summary of	of findings			
Quality ass	sessment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Posterior leaf spring ankle- foot orthosis (PLSAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Peak dorsi	flexion swing	(Better indicat	ed by higher value	ues)							
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ⁹	16 ¹⁰	-	MD = 0.30 lower (3.85 lower to 3.25 higher)*	Low
Range (Bet	ter indicated	by higher valu	es)								
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	16 ¹¹	16 ¹²	-	MD = 4.00 higher (1.11 higher to 6.89 higher)*	Moderate
Ankle rang	e dorsiflexion	knee extension	on, degree (Bette	r indicated by h	nigher values)						
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ¹³	16 ¹⁴	-	MD = 0.00 higher (3.83 lower to 3.83 higher)*	Low

Quality ass	easement						Summary o	of findings			
Quality ass	essille iii						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Posterior leaf spring ankle- foot orthosis (PLSAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Dorsiflexio	n knee flexion	, degrees (Be	tter indicated by	higher values)							
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ¹⁵	16 ¹⁶	-	MD = 3.00 higher (2.30 lower to 8.30 higher)*	Low

- 2 Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and confidence intervals are wide
- 3 Mean final score \pm standard deviation (SD) reported as 4.8 \pm 4.6
- 4 Mean final score \pm SD reported as 5.0 \pm 4.5
- 5 Mean final score ± SD reported as 14.8 ± 7.3
- 6 Mean final score ± SD reported as 12.5 ± 5.3
- 7 Mean final score ± SD reported as 38 ± 13
- 8 Mean final score \pm SD reported as 36 \pm 13
- 9 Mean final score \pm SD reported as 6.9 ± 4.6
- 10 Mean final score ± SD reported as 7.2 ± 5.6
- 11 Mean final score ± SD reported as 14.6 ± 4.5
- 12 Mean final score ± SD reported as 10.6 ± 3.8
- 13 Mean final score \pm SD reported as 8 ± 6
- 14 Mean final score ± SD reported as 8 ± 5
- 15 Mean final score ± SD reported as 18 ± 9
- 16 Mean final score ± SD reported as 15 ± 6

^{*} Calculated by the NCC-WCH

¹ All outcomes have serious limitations as although randomisation was performed, no details are given, blinding of assessors and caregivers was not carried out and the means presented are not "mean changes from baseline" but are "mean values from observations made in a given treatment period".

Table K.5.10 Evidence profile for posterior leaf spring ankle foot orthosis compared with solid ankle foot orthosis in children with hemiplegia; lower limb; joint movement assessment

Ouglity and	aaamant						Summary of	of findings			
Quality ass	sessment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Posterior leaf spring ankle- foot orthosis (PLSAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Ankle dors	iflexion Initial	contact (Bette	er indicated by hi	gher values)							
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ³	29 ⁴		MD = 2.20 lower (4.49 lower to 0.09 higher)*	Low
Peak dorsi	flexion stance	(Better indica	ted by higher val	lues)							
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	29 ⁵	29 ⁶		MD = 5.00 higher (2.21 higher to 7.79 higher)*	Moderate
Ankle dors	iflexion dynar	nic Range (Be	tter indicated by	higher values)							
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	29 ⁷	29 ⁸		MD = 4.00 higher (2.21 higher to 5.79 higher)*	Moderate

Quality ass	ecement						Summary of	of findings			
Quality ass	essillelli						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Posterior leaf spring ankle- foot orthosis (PLSAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Ankle rang	e dorsiflexion	knee extension	on, degree (Bette	r indicated by h	nigher values)						
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ⁹	29 ¹⁰	-	MD = 1.00 higher (1.02 lower to 3.02 higher)*	Low
Dorsiflexio	n knee flexion	, degrees (Be	tter indicated by	higher values)							
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ¹¹	29 ¹²		MD = 1.00 higher (1.58 lower to 3.58 higher)*	Low

^{*} Calculated by the NCC-WCH

¹ All outcomes have serious limitations as although randomisation was performed, no details are given, blinding of assessors and caregivers was not carried out and the means presented are not "mean changes from baseline" but are "mean values from observations made in a given treatment period".

² Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and confidence intervals are wide

³ Mean final score \pm standard deviation (SD) reported as -0.2 \pm 5

⁴ Mean final score ± SD reported as 2 ± 4

⁵ Mean final score \pm SD reported as 16 \pm 6

⁶ Mean final score \pm SD reported as 11 \pm 5

⁷ Mean final score ± SD reported as 15 ± 4

⁸ Mean final score ± SD reported as 11 ± 3

⁹ Mean final score ± SD reported as 7 ± 4

Table 5.11 Evidence profile for posterior leaf spring ankle foot orthosis compared with solid ankle foot orthosis in children with diplegia; functioning assessment

Quality ago	naamant						Summary o	of findings			
Quality asse	essinent						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Posterior leaf spring ankle- foot orthosis (PLSAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Gross moto	r function me	asure (GMFM)	(version not rep	orted): Dimens	ion D (Standin	g) score (Better ir	ndicated by h	igher value	es)		
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ³	16 ⁴	-	MD = 0.20 lower (2.25 lower to 1.85 higher)*	Low
GMFM (vers	sion not repor	ted): Dimensio	on E (Walking, ru	nning and jum	oing) score (Be	etter indicated by	higher value	s)			
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ⁵	16 ⁶	-	MD = 0.20 higher (7.01 lower to 7.41 higher)*	Low
Pediatric ev	aluation of di	sability invent	ory (PEDI): Func	tional skills sca	ale, Mobility do	main score (Bett	er indicated	by higher v	alues)		
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ⁷	168	-	MD = 0.30 higher (1.72 lower to 2.32 higher)*	Low

¹⁰ Mean final score ± SD reported as 6 ± 4

¹¹ Mean final score ± SD reported as 14 ± 6

¹² Mean final score ± SD reported as 13 ± 4

Quality ass	assmant						Summary o	of findings			
Quality ass	CSSIIICIIL						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Posterior leaf spring ankle- foot orthosis (PLSAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
PEDI: Care	giver assistan	ce scale, Mob	ility domain scor	e (Better indica	ted by higher	values)					
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ⁹	16 ¹⁰	-	MD = 0.10 lower (1.19 lower to 0.99 higher)*	Low
Velocity, (m	neters/second) (Better indicate	ated by higher va	lues)		<u>'</u>					
1 study (Buckon 2004a)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	16 ¹¹	16 ¹²	-	MD = 0.07 higher (0.06 lower to 0.20 higher)*	

- 3 Mean final score ± standard deviation (SD) reported as 35.6 ± 3.1
- 4 Mean final score \pm SD reported as 35.8 \pm 2.8
- 5 Mean final score ± SD reported as 60.8 ± 10.3
- 6 Mean final score ± SD reported as 60.6 ± 10.5
- 7 Mean final score ± SD reported as 52.9 ± 2.6
- 8 Mean final score \pm SD reported as 52.6 \pm 3.2
- 9 Mean final score \pm SD reported as 34.3 \pm 1.8
- 10 Mean final score ± SD reported as 34.4 ± 1.3
- 11 Mean final score ± SD reported as 1.11 ± 0.19
- 12 Mean final score ± SD reported as 1.04 ± 0.18

^{*} Calculated by the NCC-WCH

¹ All outcomes have serious limitations as although randomisation was performed, no details are given, blinding of assessors and caregivers was not carried out and the means presented are not "mean changes from baseline" but are "mean values from observations made in a given treatment period".

² Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and confidence intervals are wide

Table K.5.12 Evidence profile for posterior leaf spring ankle foot orthosis compared with solid ankle foot orthosis in children with hemiplegia; functioning assessment

Quality acc	ocement						Summary o	of findings			
Quality asse	essinent						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Posterior leaf spring ankle- foot orthosis (PLSAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Gross moto	r function me	asure (GMFM)	(version not rep	orted): Dimens	ion D (Standin	g) score (Better ir	ndicated by h	igher value	es)		
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ³	29 ⁴	-	MD = 0.20 lower (0.71 lower to 0.31 higher)*	Low
GMFM (vers	ion not repor	ted): Dimensio	on E (Walking, ru	nning and jump	oing) score (Be	etter indicated by	higher value	s)			
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ⁵	29 ⁶	-	MD = 0.50 higher (1.29 lower to 2.29 higher)*	Low
Pediatric ev	aluation of di	sability invent	ory (PEDI) : Fund	tional skills sc	ale, Mobility do	omain score (Bet	ter indicated	by higher	values)		
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ⁷	29 ⁸	-	MD = 0.20 lower (1.21 lower to 0.81 higher)*	Low
PEDI: Item 5	54, Ascent (pr	oportion of ch	ildren who keep	up with peers)	score (Better i	ndicated by highe	er values)				
1 study (Sienko- Thomas 2002)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{2,9}	none	8/19	9/19	0.89 (0.44 to 1.81)	RD = 0.05 lower (0.37 lower to 0.26 higher)*	Low

Quality ass	essment						Summary of	of findings			
Quality ass	cosment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Posterior leaf spring ankle- foot orthosis (PLSAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
PEDI: Item	59, Descent (p	roportion of c	hildren who keep	up with peers) score (Better	indicated by high	er values)				
1 study (Sienko- Thomas 2002)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{2,9}	none	6/19	7/19	0.86 (0.35 to 2.08)	RD = 0.05 lower (0.35 lower to 0.25 higher)*	Low
Velocity, (m	etres/second	(Better indica	ated by higher va	lues)							
1 study (Buckon 2001)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	29 ¹⁰	29 ¹¹		MD = 0.07 L higher (0.02 lower to 0.16 higher)*	ow
Velocity as	cent (time for	distance stair	1 to stair 3)								
1 study (Sienko- Thomas 2002)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{2,12}	none	19 ¹³	19 ¹⁴		MD = 0.03 L higher (0.01 lower to 0.08 higher)*	ow

Quality ass	assmant						Summary of	of findings			
Quality ass	CSSIIICIII						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Posterior leaf spring ankle- foot orthosis (PLSAFO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Velocity de	scent (time fo	r distance stai	ir 3 to stair 1)								
1 study (Sienko- Thomas 2002)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{2,12}	none	19 ¹⁵	19 ¹⁶		MD = 0.03 higher (0.04 lower to 0.09 higher)*	Low

CI confidence interval, MD mean difference, RD risk difference

- 2 Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and confidence intervals are wide
- 3 Mean final score ± standard deviation (SD) reported as 37.8 ± 1
- 4 Mean final score ± SD reported as 38.0 ± 1
- 5 Mean final score ± SD reported as 68.1 ± 3
- 6 Mean final score ± SD reported as 67.6 ± 4
- 7 Mean final score \pm SD reported as 56.6 \pm 2
- 8 Mean final score \pm SD reported as 56.8 \pm 2
- 9 P = No significant difference (reported)
- 10 Mean final score ± SD reported as 1.18 ± 0.17
- 11 Mean final score ± SD reported as 1.11 ± 0.17
- 12 P = No significant difference (reported)
- 13 Mean final score ± SD reported as 0.304 ± 0.07
- 14 Mean final score ± SD reported as 0.270 ± 0.07
- 15 Mean final score ± SD reported as 0.323 ± 0.11
- 16 Mean final score ± SD reported as 0.296 ± 0.10

^{*} Calculated by the NCC-WCH

¹ All outcomes have serious limitations as although randomisation was performed, no details are given, blinding of assessors and caregivers was not carried out and the means presented are not "mean changes from baseline" but are "mean values from observations made in a given treatment period".

Table K.5.13 Evidence profile for supramalleolar foot orthosis compared with solid ankle foot orthosis in children with diplegia; joint movement assessment

Quality as	ssessment				Summary of find	lings			_		
							No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness Imprecision Other considerations up mean (Better indicated by higher values)			Supramalleolar orthosis (SMO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Ankle do	rsiflexion ang	le at foot strik	e (degrees) - gro	up mean (Bette	r indicated by	higher values)					
1 study (Carlson 1997)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision ²	none	11 ³	114	-	MD = 6.70 lower (12.15 lower to 1.25 lower)*	

CI confidence interval, MD mean difference

^{*} Calculated by the NCC-WCH

¹ All outcomes have serious limitations as although randomisation was performed, no details are given, blinding of assessors and caregivers was not carried out and the means presented are not "mean changes from baseline" but are "mean values from observations made in a given treatment period".

² P < 0.05 (reported)

³ Mean final score \pm standard deviation (SD) reported as 3.3 ± 7.0

⁴ Mean final score \pm SD reported as 10.0 ± 6.0

Table K.5.14 Evidence profile for supramalleolar foot orthosis compared with solid ankle foot orthosis in children with diplegia; functioning assessment

Quality a	ssessment				Summary of find	lings					
Quality a	330331110111						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Supramalleolar orthosis (SMO)	Solid ankle- foot orthosis (SAFO)	Relative (95% CI)	Absolute (95% CI)	Quality
Velocity ((metres/ seco	nd) - group me	ean (Better indica	ted by higher v	/alues)						
1 study (Carlson 1997)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ^{2,3}	none	114	11 ⁵	-	MD = 0.00 (0.16 lower to 0.16 higher)*	Low

^{*} Calculated by the NCC-WCH

¹ All outcomes have serious limitations as although randomisation was performed, no details are given, blinding of assessors and caregivers was not carried out and the means presented are not "mean changes from baseline" but are "mean values from observations made in a given treatment period".

² Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and confidence intervals are wide

³ P = No significant difference (reported)

⁴ Mean final score \pm standard deviation (SD) reported as 1.00 \pm 0.20

⁵ Mean final score \pm SD reported as 1.00 ± 0.19

Table K.5.15 Evidence profile for elastomere arm splint compared with no orthosis in children with quadriplegia and hemiplegia; functioning assessment

Quality as	ssessment						Summary of fire	ndings			
Quanty a.	330331110111						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Elastomere arm splint	No orthosis	Relative (95% CI)	Absolute (95% CI)	Quality
GAS-T sc	ore (mean ch	ange score) (E	Better indicated b	y higher values	s)						
1 study (Elliott 2011)	randomised study	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	8 ¹	8 ²	-	MD = 18 (12.15 higher to 23.85 higher)* 3	High

^{*} Calculated by the NCC-WCH

¹ Mean change score \pm standard deviation (SD) reported as 53 \pm 5.0

² Mean final score \pm SD reported as 35 \pm 6.8

³ The authors note that a change score from baseline within a treatment group ≥50 represented the expected change in goal attainment over the 3 month period.

Chapter 6 Oral drugs

Table K.6.1 Evidence profile for bedtime doses of oral diazepam compared with placebo in children with spasticity of different severities; tone assessment

Ouglity asses	amant						Summary of f	indings			
Quality asses	ssment						No. of patient	:s	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Diazepam	Placebo	Relative (95% CI)	Absolute	Quality
	on of muscle to bo: (Better indic	=	lified Ashworth sca r values)	ale (MAS)) at 15	-20 days; b	edtime	half dose diaz	epam 0.5mg	g if <8.5kg,	1mg if >8.5kg	bodyweight
1 study (Mathew 2005b)	randomised trials	no serious Iimitations		no serious indirectness	serious ¹	none	59 ²	55 ³	-	$MD = 8.00^4$	Moderate
Mean reducti by higher val		ne score (MAS	6) at 15 - 20 days :	bedtime full dos	e diazepam	1mg if	<8.5kg, 2mg >	-8.5kg body	weight vers	sus placebo: (Better indicated
1 study (Mathew 2005b)	randomised trials	no serious limitations		no serious indirectness	serious ¹	none	59 ⁵	55 ⁶	-	$MD = 12.79^7$	Moderate

¹ Total population less than 400, confidence intervals not calculable

² Mean change reported as 8.53

³ Mean change reported as 0.53

⁴ Reported p<0.001 (one way analysis of variance (ANOVA))

⁵ Mean change reported as 13.32

⁶ Mean change reported as 0.53

⁷ Reported p<0.001 (one way ANOVA)

Table K.6.2 Evidence profile for bedtime dose of oral diazepam compared with placebo in children with spasticity of different severities; adverse events

Quality asse	essment						Summary of findings				
quality acce							No. of patients	S	Effect		
No. of studies							Diazepam	Placebo	Relative (95% CI)	Absolute	Quality
Daytime dro	wsiness assess	ed by caregive	ers at 15 -20 days:	bedtime dose di	azepam						
,		no serious limitations		no serious indirectness	serious ¹	none		0/55 (0%)	-	-	Moderate

CI confidence interval

Table K.6.3 Evidence profile for bedtime doses of oral diazepam compared with placebo in children with spasticity of different severities; treatment acceptability assessment

Quality asse	esmont						Summary of fi	ndings			
Quality asse	- Samerit						No. of patients	3	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Diazepam	Placebo	Relative (95% CI)	Absolute	Quality
Child's disp	osition during a	ctivities of dai	ly living at 15 - 20	days: bedti	me dose diazepa	m (Bet	ter indicated by	y higher val	ues)		
_		no serious limitations	no serious inconsistency		no serious imprecision ²		59 ³	55 ⁴	-	MD 5.93 higher (5.41 to 6.45 higher)	Moderate

¹ Total number of events less than 300, no reports of drowsiness in either group

Quality asso	esmont						Summary of fi	indings			
Quality asse	:551116111						No. of patients	s	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Diazepam	Placebo	Relative (95% CI)	Absolute	Quality
Burden of ca	aring for the chi	ld on the famil	y at 15 - 20 days: k	pedtime do	se diazepam (Bet	ter ind	icated by highe	er values)			
1		no serious limitations	no serious inconsistency	serious ¹	no serious imprecision ²	none	59 ⁵	55 ⁶	-	MD 7.31 higher (6.78 to 7.84 higher)	Moderate
Child's beha	avioural profile a	t 15 - 20 days:	bedtime dose dia	zepam (Bet	ter indicated by I	nigher	values)	·	1	·	
1		no serious limitations	no serious inconsistency	serious ¹	no serious imprecision ²	none	59 ⁷	55 ⁸	-	MD 7.35 higher (6.74 to 7.96 higher)	Moderate

^{*} Calculated by the NCC-WCH

¹ Outcomes are reported clearly but tools are not validated

² Total population less than 400, 95% confidence intervals do not include no effect and are not wide

³ Mean change in score 6.31 standard deviation (SD) 1.94

⁴ Mean change in score 0.38 SD 0.62

⁵ Mean change in score 7.75 SD 1.98

⁶ Mean change in score 0.44 SD 0.66

⁷ Mean change in score 8.17 SD 2.14

⁸ Mean change in score 0.82 SD 1.07

Table K.6.4 Evidence profile for oral baclofen compared with placebo in children with spasticity of different severities; tone assessment

Ouglity as		ant.						Summary of	findings			
Quality as	sessiii	lent						No. of patie	nts	Effect		
No. of studies		Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Baclofen	Placebo	Relative (95% CI)	Absolute	Quality
Improvem	ent of	spasticity (by 1	level of Ash	worth scale) at da	y 28 of treatmen	t						
1 study 1977)	,	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	9/20 ³	2/20 ⁴	(1.11 to	35 more per 100 (from 1 more to 173 more)*	_ow
Improvem	ent of	spasticity (by	more than 1 l	evel of Ashworth	scale) at day 28	of treatment						
1 study 1977)	,	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ⁵	none	5/20 ⁶	0/20 ⁶	RR 11 (0.65 to- 186.62)*	- 1	_ow
Reduced	muscle	tone (Ashwort	th scale) repo	rted by investigat	ors							
1 (McKinlay	- 1		serious ⁷	no serious inconsistency	no serious indirectness	serious ²	none	-	-	_8	- 1	LOW
Reduced	muscle	tone or better	movement re	ported by physion	therapist			•	•			
1 (McKinlay	- 1		serious ⁶	no serious inconsistency		no serious imprecision	none	14/20 ⁹	5/20 ⁹	(1.26 to	45 more per 100 (from 6 more to 130 more)*	Moderate

Quality assessn	nont						Summary of	findings			
Quality assessing	iletit						No. of patier	nts	Effect		
No. of studies	Design	Limitations	nconsistency		Imprecision	Other considerations	Baclofen	Placebo	Relative (95% CI)	Absolute	Quality
Mean Tardieu so	cale score at we	ek 12 of treat	ment (Better indic	cated by lower v	alues)						
-		no serious limitations		no serious indirectness	serious ¹⁰	none	15 ¹¹	15 ¹²	-	4.4 lower ¹³	Moderate

CI confidence interval, RR relative risk

- * Calculated by the NCC-WCH
- 1 No washout period, allocation concealment unclear
- 2 Total number of events less than 300, the 95% confidence interval is wide
- 3 Reported Sign test p<0.001
- 4 Reported Sign test p=0.25. The 2 patients who improved received placebo before baclofen
- 5 Total number of events less than 300, the 95% confidence interval includes no effect and is wide
- 6 Significance level was not reported. Using data from the first period only and analysing as a parallel trial, (3/10 in baclofen group versus 0/10 placebo group improved) relative risk (RR) = 7.00 (0.41 to 120.16) p=0.18
- 7 Allocation concealment unclear
- 8 Data not presented. Statement in report: "No significant changes between baclofen and placebo were observed in muscle tone". The assessment period for this observation was not reported
- 9 Reduced muscle tone or better movement was reported by physiotherapists in 14 children taking baclofen (70%), five children taking placebo (25%), p=0.064 reported, method used not reported. One child showed no change throughout. N=20
- 10 Total population less than 400, the 95% confidence interval includes no effect and is wide
- 11 Baseline Mean Tardieu score 20.9 (15.7 to 26.2). Final score 25.6 (19.4 25.8)
- 12 Baseline Mean Tardieu score 20.9 (15.7 to 26.2). Final score 27.1 (21.0 33.3)
- 13 No significant treatment, carry over or period effects found. Reported in paper as mean change = -4.4 (-10.8 to 2.0)

Table K.6.5 Evidence profile for oral baclofen compared with placebo in children with spasticity of different severities; functioning assessment

) vality access	a m t						Summary of	of findings			
Quality assessm	ient						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Baclofen	Placebo	Relative (95% CI)	Absolute	Quality
ean Pediatric e	evaluation of di	sability inven	tory (PEDI): Self c	are domain, sco	ore at week 12	of treat	ment: (Bett	er indicated	by higher v	/alues)	
•	randomised trials	no serious limitations		no serious indirectness	serious ¹	none	15 ²	15 ³	-	1.5 lower ⁴	Moderate
lean PEDI: Mob	oility domain so	ore at week 1	2 of treatment: (B	etter indicated b	by higher value	es)	·	<u> </u>		•	•
•	randomised trials	no serious limitations		no serious indirectness	serious ¹	none	15 ⁵	15 ⁶	-	1.5 lower ⁷	Moderate
lean PEDI: Soc	ial function sco	ore at week 12	of treatment: (Be	etter indicated b	y higher values	5)					
•	randomised trials	no serious limitations		no serious indirectness	serious ¹	none	15 ⁸	15 ⁹	-	0.2 lower ¹⁰	Moderate
Mean Goal attair	nment scaling (GAS) T-score	at week 12 of trea	atment: (Better i	indicated by high	gher va	alues)				
•	randomised trials	serious ¹¹	no serious inconsistency		no serious imprecision	none	15 ¹²	15 ¹³	-	6.6 higher ¹⁴	Moderate

Quality assessn	nent						Summary of	ffindings			
Quality assessin	ient						No. of patie	nts	Effect		
No. of studies	Design	Other considerations	Baclofen	Placebo	Relative (95% CI)	Absolute	Quality				
Gait assessmen	t performance i	mproved (int	erstep distance ar	nd angle of the f	oot to the direc	ction of	f walking ¹⁵				
1 study (McKinlay 1980)		serious ¹⁶	no serious inconsistency	no serious indirectness	serious ¹⁷	none	8/20	4/20	(0.72 to 5.59)* ¹⁸	20 more per 100 (from 6 fewer to 92 more)*	

CI confidence interval. RR relative risk

- * Calculated by the NCC-WCH
- 1 Total population less than 400, the 95% confidence interval includes no effect and is wide
- 2 Baseline mean PEDI self care score: 15.2 (6.5 to 23.8). Final score 19.1 (8.8 to 29.4)
- 3 Baseline mean PEDI self care score: 15.2 (6.5 to 23.8). Final score 20.5 (9.8 to 31.3)
- 4 Reported in paper as mean change = -1.5 (-3.5 to 0.6). No significant treatment, carry over or period effects found
- 5 Baseline mean PEDI mobility score: 17.5 (7.3 to 27.8). Final score 17.3 (6.9 to 27.7)
- 6 Baseline mean PEDI mobility score: 17.5 (7.3 to 27.8). Final score 18.7 (8.1 to 29.4)
- 7 Reported in paper as mean change = -1.5 (-3.1 to 0.2). No significant treatment, carry over or period effects found
- 8 Baseline mean PEDI social function score: 31.8 (18.0 to 45.6). Final score 32.7 (19.8 to 45.6)
- 9 Baseline mean PEDI social function score: 31.8 (18.0 to 45.6). Final score 32.9 (19.3 to 46.5)
- 10 Reported in paper as mean change = -0.2 (-3.0 to 2.6) No significant treatment, carry over or period effects found
- 11 A significant treatment effect was reported F (1.13) = 4.5, p=0.05. No significant carry over or period effects found
- 12 Baseline mean GAS T-score was set at 35.0. Final score 51.3 (47.4 to 55.1)
- 13 Baseline mean GAS T-score was set at 35.0. Final score 44.7 (39.3 to 50.0)
- 14 Reported in paper as mean change = 6.6 (1.0 higher to 12.3).
- 15 Physiotherapy staff asked children to walk along a roll of wallpaper on the floor after standing in black paint
- 16 Allocation concealment unclear
- 17 Total number of events less than 300, the 95% confidence interval includes no effect and is wide
- 18 The investigators report that performance was unchanged throughout for 8/20 children

Table K.6.6 Evidence profile for oral baclofen compared with placebo in children with spasticity of different severities; adverse effects

0 114							Summary of	findings			
Quality assessn	nent						No. of patier	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Baclofen	Placebo	Relative (95% CI)	Absolute	Quality
Adverse effects								•			
1 study (Milla 1977)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	5/20 ³	0/20	RR = 11 (0.65 to 186.62)*		Low
Adverse effects	(parental report	s)				1	1	1	!		l
1 study (McKinlay 1980)			no serious inconsistency	no serious indirectness	serious ⁵	none	8/20 ⁶	1/20	RR = 8 (1.1 to 58.19)*	35 more per 100 (from 1 more to 100 more)*	Low
Drowsiness (the	rapist and teach	ner reports)									
1 study (McKinlay 1980)			no serious inconsistency	no serious indirectness	serious ⁵	none	12/20	0/20	RR = 25 (1.58 to 395.48)* ⁷		Low
Adverse effects											
1 study (Scheinberg 2006)		no serious limitations		no serious indirectness	serious ²	none	6/15 ⁸	4/15 ⁹	(0.53 to	13 more per 100 (from 13 fewer to 87 more)*	Moderate

CI confidence interval, RR relative risk

^{*} Calculated by the NCC-WCH

¹ No washout period, allocation concealment unclear

- 2 Total number of events less than 300, the 95% confidence interval includes no effect and is wide
- 3 Children experienced adverse effects associated with baclofen during the initial dose finding period. 4/5 children were younger than 7 years and weighed less than 19 kg and in all five children symptoms disappeared a few days after stopping treatment. One child experienced hypotonia alone, two children experienced sedation alone, and two children experienced both adverse effects. No adverse reports were reported with stepped re-introduction of baclofen from a starting dose of 10mg/day, in all but one child, who had athetosis (sedation and hypotonia experienced at 20mg/day, but child continued in study on a 10mg/day dose).
- 4 Allocation concealment unclear
- 5 Total number of events less than 300, the 95% confidence interval is wide
- 6 Side effects were reported by the parents of 9/20 children. One of these reports pertained to the placebo period and the remaining 8 to the baclofen treatment period. In 4 of the 8 children reduction of dose of baclofen relieved side effects. Overall, drowsiness (5), sickness (2), nocturnal enuresis (2), absence states, query epileptiform (2) slurred speech (2) and weakness (1) were reported, although the side effects are not listed by treatment period.
- 7 The investigators report this as a statistically significant difference (p<0.001).
- 8 Adverse effects reported as lethargy (1), constipation (2), seizures (2), poor appetite (1), drowsiness (1)
- 9 Adverse effects reported as lethargy (1), constipation (2), seizures (1), hypotonia (1), difficulty passing urine (1)

Table K.6.7 Evidence profile for oral baclofen compared with placebo in children with spasticity of different severities; treatment acceptability assessment (parental report)

Quality accessm	ant.						Summary of	findings					
Quality assessm	lent						No. of patier	nts	Effect				
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Baclofen	Placebo	Relative (95% CI)	Absolute	Quality		
Wish to continue	sh to continue child's treatment (parental report)												
1 study (McKinlay 1980)		serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	-	-	-	_3	Low		
Willingness to co	ontinue with the	medication t	heir child was on ((parental report)			1						
_		no serious limitations		no serious indirectness	serious ⁴	none	6/15 ⁵	4/15 ⁶	RR = 1.5 (0.53 to 4.26)*	13 more per 100 (from 13 fewer to 87 more)*			

Quality access	ont.						Summary of	findings			
Quality assessm	ient						No. of patier	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness Imprecision Other			Baclofen	Placebo	Relative (95% CI)	Absolute	Quality
Positive effects ((parental report)										
		no serious limitations		no serious indirectness	serious ⁴	none	6/15 ⁷	7/15 ⁸	1 95)*	7 fewer per 100 (from 28 fewer to 44 more)*	

CI confidence interval, RR relative risk

- 2 Total number of events less than 300, confidence interval not calculable
- 3 One parent out of 20 said that they would continue with treatment (should their guess about active treatment be correct).
- 4 Total number of events less than 300, the 95% confidence interval includes no effect and is wide
- 5 Six parents said they would continue on baclofen therapy compared to 8 who would discontinue treatment and 1 who was unsure
- 6 Four parents said they would continue with placebo compared to 10 who would not continue
- 7 Six parents reported positive effects in their children whilst taking baclofen [sleeps better (3), more vocal (1), easier to dress (1), less spasms (1)]
- 8 Seven parents reported positive effects when their children were taking placebo [sleeps better (2), more vocal (1), more relaxed/settled (3), less drooling (1)]

^{*} Calculated by the NCC-WCH

¹ Allocation concealment unclear

Table K.6.8 Evidence profile for oral dantrolene compared with placebo in children with spasticity of different severities; tone assessment

Ovality assessment						Summary of fin	dings					
Quality assessr	nent						No. of patients		Effect			
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Dantrolene	Placebo	Relative (95% CI)	Absolute	Quality	
Motor tone asso	essment											
	randomised trials		no serious inconsistency	serious ¹	serious ²	none	59 ³	55 ³	-	0.609 higher ⁴	Low	
Scissoring												
-	randomised trials		no serious inconsistency	serious ⁵	serious ²	none	59 ³	55 ³	-	0.381 higher ⁶	Low	
Incidence of sp	asms (child	and parental i	eports of improve	ment)		•						
1 study (Joynt 1980)				no serious indirectness	serious ⁷	none	3/11	0/9	RR = 5.83 (0.34 to 100.03)*8		Moderate	
Passive range of	of movemen	t (PROM)				•						
- 1	randomised trials		no serious inconsistency	serious ⁹	serious ²	none	59 ³	55 ³	-	0.565 higher ¹⁰	Low	
Spontaneous ra	ange of mov	rement				•						
- 1	randomised trials		no serious inconsistency	serious ¹¹	serious ²	none	59 ³	55 ³	-	0.522 higher ¹²	Low	

CI confidence interval, RR relative risk

^{*} Calculated by the NCC-WCH

¹ Assessments made using an eight point quantitative score (ranging from hypotonia -1 to hypertonia - 8) rather than a validated scoring system

- 2 Total population less than 400, 95% confidence interval not calculable.
- 3 No baseline or final values of assessment reported
- 4 Mean difference between dantrolene and placebo periods reported as p>0.05 (T-test for mean ΔD-ΔP)
- 5 Assessments made using an four point quantitative score (ranging from no scissoring -1 to marked 4) rather than a validated scoring system
- 6 Mean difference between dantrolene and placebo periods reported as p<0.05 (T-test for mean ΔD-ΔP)
- 7 Total event rate less than 300, 95% confidence interval not calculable
- 8 p=0.089 reported
- 9 Assessments made using a seven point quantitative score (ranging from no restriction -1 to marked 7) rather than a validated scoring system
- 10 Mean difference between dantrolene and placebo periods reported as p>0.05 (T-test for mean ΔD-ΔP)
- 11 Assessments made using a seven point quantitative score (ranging from no restriction -1 to marked 7) rather than a validated scoring system
- 12 Mean difference between dantrolene and placebo periods reported as p>0.05 (T-test for mean ΔD-ΔP)

Table K.6.9 Evidence profile for oral dantrolene compared with placebo in children with spasticity of different severities; functioning assessment

Quality assessm	ont				Summary of find	ings						
Quality assessm	lent						No. of patients		Effect			
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Dantrolene	Placebo	Relative (95% CI)	Absolute	Quality	
Improvement in	motor functi	oning										
1 study (Denhoff 1975)	randomised trials	no serious limitations	no serious inconsistency	serious ¹	serious ²	none	10/26 ³	8/26 ³	-4	-	Low	
Improvement in	activities of	daily living and	behaviour – staff as	sessment		·					1	
1 study (Denhoff 1975)	randomised trials		no serious inconsistency	serious ¹	serious ²	none	11/20 ⁶	2/20 ⁶	-7	-	VERY Low	
Improvement in	Improvement in activities of daily living and behaviour – parent's assessment											
1 study (Denhoff 1975)	randomised trials	no serious limitations	no serious inconsistency	serious ¹	serious ²	none	12/28 ⁸	2/28 ⁸	-9	-	Low	

Quality assessm	nent						Summary of find	ings				
Quality assessin	ient						No. of patients		Effect			
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Dantrolene	Placebo	Relative (95% CI)	Absolute	Quality	
Overall assessm	nents (neurol	ogical, orthopa	edic, motor, activitie	es of daily livi	ing and beh	aviour)						
1 study (Denhoff 1975)			serious inconsistency	serious ¹	serious ²	none	28	28	-	_10	Low	
Activities of daily living using multiple performance tests at 9 weeks (e.g. as time taken to screw and unscrew two halves of barrels of three sizes and time taken to button and unbutton buttons of three different sizes)												
1 study (Joynt 1980)	randomised trials		no serious inconsistency	serious ¹¹	serious ²	none	11	9	-	_12	Low	

- * Calculated by the NCC-WCH
- 1 treatment difference scores derived for each child using an unvalidated scoring system to indicate the comparative degree of improvement in functioning experienced in each treatment period, described as marked, moderate or marginal.
- 2 Total event rate less than 300, 95% confidence interval not calculable.
- 3 10 children showed improvement with dantrolene (5 moderate and 5 marginal), 8 children showed improvement with placebo (2 marked, 4 moderate and 2 marginal) and 8 children showed no changes throughout the study
- 4 The investigators report that this was not a statistically significant result (determined by binomial distribution)
- 5 Results for 6 of 28 children not included (> 20% attrition rate)
- 6 11 children showed improvement with dantrolene (4 marked, 4 moderate and 3 marginal), 2 children showed improvement with placebo (2 marginal) and 8 children showed no changes throughout the study
- 7 The investigators report that this was a statistically significant result (p<0.02 determined by binomial distribution).
- 8 12 children showed improvement with dantrolene (5 marked, 4 moderate and 3 marginal), 3 children showed improvement with placebo (1 marked, 2 moderate) and 13 children showed no changes throughout the study
- 9 The investigators report that this was a statistically significant result (p<0.03 determined by binomial distribution).
- 10 The investigators note that only a few children showed marked differences in assessments (neurological, orthopaedic, motor, activities of daily living and behaviour) between the drug and the placebo periods: more showed moderate differences and most showed marginal differences. For between eight and 13 of the 28 children, no discernible differences in functioning could be found between the drug and placebo treatment periods.

- 11 Assessments used unvalidated scoring system
- 12 The investigators report that no statistically significant differences between the treatment and placebo groups were observed for these tests

Table K.6.10 Evidence profile for oral dantrolene compared with placebo in children with spasticity of different severities; adverse events

Quality assessn	nent						Summary of fi	ndings			
Quality assessin	ioni						No. of patients	S	Effect		
No. of studies	De sign Process at 15 - 20 days: bedtime dose diazer			rectne	Imprecision	Other considerations	Dantrolene	Placebo	Relative (95% CI)	Absolute	Quality
Daytime drowsii	ness assessed by	caregivers at 15	- 20 days: bedtime	e dose diazepam	ı						
1 study (Denhoff 1975)		no serious Iimitations		no serious indirectness	serious ¹	none	16/28 ²	7/28 ²	_3	-	Moderate

¹ Total event rate less than 300.

² Side effects were generally transient. These were seen in 23/28 children and included irritability, lethargy, drowsiness and general malaise.16 children experienced these during dantrolene treatment periods and 7 during placebo treatment periods. Irritability was more commonly reported during placebo periods than during dantrolene periods

³ The investigators report that this was a statistically significant result (p<0.03 reported)

Table K.6.11 Evidence profile for trihexiphenidyl compared with placebo in children with spasticity of different severities; tone assessment

Ouglity	assessment						Summary of findings				
Quality a	1556551116111						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Trihexyphenidyl	Placebo	Relative (95% CI)	Absolute	Quality
Mean Ba	rry-Albright Dyst	onia Scale (B <i>A</i>	AD) score: (Better in	dicated by	lower value	s)					
1 study (Rice 2008)	randomised trials		no serious inconsistency	serious ¹	serious ²	none	16 ³	16 ⁴	-	_5	Low

^{1 11/16} participants had dystonia and spasticity. 5/16 had dystonia alone

² Total population is less than 400, 95% confidence interval includes no effect

³ Baseline mean BAD score: 18.4 (15.5 to 21.2). Final score 18.3 (14.8 to 21.8)

⁴ Baseline mean BAD score: 18.4 (15.5 to 21.2). Final score 16.9 (13.4 to 20.4)

⁵ Reported mean difference = 0.9 (-2.2 to 3.9)

Table K.6.12 Evidence profile for trihexiphenidyl compared with placebo in children with spasticity of different severities; functioning assessment

Ouglity o	ccccmont						Summary of findings				
Quality a	ssessment						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Trihexyphenidyl	Placebo	Relative (95% CI)	Absolute	Quality
Mean Qu	ality of upper ext	tremity skills to	est (QUEST) score ((Better indic	ated by high	ner valu	ies)				
1 study (Rice 2008)	randomised trials		no serious inconsistency	serious ¹	serious ²	none	16 ³	16 ⁴	-	_5	Low
Mean Go	al attainment sca	aling (GAS) sc	ore (Better indicate	d by higher	values)				•		
1 study (Rice 2008)	randomised trials		no serious inconsistency	serious ¹	serious ²	none	16 ⁷	16 ⁸	-	_9	Very low
Mean Ca	nadian occupation	onal performar	nce measure - perfo	rmance (CC	PM-P) score	e (perfo	rmance) (Better indicate	d by higher	values)	<u> </u>	!
1 study (Rice 2008)	randomised trials		no serious inconsistency	serious ¹	serious ²	none	16 ¹¹	16 ¹²	-	_13	Very low

- 1 11/16 participants had dystonia and spasticity. 5/16 had dystonia alone
- 2 Total population is less than 400, 95% confidence interval includes no effect
- 3 Baseline mean QUEST score: 15.3 (-0.1 to 30.7). Final score 13.5 (1.4 to 25.5)
- 4 Baseline mean QUEST score: 15.3 (-0.1 to 30.7). Final score 15.1 (2.8 to 27.4)
- 5 Reported mean difference = -1.6 (-6.3 to 3.1)
- 6 Evidence of statistically significant order effect: F (1, 11) = 10.2, p= 0.009
- 7 Baseline mean GAS score: 20.0. Final score 39.3 (31.8 to 46.8)
- 8 Baseline mean GAS score: 20.0. Final score 33.3 (27.4 to 39.1)
- 9 Reported mean difference = 6.8 (-3.7 to 17.5)

- 10 Evidence of statistically significant order effect: F (1, 12) =4.7, p=0.05
- 11 Baseline mean COPM score (performance): 2.6 (2.2 to 3.0). Final score 4.4 (3.6 to 5.3)
- 12 Baseline mean COPM score (performance): 2.6 (2.2 to 3.0). Final score 3.8 (3.0 to 4.7)
- 13 Reported mean difference = 0.8 (-0.5 to 2.0)

Table K.6.13 Evidence profile for trihexiphenidyl compared with placebo in children with spasticity of different severities; adverse events

Quality a	ıssessment				Summary of findings						
Quanty &	1336331116111						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Trihexyphenidyl	Placebo	Relative (95% CI)	Absolute	Quality
Adverse	effects										
1 study (Rice 2008)	randomised trials		no serious inconsistency	serious ¹	serious ²	none	16/16 ³	6/16 ⁴	-	-	Low

^{1 11/16} participants had dystonia and spasticity. 5/16 had dystonia alone

² Total population is less than 400

³ Adverse effects symptoms during the active medication phase included agitation (distressed without reason or other odd behaviour), constipation, dry mouth and poor sleep. One child developed multiple adverse effects related to trihexyphenidyl (including dry mouth, confusion, agitation, inability to sleep, tachycardia, hallucinations, and urinary incontinence) requiring brief admission to hospital after the initial dose and had to withdraw from the trial.

⁴ Six of the sixteen participants (38%) experienced side effects during the placebo phase.

Table K.6.14 Evidence profile for trihexiphenidyl compared with placebo in children with spasticity of different severities; treatment acceptability assessment

Quality a	ssessment						Summary of findings				
Quanty a	1336331116111						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Trihexyphenidyl Placebo		Relative (95% CI)		Quality
Mean Ca	nadian occupation	onal performar	nce measure - satis	faction (CO	PM-S) scor	e (Bette	r indicated by higher val	ues)			
1 study (Rice 2008)	randomised trials		no serious inconsistency	serious ¹	serious ²	none	16 ³	16 ⁴	-	_5	Low

^{1 11/16} participants had dystonia and spasticity. 5/16 had dystonia alone

² Total population is less than 400, 95% confidence interval includes no effect

³ Baseline mean COPM score (satisfaction): 2.3 (1.8 to 2.7). Final score 4.7 (3.5 to 5.9)

⁴ Baseline mean COPM score (satisfaction): 2.3 (1.8 to 2.7). Final score 3.8 (2.8 to 4.8)

⁵ Reported mean difference = 0.7 (-0.3 to 1.8)

Chapter 7 Botulinum toxin

Table K.7.1 Evidence profile for botulinum toxin type A and physical therapy compared with physical therapy alone; upper limb; tone and joint movement assessment

) uality a	occoment						Summary of	findings			
auanty a	ssessment						No. of patient	ts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	(BoNT-A)/	Occupational therapy only all outcomes		Absolute	Quality
/lodified	Ashworth scal	e (MAS) score should	er adductors - 4 r	months							
1 study (Greaves 2004)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	9	9	OR 0.20 (0.03, 1.15)†	-	Low
MAS sco	ore elbow flexor	s - 3 months								l	
	randomised trials	serious ³	no serious inconsistency		no serious imprecision	none	41	39	OR 0.16 (0.06 to 0.43)†		Moderate
MAS sco	ore elbow flexor	s - 6 months								l	
2 studies (Russo 2007; Wallen 2007)	randomised trials	serious ³		no serious indirectness	serious ⁵	none	41	39	OR 0.33 (0.13 to 0.86)†		Low

Quality a	ssessment						Summary of f	indings			
Quality a	556551116111						No. of patient	s	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	er sideratior	Botulinum toxin A (BoNT-A)/ Occupational therapy	Occupational therapy only all outcomes		Absolute	Quality
Modified	Tardieu scale so	core (mean change fr	om baseline scor	e); elbow flexo	ors at 4 months (B	etter in	dicated by lov	wer values)			
1 study (Greaves 2004)			no serious inconsistency	no serious indirectness	serious ⁶	none	9	9	-	MD 43.89 lower (92.99 lower to 5.21 higher)†	Low
Modified	Tardieu scale so	core (mean final scor	e); elbow flexors	at 4 months, (0	Cycle 1) (Better in	dicated	by lower valu	ies)			
	randomised trials	no serious limitations		no serious indirectness	serious ⁶	none	11 ⁷	11 ⁸	-	MD 34.3 lower (70.67 lower to 2.07 higher)*	Moderate
Modified	Tardieu scale so	core (mean final scor	e); elbow flexors	, (Cycle 2) (Bet	ter indicated by lo	ower va	alues)				
	randomised trials	no serious limitations		no serious indirectness	serious ⁹	none	11 ¹⁰	11 ¹¹	-	MD 36 lower (71.3 to 0.7 lower)*	Moderate

Quality a	ssessment						Summary of f	indings			
Quality a	ssessillelli						No. of patient	:s	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	er sidera	(BoNT-A)/	Occupational therapy only all outcomes		Absolute	Quality
Modified	Tardieu scale s	core (mean final sco	re); elbow flexors	s, (Cycle 3)(Bet	ter indicated by l	ower va	alues)				
	randomised trials		no serious inconsistency	no serious indirectness	serious ⁶	none	11 ¹²	11 ¹³	-	MD 42.8 lower (86.48 lower to 0.88 higher)*	Moderate
Passive r	ange of movem	ent (PROM) elbow ex	tension (change	from baseline)	- 3 months (Bette	er indic	ated by highe	r values)			
2 studie (Fehlings 2000; Wallen 2007)			no serious inconsistency	no serious indirectness	serious ⁶	none	34	31	-	MD 0.11 higher (2.96 lower to 3.19 higher)†	
PROM ell	bow extension (change from baseline	e) - 6 months (Bet	ter indicated b	y higher values)						
2 studie (Fehlings 2000; Wallen 2007)			no serious inconsistency	no serious s indirectness	serious ⁶	none	34	32	-	MD 0.15 lower (3.38 lower to 3.07 higher)†	

Ouglity	sessment						Summary of f	indings			
Quality as	36331116111						No. of patient	ts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	er sidera	(BoNT-A)/	Occupational therapy only all outcomes		Absolute	Quality
MAS scor	e - pronators - 3	3 Months									
1 study (Wallen 2007)	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	20	17	OR 1.58 (0.45 to 5.52)†		Moderate
MAS scor	e - pronators -	4 Months									
1 study (Greaves 2004)			no serious inconsistency	no serious indirectness	serious ⁶	none	9	9	OR 0.13 (0.02 to 0.97)†		Low
MAS scor	e - pronators - 6	6 Months									
1	randomised trials		no serious inconsistency	no serious indirectness	serious ⁶	none	20	17	OR 1.5 (0.22 to 10.16)†		Low
Modified 7	Tardieu scale so	core (mean change fr	om baseline scor	e); forearm pro	onators at 4 mont	hs, (Cy	cle 1) (Better	indicated by lo	wer valu	es)	
_	randomised trials		no serious inconsistency	no serious indirectness	serious ¹⁶	none	11 ¹⁷	11 ¹⁸	-	MD 4 higher*	Low
Modified 7	Tardieu scale so	core (mean change fr	om baseline scor	e); forearm pro	onators, (Cycle 2)	(Bette	r indicated by	lower values)			
1 study (Olesch 2010)	no s methodology chosen		no serious inconsistency i	no serious ndirectness	serious ¹⁵	none	11 ¹⁹ 1	1 ²⁰ -		MD 5.8 ower*	Low

Quality as	sessment						Summary of f	indings			
Quality as	3633IIIGIII						No. of patient	s	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Botulinum toxin A (BoNT-A)/ Occupational therapy	Occupational therapy only all outcomes		Absolute	Quality
Modified 7	Tardieu scale s	core (mean change fr	om baseline sco	re); forearm pro	onators, (Cycle 3)	(Bette	r indicated by	lower values)			
1 study (Olesch 2010)	no methodology chosen		no serious inconsistency	no serious indirectness	serious ¹⁵	none	11 ²¹ 1	1 ²² -		MD 18.5 ower*	Low
Active ran	ige of moveme	nt (AROM) supination	(change from ba	aseline) - 3 mor	ths (Better indica	ated by	higher values)			
1 study (Speth 2005)	randomised trials		no serious n inconsistency ir	o serious ndirectness	serious ⁶	none	10	10	-	MD 16 lower (33. lower to 0. higher)†	Moderate
AROM su	pination (chan	ge from baseline) - 6 r	nonths (Better in	dicated by high	ner values)						
1 study (Speth 2005)	randomised trials	no serious limitations		no serious indirectness	serious ⁶	none	10	10	-	MD 8.4 low (36.74 low to 19. higher)†	ver Moderate
PROM for	earm supination	on (change from base	ine) - 3 months (Better indicated	d by higher values	s)				!	'
	randomised trials		no serious inconsistency	no serious indirectness	serious ⁶	none	34	31	-	MD 3. higher (0. lower to 8 higher)†	II OW

Ovelity on							Summary of f	indings			
Quality as	sessment						No. of patient	s	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Botulinum toxin A (BoNT-A)/ Occupational therapy	Occupational therapy only all outcomes		Absolute	Quality
PROM for	earm supinatio	n (change from base	line) - 6 months (I	Better indicated	d by higher values	s)					
	randomised trials		no serious inconsistency	no serious indirectness	serious ⁶	none	34	32	-	MD 0. higher (4. lower to 6. higher)†	45
MAS scor	e wrist flexors	- 3 Months									
2 studies (Russo 2007, Wallen 2007)	randomised trials	serious ³		no serious indirectness	no serious imprecision		0/0 (0%)	0/0 (0%)	OR 0.1 (0.03 to 0.29)†		Moderate
MAS scor	e wrist flexors	- 4 Months								L	
	randomised trials		no serious inconsistency	no serious indirectness	serious ⁶	none	0/0 (0%)	0/0 (0%)	OR 0.36 (0.07 to 1.87)†		Low
MAS scor	e wrist flexors	- 6 Months						l		I .	
2 studies (Russo 2007, Wallen 2007)	randomised trials	serious ³		no serious indirectness	no serious imprecision		0/0 (0%)	0/0 (0%)	OR 0.2 (0.08 to 0.51)†		Low

O ! ! !							Summary of f	indings			
auanty as	sessment						No. of patient	s	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	er sideratior		Occupational therapy only all outcomes		Absolute	Quality
Modified T	Tardieu scale s	core (mean change f	rom baseline sco	re); wrist flexo	rs at 4 months (B	etter in	dicated by lov	ver values)			
-	randomised trials		no serious inconsistency	no serious indirectness	serious ⁶	none	10	10	-	MD 10. lower (30. lower to 9. higher)†	83
Modified T	Tardieu scale s	core (mean final scor	e); wrist flexors a	at 4 months, (C	ycle 1) (Better ind	dicated	by lower valu	es)			
,	randomised trials	no serious limitations		no serious indirectness	serious ⁶	none	11 ²⁵	11 ²⁶	-	MD 18 lower (37. lower to 0. higher)*	
Modified T	ardieu scale s	core (mean final sco	re); wrist flexors,	(Cycle 2) (Bette	er indicated by lo	wer val	lues)				<u> </u>
,	randomised trials	no serious limitations		no serious indirectness	serious ⁶	none	11 ²⁷	11 ²⁸	-		78 Moderate
Nodified T	ardieu scale s	core (mean final sco	re); wrist flexors,	(Cycle 3) (Bette	er indicated by lo	wer val	lues)	1			
l study Olesch 2010)	randomised trials	no serious limitations			no serious imprecision	none	11 ²⁹	11 ³⁰	-	lower (38.	0.9 27 High

Ouglity or	ssessment						Summary of fi	indings			
Quality as	ssessille iit						No. of patients	s	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Botulinum toxin A (BoNT-A)/ Occupational therapy	Occupational therapy only all outcomes		Absolute	Quality
AROM wr	ist extension (c	hange from baseline	- 3 months (Bett	er indicated by	higher values)						
1 study (Speth 2005)	randomised trials	no serious limitations		no serious indirectness	serious ⁶	none	10	10	-	MD 14 higher (7. lower 37.32 higher)†	1.7 92 to Moderate
AROM wr	ist extension (c	hange from baseline)	- 6 months (Bett	er indicated by	higher values)	l			1		
1 study (Speth 2005)	randomised trials	no serious limitations		no serious indirectness	serious ⁶	none	10	10	-	MD 15 higher (6. lower 37.56 higher)†	5.6 36 to Moderate
PROM wri	ist extension (c	hange from baseline)	- 3 months (Bette	er indicated by	higher values)						
1 study (Fehlings 2000)	randomised trials		no serious inconsistency	no serious indirectness	serious ⁶	none	14	15	-		31 4.7 to Low

Quality as	ssessment						Summary of t	indings			
Ruality as	sessinent						No. of patient	:S	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	_ =		Occupational therapy only all outcomes		Absolute	Quality
PROM wri	ist extension (c	hange from baseline	- 6 months (Bett	er indicated by	higher values)						
- · · · · ,	randomised trials	serious ¹⁴	no serious inconsistency	no serious indirectness	serious ⁶	none	14	15	-	MD 0. lower (9. lower to 9. higher)†	85
PROM pal	lmar thumb abo	luction (change from	baseline) - 3 mor	nths (Better ind	icated by higher	values))				
,	randomised trials	serious ¹⁴	no serious inconsistency	no serious indirectness	serious ⁶	none	14	15	-	MD 2. higher (4. lower to 8. higher)†	II OW
PROM pal	lmar thumb abo	luction (change from	baseline) - 6 mor	nths (Better ind	icated by higher	values))				
,	randomised trials	serious ¹⁴	no serious inconsistency	no serious indirectness	serious ⁶	none	14	15	-	MD 1. higher (3. lower to 7. higher)†	$\Pi \cap W$

CI confidence interval, MD mean difference, OR odds ratio

^{*} Calculated by the NCC-WCH

[†] Data from Hoare 2010 Cochrane systematic review

¹ Therapists and outcome assessors not blinded to treatment allocation

² Total number of events less than 300, the 95% confidence interval includes no effect and is wide

³ Therapists not blinded to treatment allocation in Wallen 2007,

⁴ Heterogeneity: Tau² = 2.30; Chi² = 5.80, df = 1 (P = 0.02); I² = 83%. Russo 2007 OR = 0.10 [0.03 to 0.39] and for Wallen 2007 OR = 1.06 [0.27 to 4.11]

⁵ Total number of events less than 300, 95% confidence interval for mean difference does not cross null hypothesis but is wide

⁶ Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and are wide

Spasticity in children and young people with non-progressive brain disorders (appendices)

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7 Mean final score ± standard deviation (SD) reported as 43.0 ± 45.7
8 Mean final score ± SD reported as 77.3 ± 39.3
9 Total population less than 400, 95% confidence interval for mean difference does not cross null hypothesis but is wide
10 Mean final score ± SD reported as 54.5 SD ± 44.1
11 Mean final score ± SD reported as 90.5 SD ± 40.3
12 Mean final score ± SD reported as 34.5 SD ± 48.0
13 Mean final score ± SD reported as 77.3 SD ± 56.2
14 No allocation concealment in Fehlings 2000
15 Treatment groups have significantly different baseline mean scores ± SD: BoNT + therapy group 50.5 ± 27.4, therapy only group = 82.0 ± 26.3
16 Mean difference in change scores estimated because of significantly different baseline mean scores in treatment groups. Total number of events less than 300, 95% confidence interval not
calculable
17 Mean final score ± SD reported as 48.5 ± 37.2
18 Mean final score ± SD reported as 75.5 ± 31.7
19 Mean final score ± SD reported as 39.5 ± 40.6
20 Mean final score ± SD reported as 77.3 ± 22.8
21 Mean final score ± SD reported as 22.7 ± 33.2
22 Mean final score ± SD reported as 72.7 ± 28.7
23 Heterogeneity: Chi<sup>2</sup> = 7.52, df = 1 (P = 0.006); l<sup>2</sup> = 87%. Russo 2007 OR = 0.01 [0.00 to 0.07] and for Wallen 2007 OR = 0.26 [0.07 to 0.96]
24 Heterogeneity: Chi<sup>2</sup> = 6.77, df = 1 (P = 0.009); l<sup>2</sup> = 85%. Russo 2007 OR = 0.05 [0.01 to 0.20] and for Wallen 2007 OR = 0.57 [0.17 to 1.91]
25 Mean final score ± SD reported as 11.0 ± 17.4
26 Mean final score ± SD reported as 29.5 ± 27.6
27 Mean final score \pm SD reported as 7.3 \pm 9.3
28 Mean final score ± SD reported as 25.0 ± 30.7
29 Mean final score \pm SD reported as 3.2 \pm 7.2
30 Mean final score ± SD reported as 24.1 ± 28.5
```

Table K.7.2 Evidence profile for botulinum toxin type A and physical therapy compared with physical therapy alone; lower limb; tone and joint movement assessment

Ouglity agai	aamant						Summary of fin	dings			
Quality asse	ssment					No of patients/N	/lean±SD	Effect			
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	r idera-	Botulinum toxin (BoNT) + physical therapy	Physical therapy only	Relative	Absolute	Quality
Modified As	hworth scal	e (MAS) score	plantar flexor spa	sticity (reduc	tion in spastici	ty) mean c	hange 3 months	Better indi	cated by highe	er values)	
• , •	randomised trials	serious ¹	no serious inconsistency	no seriou indirectness	s serious ²	none	16 limbs ³	20 limbs ⁴	-	MD 0.2 higher (0.52 lower to 0.92 higher)*	
MAS score p	olantar flexo	r spasticity (r	eduction in spasti	city)mean cha	inge 6 months	(Better ind	icated by higher	values)	<u>'</u>		
• , •	randomised trials	serious ⁵	no serious inconsistency	no seriou indirectness	s serious ⁶	none	16 limbs ⁷	20 limbs ⁸	-	MD 0.94 higher (0.14 to 1.74 higher)*	
Ashworth so	ore at ankle	(reduction in	spasticity) – mea	n change 3 m	onths (Better in	ndicated by	/ higher values)				
•	randomised trials	serious ⁹	no serious inconsistency	no seriou indirectness	sserious ¹⁰	none	12 ¹¹	13 ¹²	-	MD 0.3 higher	Low
Ashworth so	ore at ankle	(reduction in	spasticity) – mea	n change 6 m	onths (Better in	ndicated by	y higher values)	<u> </u>		ı	
1 study (Ackman 2005)	randomised trials	serious ⁹	no serious inconsistency	no seriou indirectness	s serious 10	none	12 ¹³	13 ¹⁴	-	MD 0.0 lower/higher	Low

Ovelity coo							Summary of fin	dings			
Quality asse	essment						No of patients/N	Mean±SD	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	ır sidera- s	Botulinum toxin (BoNT) + physical therapy	Physical therapy only	Relative	Absolute	Quality
Active dorsi	flexion at ar	nkle – mean c	hange at 3 months	(Better indic	ated by higher	values)					
1 study (Ackman 2005)	randomised trials	serious ⁹	no serious inconsistency	no seriou indirectness	is serious ¹⁰	none	12 ¹⁵	13 ¹⁶	-	MD 2 more	Low
Active dorsi	flexion at ar	nkle – mean c	hange at 6 months	(as reported	, read from gra	ph) (Better	indicated by hig	gher values)		
1 study (Ackman 2005)	randomised trials	serious ⁹	no serious inconsistency	no seriou indirectness	sserious ¹⁰	none	12 ¹⁷	13 ¹⁸	-	MD 3 higher	Low
Passive ran	ge of mover	nent (PROM)	ankle dorsiflexion	(knee flexion)	at 3 months (r	mean chang	ge from baseline	e) (Better in	dicated by high	ner values)	
1 study (Ackman 2005)	randomised trials	serious ⁹	no serious inconsistency i	no seriou ndirectness	sserious ¹⁰	none	12 ¹⁹	13 ²⁰	-	MD 0.5	Low
PROM ankle	dorsiflexio	n (knee flexio	n) at 6 months (me	ean change fr	om baseline) (E	Better indic	ated by higher v	/alues)			
1 study (Ackman 2005)	randomised trials	serious ⁹	no serious inconsistency i	no seriou ndirectness	sserious ¹⁰	none	12 ²¹	13 ²²	-	MD 1.5 higher	Low
PROM ankle	dorsiflexio	n (knee exten	sion) at 3 months	(mean change	e from baseline) (Better in	dicated by high	er values)			
1 study (Ubhi 2005)	randomised trials	no seriou limitations		no seriou ndirectness	s serious 23	none	20 ²⁴	16 ²⁵	-	MD 2.5 higher	Moderate

Quality asse	esmont						Summary of fin	dings			
Quality asse	ssillelli						No of patients/N	Mean±SD	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	ir sidera- s	Botulinum toxin (BoNT) + physical therapy	Physical therapy only	Relative	Absolute	Quality
PROM ankle	dorsiflexio	n (knee exte	nsion) at 3 months	(mean chang	e from baseline	(Better in	dicated by high	er values)			
1 study (Ackman 2005)	randomised trials	serious ⁹	no serious inconsistency i	no seriou indirectness	us serious ¹⁰	none	12 ²⁶	13 ²⁷	-	MD 1 higher	Low
PROM ankle	dorsiflexio	n (knee exte	nsion) at 6 months	(mean change	e from baseline	(Better in	dicated by high	er values)			
1 study (Ackman 2005)	randomised trials	serious ⁹	no serious inconsistency i	no seriou indirectness	us serious ¹⁰	none	12 ²⁸	13 ²⁹	-	MD 1.5 higher*	Low
PROM ankle	dorsiflexio	n at 3 month	ns (mean change fro	om baseline) (Better indicated	by higher	values)				
1 study (Kay 2004)	randomised trials	serious ¹	no serious inconsistency i	no seriou indirectness	us serious ³⁰	none	16 ³¹	20 ³²	-	MD 4.5 higher (3.22 lower to 12.22 higher)*	
PROM ankle	dorsiflexio	n at 6 month	ns (mean change fro	om baseline) r	ead from graph	(Better inc	licated by highe	er values)			
• , •	randomised trials	serious ⁵	no serious inconsistency i	no seriou indirectness	us serious ¹⁰	none	16 ³³	20 ³⁴	-	MD 1.5 lower	Low

0							Summary of fin	dings			
Quality asse	ssment					No of patients/l	Mean±SD	Effect			
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	ır sidera- s	Botulinum toxin (BoNT) + physical therapy	Physical therapy only	Relative	Absolute	Quality
PROM right	ankle dorsif	lexion (knee	extension) at 3 mo	nths (mean c	hange from bas		ter indicated by	higher valu	ies)		
1 study Reddihough 2002)	randomised trials	serious ³⁵	no serious r inconsistency ii	no serior ndirectness	us no serious imprecision	selective outcome reporting ³⁶	11 ³⁷	11 ³⁸	-	MD 8.63 higher (2.23 to 15.03 higher)*	Low
ROM right	ankle dorsif	lexion (knee	flexion) at 6 month	s (mean cha	nge from baselir	ne) (Better	indicated by high	gher values)	<u> </u>	
l study Reddihough 2002)	randomised trials	serious ³⁵	no serious inconsistency	no serio indirectness	us serious ³⁰	selective outcome reporting ³⁶	34 ³⁹	34 ⁴⁰	-	MD 8.53 higher (0.27 lower to 17.33 higher)*	
IAS score le	eft calf mea	n change 6 m	onths (Better indic	ated by lowe	r values)						
study Reddihough 2002)	randomised trials	serious ³⁵	no serious inconsistency	no serior indirectness	us serious ⁴¹	selective outcome reporting ³⁶	35 ⁴²	35 ⁴³	-	0.52 lower (0.89 to 0.15 lower)*	
IAS score le	eft adductor	mean chang	e 6 months (Better	indicated by	higher values)	1	<u>'</u>	,		<u> </u>	<u>'</u>
study Reddihough 2002)	randomised trials	serious ³⁵	no seriou inconsistency	isno serior indirectness	us serious ⁴¹	selective outcome reporting ³⁶		8 ⁴⁵	-	1.63 lower (2.53 to 0.71 lower)*	

Ouglity assa	acmont						Summary of fin	dings					
Quality asse	ssinent						No of patients/N	/lean±SD	Effect				
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	r idera-	(OXIN (BONI) +	Physical therapy only	Relative	Absolute	Quality		
/IAS score r	AS score right adductor mean change 6 months (Better indicated by higher values)												
l study Reddihough 2002)	randomised trials	serious ³⁵	no seriou inconsistency	sno serious indirectness	sserious ⁴⁶	selective outcome reporting ³⁶	_47	_48	-	_46	Very low		
MAS total score mean change 3 months (Better indicated by higher values)													
1 study Reddihough 2002)	randomised trials	serious ³⁵	no seriou inconsistency	sno serious indirectness	no serious imprecision	none	18 ⁴⁹	18 ⁵⁰	-	2.51 lowe (3.22 to 1.8 lower)			

- * Calculated by the NCC-WCH
- 1 Outcome assessors not blinded to treatment allocation.
- 2 Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and is wide. p=0.7061 reported
- 3 Mean change from baseline \pm standard deviation (SD) = 0.9 \pm 1.0
- 4 Mean change from baseline \pm SD = 1.1 \pm 1.2
- 5 Outcome assessors not blinded to treatment allocation. Results estimated from graphs
- 6 Total population less than 400, 95% confidence interval for mean difference does not cross null hypothesis but is wide p<0.03 reported
- 7 Mean change from baseline \pm SD = 0.26 \pm 1.14
- 8 Mean change from baseline \pm SD =1.2 \pm 1.3
- 9 No analysis or results across groups provided, results estimated from graphs
- 10 Total population less than 400, 95% confidence interval of mean difference of change not calculable,
- 11 Estimated baseline = 2.6±0.9, estimated final score 2.4±0.5
- 12 Estimated baseline = 2.6±1.0, estimated final score 2.1±0.8
- 13 Estimated baseline = 2.6±0.9, estimated final score 2.2±0.6
- 14 Estimated baseline = 2.6 ± 1.0 . estimated final score 2.2 ± 0.7
- 15 Estimated baseline = -18°±16, estimated final score -15°±20
- 16 Estimated baseline = -12°±14, estimated final score -11°±20

Spasticity in children and young people with non-progressive brain disorders (appendices)

- 17 Estimated baseline = -18°±16, estimated final score -11°±14
- 18 Estimated baseline = -12°±14, estimated final score -8°±13
- 19 Estimated change from baseline = 3.5
- 20 Estimated change from baseline = 4
- 21 Estimated change from baseline = 4.5
- 22 Estimated change from baseline = 3
- 23 Total population less than 400, authors report no significant differences between groups in mean change from baseline
- 24 This group received BoNT-A, physiotherapy and orthotic treatment. Estimated change from baseline = 2.2, 95% CI (-1.4 to 5.9)
- 25 This group received placebo, physiotherapy and orthotic treatment. Estimated change from baseline = -0.3, 95% CI (-3.3 to 3.8)
- 26 Estimated change from baseline = 3.5
- 27 Estimated change from baseline = 2.5
- 28 Estimated change from baseline = 4.5
- 29 Estimated change from baseline = 3
- 30 Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and is wide.
- 31 Mean change from baseline reported as 18.4 ± 11.7
- 32 Mean change from baseline reported as 13.9 ± 11.8
- 33 Estimated change from baseline = 10.5 ± 10.5
- 34 Estimated change from baseline = 12 ± 12
- 35 No allocation concealment. Serious attrition for many outcomes. 49 participants recruited
- 36 Only statistically significant results reported p<0.05
- 37 Mean change from baseline \pm SD = 1.36 \pm 7.45
- 38 Mean change from baseline \pm SD = -7.27 \pm 7.86
- 39 Mean change from baseline reported as -0.09 ± 0.78
- 40 Mean change from baseline reported as 13.9 ± 11.8
- 41 Total population less than 400, 95% confidence interval for mean difference does not cross null hypothesis but is wide. p <0.05 reported
- 42 Mean change from baseline \pm SD = -0.09 \pm 0.78
- 43 Mean change from baseline \pm SD = 0.43 \pm 0.81
- 44 Mean change from baseline \pm SD = -0.63 \pm 1.06
- 45 Mean change from baseline \pm SD = 1 \pm 0.76
- 46 Total population less than 400, 95% confidence interval of mean difference of change not calculable, p <0.05 reported
- 47 Worsening of approx 0.5-1 MAS reported
- 48 Improvement of approx 1 MAS point reported
- 49 Mean change from baseline \pm SD = -1.13 \pm 0.83
- 50 Mean change from baseline \pm SD = 1.38 \pm 1.30

Table K.7.3 Evidence profile for botulinum toxin type A and physical therapy compared with physical therapy alone; upper limb; functioning assessment

Quality a	ssessment						Summary of f	indings			
Quality a	336331116111						No of patients	s	Effect		
Oo of studies	E Signaturi Sign	rimitations	nconsistency strom baseline) - Pa	Leut - Three mout	uoisi Jabec Jab Jabec Jabec Jabec Jabec Jabec Jabec Jabec Jabec Jabec Ja	Othe	toxin A (BoNT-A)/ Occupational therapy	Occupational therapy only all outcomes	Relative	Absolute	Quality
			-			_	J				
4 studies (Boyd 2004; Lowe 2006; Russo 2007; Wallen 2007)	randomised trials				no serious imprecision		77	75	-	MD 8.52 higher (4.42 to 12.62 higher)†	High
Goal Atta	inment Scaling s	score (change	from baseline) - Pa	rent - Four month	s (Better indicated	by hig	her values)				
1 study (Greaves 2004)	randomised trials		no serious inconsistency i	no serious indirectness	serious ²	none	10	10	-	MD 9.21 higher (1.06 to 17.36 higher)†	Low

Quality as	ssessment						Summary of	findings			
Quanty a.	336331116111						No of patient	s	Effect		
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	er sideration	Botulinum toxin A (BoNT-A)/ Occupational therapy	Occupational therapy only all outcomes	Relative	Absolute	Quality
Goal Atta	inment Scaling s	score (change	from baseline) - Pa	rent - Six months	(Better indicated b	y high	er values)				
3 studies (Lowe 2006; Russo 2007; Wallen 2007)	randomised trials			no serious indirectness	serious ³	none	62	60	-	MD 5.04 higher (0.75 lower to 10.83 higher)†	Moderate
Goal atta	inment scaling (GAS) T-Score	(final score compar	rison) Cycle 1 (Be	tter indicated by hig	gher va	alues)				
1 study (Olesch 2010)	randomised trials			no serious indirectness	serious ³	none	11 ⁴	11 ⁵	-	MD 6,0 higher (2.32 lower to 14.32 higher)*	Moderate
GAS T-so	ore (final score	comparison) (Cycle 2 (Better indic	ated by higher va	lues)						
1 study (Olesch 2010)	randomised trials			no serious indirectness	serious ³	none	11 ⁶	11 ⁷	h - lo 1	MD 7.7 igher (1.16 ower to 6.56 igher)*	

Quality a	ssessment						Summary of fi	ndings			
Quanty a	336331116111						No of patients	i e	Effect		
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	er siderat	toxin A	Occupational therapy only all outcomes		Absolute	Quality
GAS T-so	core(final score c	omparison) C	Cycle 3 (Better indica	ated by higher val	ues)						
1 study (Olesch 2010)	randomised trials			no serious indirectness	serious ³	none	11 ⁸	11 ⁹	 - 1	MD 4.9 ligher (2.11 ower to 1.91 ligher)*	
GAS T-so	core over whole y	ear (Better in	dicated by higher va	alues)							
1 study (Olesch 2010)	randomised trials			no serious indirectness	serious ²	none	11 ¹⁰	11 ¹¹	- (MD 7 higher 0.59 to 3.41 igher)*	Moderate
Canadiar	occupational pe	erformance m	easure - performand	ce (COPM-P) scor	e (change from bas	eline)	- Three months	s (Better indic	cated by	higher value	s)
3 studies (Boyd 2004; Lowe 2006; Wallen 2007)	randomised trials			no serious indirectness	serious ²	none	56	53	r -	MD 0.77 iigher (0.23 o 1.31 iigher)†	Moderate

Quality a	ssessment						Summary of f	indings			
auanty a	336331116111						No of patients	s	Effect		
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations		Occupational therapy only all outcomes		Absolute	Quality
ОРМ-Р	score (change fr	om baseline)	- Four months (Bett	er indicated by hi	gher values)						
1 study (Greaves 2004)	randomised trials		no serious inconsistency	no serious indirectness	serious ³	none	10	10	- lo	D 0.6 gher (0.68 wer to 1.88 gher)†	
СОРМ-Р	score (change fr	om baseline)	- Four months (cycl	e 1) change score	(Better indicated b	y high	er values)				
1 study (Olesch 2010)	randomised trials		no serious inconsistency	no serious indirectness	serious ³	none	11 ¹²	11 ¹³	- lo		Moderate
СОРМ-Р	score (change fr	om baseline)	Cycle 2 (Better indi	cated by higher va	alues)				<u> </u>		
1 study (Olesch 2010)	randomised trials	no se limitations	rious no serious inconsistency	no serious indirectness	serious ²	none	11 ¹⁴	11 ¹⁵		D 0.9 gher (0.1 to 7 higher)*	
СОРМ-Р	score (change fr	om baseline)	Cycle 3 (Better indi	cated by higher va	alues)	,		-			
1 study (Olesch 2010)	randomised trials	no se limitations	rious no serious inconsistency	no serious indirectness	serious ²	none	11 ¹⁶	11 ¹⁷	- (0	D 1.4 high .35 to 2.4 gher)*	er 15 Moderat

Quality a	ssessment						Summary of f	indings			
							No of patients	5	Effect		
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	er sidera	toxin A	Occupational therapy only all outcomes		Absolute	Quality
СОРМ-Р	score (change fr	om baseline) o	over whole year (Be	tter indicated by l	higher values)						
1 study (Olesch 2010)	randomised trials	no ser limitations	ious no serious inconsistency	no serious Indirectness	serious ³	none	11 ¹⁸	11 ¹⁹	- (0	ID 0.8 highe 0.04 lower to .64 higher)*	
СОРМ-Р	score (change fr	om baseline) -	· Six months (Better	indicated by high	ner values)						
2 studies (Lowe 2006; Wallen 2007)	randomised trials			no serious indirectness	serious ³	none	41	38	- (MD 0.4 highe 0.3 lower † .09 higher)†	er to Moderate
Paediatri	c evaluation of d	isability inven	tory (PEDI): Function	onal skills scale, s	scaled score (chang	je fron	n baseline) - Tl	rree months (Better in	dicated by h	igher values)
3 studies Boyd 2004; Fehlings; Wallen 2007)	randomised trials		no serious nconsistency	no serious indirectness	serious ³	none	49	47	- (//D 0.6 high 1.44 lower (2.63 higher)†	

Quality a	ssessment						Summary of t	indings			
Quality a	ssessillelli						No of patients	s	Effect		
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	er siderat	Botulinum toxin A (BoNT-A)/ Occupational therapy	all outcomes	Relative	Absolute	Quality
PEDI: Fu	nctional skills sc	ale, scaled so	core (change from ba	aseline) - Six mon	ths (Better indicate	d by h	igher values)				
2 studies (Fehlings 200; Wallen 2007)	randomised trials		no serious inconsistency	no serious indirectness	serious ³	none	34	32	-	MD 1.0 higher (1 lower to 3.8 higher)†	.7
PEDI: Ca	regiver assistand	e scale, scal	ed score (change fro	om baseline) - Thr	ee months (Better i	ndicat	ed by higher v	values)			
1 study (Wallen 2007)	randomised trials			no serious indirectness	serious ³	none	20	17	-	MD 6.3 lower (14.68 lower to 2.08 higher)†	Moderate
PEDI: Ca	regiver assistand	e scale, scal	ed score (change fro	om baseline) - Six	months (Better ind	icated	by higher val	ues)			
1 study (Wallen 2007)	randomised trials			no serious indirectness	serious ³	none	20	17	-	MD 4.4 lower (13.38 lower to 4.58 higher)†	Moderate

Quality a	ssessment						Summary of	indings			
Quanty a	33633mem						No of patient	s	Effect		
No of studies	Design	Limitations	Inconsistency	Indirectness		Other consideration	(BoNT-A)/ Occupational therapy		Relative (95% CI)	Absolute	Quality
_			UEST): Parent score	e (change from ba	aseline) - Three mor	nths (E	Better indicate	d by higher va	alues)		
3 studies (Fehlings 2000; Lowe 2006; Wallen 2007)	randomised trials		no serious inconsistency		no serious imprecision		42	42	-	MD 9.19 higher (4.84 to 13.54 higher)†	Moderate
QUEST: I	Parent score (cha	ange from bas	seline) - Four month	s (Better indicated	d by higher values)		<u> </u>				
1 study (Greaves 2004)	randomised trials		no serious inconsistency	no serious indirectness	serious ³	none	10	10	-	MD 4,42 lower (9.98 lower to 1.14 higher)†	
QUEST: I	Parent score (cha	ange from bas	seline) - Six months	(Better indicated	by higher values)						
3 studies (Fehlings 2000; Lowe 2006; Wallen 2007)	randomised trials		no serious inconsistency	no serious indirectness	serious ³	none	42	42		MD 2.93 higher (1.58 lower to 7.45 higher)†	Low

Ouglity	ccccment						Summary of	indings			
Quality a	ssessment						No of patient	S	Effect		
No of studies	Design	Limitations	Inconsistency	Indirectness		Other considerations	Botulinum toxin A (BoNT-A)/ Occupational therapy	Occupational therapy only all outcomes	Relative	Absolute	Quality
QUEST T	otal score (final s	score compa	rison) Cycle 1 (Bette	r indicated by hig	her values)						
1 study (Olesch 2010)	randomised trials			no serious indirectness	serious ³	none	11 ²¹	11 ²²	- lo	MD 5.50 higher (5.37 ower to 6.37 higher)*	Moderate
QUEST T	otal score (final	score compa	rison) Cycle 2 (Bette	r indicated by hig	her values)						
1 study (Olesch 2010)	randomised trials			no serious indirectness	serious ³	none	11 ²³	11 ²⁴	- lo	MD 7.60 higher (2.42 lower to 7.62 higher)*	Moderate
QUEST T	otal score (final	score compa	rison) Cycle 3 (Bette	r indicated by hig	her values)	l					
1 study (Olesch 2010)	randomised trials			no serious indirectness	serious ³	none	11 ²⁵	11 ²⁶	hi - lo 14	D 6.70 gher (1.58 wer to 4.98 gher)*	Moderate

^{*} Calculated by the NCC-WCH

[†] Data from Hoare 2010 Cochrane systematic review

¹ Therapists and outcome assessors not blinded to treatment allocation

² Total population less than 400, 95% confidence interval for mean difference does not cross null hypothesis but is wide

³ Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and is wide.

- 4 Mean final score ± standard deviation (SD) reported as 54.1 ± 9.8
- 5 Mean final score ± SD reported as 48.1 ± 10.1
- 6 Mean final score \pm SD reported as 55.0 \pm 4.3
- 7 Mean final score ± SD reported as 47.3 ± 11.6
- 8 Mean final score \pm SD reported as 54.9 \pm 9.5
- 9 Mean final score \pm SD reported as 50.0 ± 7.1
- 10 Mean final score \pm SD reported as 55.8 \pm 6.6
- 11 Mean final score ± SD reported as 48.8 ± 8.6
- 12 Mean change from baseline \pm SD = 2.4 \pm 1.0
- 13 Mean change from baseline \pm SD = 1.7 \pm 1.4
- 14 Mean change from baseline \pm SD = 2.7 \pm 0.9
- 15 Mean change from baseline \pm SD = 1.8 \pm 1.0
- To Mount change from baseline 2 OB = 1.0 2 1.0
- 16 Mean change from baseline \pm SD = 3.0 \pm 1.3
- 17 Mean change from baseline \pm SD = 1.6 \pm 1.2
- 18 Mean change from baseline \pm SD = 2.5 \pm 1
- 19 Mean change from baseline \pm SD = 1.7 \pm 0.6
- 20 No allocation concealment in Fehlings 2000
- 21 Mean final score ± SD reported as 76.3 ± 13.2
- 22 Mean final score ± SD reported as 70.8 ± 12.8
- 23 Mean final score ± SD reported as 76.9 ± 10.4
- 24 Mean final score ± SD reported as 69.3 ± 13.4
- 25 Mean final score ± SD reported as 79.6 ± 8.0
- 26 Mean final score ± SD reported as 72.9 ± 11.5

Table K.7.4 Evidence profile for botulinum toxin type A and physical therapy compared with physical therapy alone; lower limb; functioning assessment

Oalitu aaaa							Summary of	findings			
Quality asses	ssment						Mean ± SD		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	r ideratio	Botulinum toxin (BoNT) + physical therapy	_	Relative (95% CI)	Absolute	Quality
					C, D and E (Crawlir		l kneeling, Sta	nding, Walkin	g, running a	nd jumping) pe	er cent
score mean o	hange 3 month	s (Better indi	cated by higher va	lues)							
1 study (Kay 2004)	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	16 limbs ³	20 limbs ⁴		MD 3.8 higher (0.5 lower to 8.1 higher)*	LOW
	on not reported ted by higher v	<i>*</i>	s C, D and E (Craw	ling and kneeling	g, Standing, Walkir	ıg, run	ning and jum	ping) per cent	score mean	change 6 mon	ths
1 study (Kay 2004)	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	16 limbs ⁶	20 limbs ⁷		MD 1.01 higher (1.13 lower to 3.15 higher)*	Low
GMFM (versi	on not reported): Total score	mean change 3 m	onths (Better inc	licated by higher v	alues)					
1 study (Reddihough 2002)			no serious inconsistency	no serious indirectness	serious ²	none	19 ⁹	19 ¹⁰		MD 1.33 lower (5.12 lower to 2.46 higher)*	
GMFM (versi	on not reported): Total score	mean change 6 m	onths (Better inc	licated by higher v	alues)	<u>'</u>	_	<u>'</u>	<u>'</u>	,
1 study (Reddihough 2002)			no serious inconsistency	no serious indirectness	serious ²	none	19 ¹¹	19 ¹²		MD 0.16 higher (4.37 lower to 4.69 higher)*	Low

Ouglity ages	amant						Summary of f	indings			
Quality asses	Sillelit						Mean ± SD		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	r iderati	Botulinum toxin (BoNT) + physical therapy	Physical therapy only	Relative (95% CI)	Absolute	Quality
GMFM (version	on not reported): Total score	with aids mean ch	nange 3 months (Better indicated b	y high	er values)		•		
1 study (Reddihough 2002)	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	7 ¹³	7 ¹⁴		MD 3.72 higher (7.56 lower to 15 higher)	Low
GMFM (version	on not reported): Total score	with aids mean ch	nange 6 months (Better indicated b	y high	er values)		1		
1 study (Reddihough 2002)	randomised trials	serious ⁸	no serious inconsistency	sno serious indirectness	sserious ²	none	24 ¹⁵	24 ¹⁶		MD 7.19 lower (13.64 to 0.74 lower)	Low
•	on not reported higher values)): Walking an	d running: Proport	tion of participan	ts who showed gr	reater t	l han 6% chang	e in the GMFI	M score at 12	weeks (Bette	r
1 study (Ubhi 2000)		no serious limitations	no serious inconsistency	no serious indirectness	serious ¹⁷	select outcor report	me 7/19 ¹⁹	1/15 ²⁰		_21	Low
Velocity (met	res/second) me	ean change 3	months (as reporte	ed, read from gra	ph) (Better indica	ted by	higher values)			1	ļ
1 study (Ackman 2005)	randomised trials	serious ²²	no serious inconsistency	no serious indirectness	serious ²³	none	12 ²⁴	13 ²⁵		MD 0.2 higher*	Low

Quality asses	smont						Summary of f	indings			
Quality asses	Silicit						Mean ± SD		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	r iderati	Botulinum toxin (BoNT) + physical therapy	Physical therapy only	Relative (95% CI)	Absolute	Quality
Velocity (meti	res/second) me	an change 6	months (as report	ed, read from gra	ph) (Better indica	ited by	higher values)				
1 study (Ackman 2005)	randomised trials		no serious inconsistency	no serious indirectness	serious ²³	none	12 ²⁶	13 ²⁷		MD 0.05 higher*	Low

- * Calculated by the NCC-WCH
- 1 Outcome assessors not blinded to treatment allocation.
- 2 Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and is wide. p= no statistically significant difference reported
- 3 Mean change from baseline \pm standard deviation (SD) = 2.5 \pm 7.5
- 4 Mean change from baseline \pm SD = -1.3 \pm 5.1
- 5 Outcome assessors not blinded to treatment allocation. Results estimated from graphs
- 6 Mean change from baseline \pm SD = 2.84 \pm 3.33
- 7 Mean change from baseline \pm SD = 1.83 \pm 3.17
- 8 No allocation concealment. Serious attrition
- 9 Mean change from baseline \pm SD = 2.70 \pm 4.62
- 10 Mean change from baseline \pm SD = 4.03 \pm 7.05
- 11 Mean change from baseline \pm SD = 3.60 \pm 7.44
- 12 Mean change from baseline \pm SD = 3.44 \pm 6.79
- 13 Mean change from baseline \pm SD = 6.52 \pm 4.95
- 14 Mean change from baseline \pm SD = 2.80 \pm 14.40
- 15 Mean change from baseline \pm SD = 3.94 \pm 11.60
- 16 Mean change from baseline \pm SD = 11.13 \pm 11.18
- 17 Total population less than 400, 95% confidence interval not reported by authors
- 18 Numerical details are not presented for other GMFM dimensions, although these are stated as not being statistically significant
- 19 This group received BoNT-A, physiotherapy and orthotic treatment.
- 20 This group received placebo, physiotherapy and orthotic treatment
- 21 χ 2 = 4.24, p = 0.04 reported by authors

- 22 No analysis or results across groups provided, results estimated from graphs
- 23 Total population less than 400, 95% confidence interval of mean difference of change not calculable
- 24 Mean change from baseline = 0.15 no SD reported
- 25 Mean change from baseline = -0.05 no SD reported
- 26 Mean change from baseline = 0.1 no SD reported
- 27 Mean change from baseline = 0.05 no SD reported

Table K.7.5 Evidence profile for botulinum toxin type A and physical therapy compared with physical therapy alone; upper limb; quality of life assessment

Quality a	ococomont						Summary of finding	ıgs			
Quality a	ssessment						No. of patients		Effect		
No. of studies	Design	re (CHQ): Phy	Inconsistenc Y Sical functioning of	Indirectness	mbrecision	considerat ns	Occupational therapy	therapy only all outcomes	Relative	Absolute	Quality
3 studies	randomised	no serious	no serious		serious ¹	none	56	54	-	MD 3.88 lower (15.48 lower to 7.72 higher)*	Moderate
CHQ: Ph	ysical functioning	ng domain sco	ore - 6 months (Be	tter indicated by	/ higher va	lues)		!	'	<u>'</u>	
		no serious limitations		no serious indirectness	serious ¹	none	41	39	-	MD 0.28 higher (12.2 lower to 12.75 higher)*	

Quality	ssessment						Summary of findir	ıgs			
Quality as	556551116111						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistenc y	Indirectness	_	Cons	Occupational therapy		Relative	Absolute	Quality
CHQ: role	e - Emotional do	main score - :	3 months (Better i	ndicated by high	ner values)						
		no serious limitations		no serious indirectness	serious ²	none	56	54	-	MD 12.98 higher (1.37 to 24.60 higher)*	Moderate
CHQ: role	e - Emotional do	main score -	6 months (Better i	ndicated by high	ner values)						
		no serious limitations		no serious indirectness	serious ¹	none	41	39	-	MD 7.30 higher (7.75 lower to 22.34 higher)	Moderate
CHQ: Phy	sical functionin	g domain sco	ore - 3 months (Be	tter indicated by	higher va	lues)					
		no serious limitations		no serious indirectness	serious ¹	none	56	54	-	MD 8.79 higher (3.04 lower to 20.62 higher)	Moderate

Quality as	ssessment						Summary of findin				
•							No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistenc y	Indirectness	Imprecision	siderat	Occupational therapy		Relative	Absolute	Quality
CHQ: Phy	sical functionin	ng domain sco	ore - 6 months (Be	tter indicated by	y higher va	lues)					
		no serious limitations		no serious indirectness	serious ¹	none	41	39	-	MD 2.02 higher (13.98 lower to 18.02 higher)	Moderate

^{*} Calculated by the NCC-WCH from data in Hoare 2010 Cochrane systematic review

¹ Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and is wide.

² Total population less than 400, 95% confidence interval for mean difference does not cross null hypothesis but is wide

Table K.7.6 Evidence profile for botulinum toxin type A and physical therapy compared with physical therapy alone; upper limb; treatment acceptability assessment

Ouglity a	ssessment						Summary of fin	dings			
Quality a	33633IIIEIII						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other consideration	toxin A th (BoNT-A)/ al Occupational therapy	I outcomes	Relative (95% CI)	Absolute	Quality
Canadiar	n occupational per	formance mea	sure - performance	(COPM-P) score	(change fro	m base	line) Three mon	ths (Better in	dicated by I	higher values)	
(Boyd 2004; Lowe 2006; Wallen 2007)		no serious limitations	inconsistency	indirectness	serious ¹		56	63	-	higher)†	Moderate
Canadiar	n occupational per	formance mea	sure – satisfaction ((COPM-S) score (change fror	n basel	ine) Four month	s (Better ind	icated by hi	gher values)	
1 study (Greaves 2004)		no serious limitations		no serious indirectness	serious ²	none	10	10	-	MD 0.76 higher (0.92 lower to 2.44 higher)†	
COPM-S	score (change fro	m baseline) Si	x months (Better in	dicated by higher	values)						
2 studies (Lowe 2006; Wallen 2007)		no serious limitations		no serious indirectness	serious ²	none	41	38	-	MD 0.35 higher (0.39 lower to 1.08 higher)†	

Ouglity a	coocmont						Summary of f	indings			
Quality a	ssessment						No. of patient	s	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	er sideratior	toxin A	Occupational therapy only all outcomes	Relative (95% CI)	Absolute	Quality
COPM-S	score (change fro	m baseline) C	ycle 1 (Better indicat	ed by higher valu	ıes)						
1 study (Olesch 2010)		no serious limitations		no serious indirectness	serious ¹	none	11	11	-	MD 1.2 higher (0.15 to 2.25 higher)*	Moderate
COPM-S	score (change fro	m baseline) C	ycle 2 (Better indicat	ed by higher valu	ies)						
1 study (Olesch 2010)	randomised trials	no serious limitations		no serious indirectness	serious ¹	none	11	11	-	MD 1.2 higher (0.15 to 2.25 higher)*	Moderate
COPM-S	score (change fro	m baseline) C	ycle 3 (Better indicat	ed by higher valu	ies)						
1 study (Olesch 2010)		no serious limitations		no serious indirectness	serious ¹	none	11	11	-	MD 1.4 higher (0.35 to 2.45 higher)*	Moderate
COPM-S	score (change fro	m baseline) o	ver whole year (Bette	er indicated by high	gher values	5)	· ·	'		<u> </u>	
1 study (Olesch 2010)	randomised trials	no serious limitations		no serious indirectness	serious ¹	none	11	11	-	MD 0.8 higher (0.11 to 1.49 higher)*	Moderate

^{*} Calculated by the NCC-WCH

[†] Data from Hoare 2010 Cochrane systematic review

¹ Total population less than 400, 95% confidence interval for mean difference does not cross null hypothesis but is wide

² Total population less than 400, 95% confidence interval for mean difference crosses null hypothesis and is wide

Table K.7.7 Evidence profile for botulinum toxin type A and physical therapy compared with physical therapy alone; lower limb; treatment acceptability assessment

Quality asses	esmont						Summary of	findings			
Quality asses	Samerit						No. of patient	ts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	er sideration	Botulinum toxin A (BoNT-A)/ Occupational therapy	Occupational therapy only all outcomes	Relative (95% CI)	Absolute	Quality
Parental perd	ception "did th	e parent feel that	the BoNT injection	had been of bene	fit to the ch	ild?" T	hree months				
1 study (Reddihough 2002)	randomised tri	als serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	-	-	-	_2	Low
Parental perd	ception "did th	e parent feel that	the BoNT injection	had been of bene	fit to the ch	ild?" S	Six months				
1 study (Reddihough 2002)	randomised tri	als serious ¹	no serious inconsistency	no serious indirectness	serious ³	none	-	-	-	_3	Low

¹ No allocation concealment.

² Statistically significantly more positive responses to the question at 3 months (χ 2 = 12.0, p<0.05) 95% confidence interval not calculable. 36 of 47 parents rated the benefit as good, very good or excellent. Of 33 parents who noticed a benefit with BoNT treatment, 26 reported the maximum benefit occurring within 6 weeks of the injection. The remainder (7 parents) reported the maximum benefit occurring 6-12 weeks post-injection

³ Statistically significantly more positive responses to the question at 6 months (χ 2 =7.16, p<0.05) 95% confidence interval not calculable. 35 of 43 parents at 6 months rated the benefit as good, very good or excellent. Of 35 parents who noticed a benefit with BoNT treatment, 23 reported the maximum benefit occurring within 1-2months of the injection, 5 reported maximum benefit at 2 to 3 months and the remainder (7 parents) reported the maximum benefit occurring 3 to 6 months post-injection

Table K.7.8 Evidence profile for botulinum toxin type A and physical therapy compared with physical therapy alone; upper limb; adverse events

Quality	assessment						Summary of findings				
Quanty	assessment						No. of patient	s	Effect	Effect	
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	er sideratio	toxin A	all outcomes	Relative (95% CI)	Absolute	Quality
Advers	e effects										
1 study (Hoare 2010)		no serious limitations		no serious indirectness	serious ¹	none	-	-	-	_1	Low
1 study (Olesch 2010)		serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	11	11	-	_2	Low

1 95% confidence interval not calculable. No adverse effects were reported in 2 studies (Greaves 2005: Speth 2005). No major adverse events reported in Boyd 2004 although three children were noted to have decreased extension of the index finger that resolved by 6 weeks. There were 31 adverse events reported by 15 participants and no between-group difference in Lowe 2006. There were 29 adverse events reported by 20 participants over six months in Russo 2007. Three of these events involved hospitalisation for seizures in known epileptic children, and one child had 3 hospitalisations for medical reasons. Excessive weakness in the injected limb (reported as a minor adverse effect) was reported in 5 children and was prolonged in 2 children. In the Wallen 2007 RCT, there were 5 adverse events reported in the BoNT and therapy group and four adverse events in the therapy only group

2 Three adverse events were reported in BoNT/occupational therapy group of the Olesch 2010 trial - One child with a maculopapular rash (immunological test to consider if response to BoNT inconclusive), one child with weakness in index finger after BoNT administration into adductor pollicis. Both these adverse events resolved spontaneously and the children continued with treatment. One child with prolonged weakness in the finger flexors did not receive any further BoNT injections at this site, but completed the study with respect to other muscle groups

Table K.7.9 Evidence profile for botulinum toxin type A and physical therapy compared with physical therapy alone; lower limb; adverse events

Quality asses	cement						Summary of f	findings			
Quality asses	Sament						No. of patient	ts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	er sideratioı	Botulinum toxin A (BoNT-A)/ Occupational therapy	Occupational therapy only all outcomes	Relative (95% CI)	Absolute	Quality
Parental resp	onse "did the chi	ild experience	some form of compl	ication or side ef	fect from th	e BoN	T?" Three mo	onths			
1 study (Reddihough 2002)	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	-	-	-	_2	Low
Parental resp	onse "did the chi	ild experience	some form of compl	ication or side ef	fect from th	e BoN	T?" Six mont	hs			
1 study (Reddihough 2002)	randomised trials		no serious inconsistency	no serious indirectness	serious ³	none	-	-	-	_3	Low
Parental resp	onse "did the chi	ild experience	any pain in their leg	s following inject	ion?" Three	mont	:hs				
1 study (Reddihough 2002)	randomised trials		no serious inconsistency	no serious indirectness	serious ⁴	none	-	-	-	_4	Low
Parental resp	onse "did the chi	ild experience	any pain in their leg	s following inject	ion?" Six m	onths					•
1 study (Reddihough 2002)	randomised trials		no serious inconsistency	no serious indirectness	serious ⁵	none	-	-	-	_5	Low

Quality asses	ssmant						Summary of	findings			
Quality asses	Sament						No. of patien	ts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	er sideratior	Botulinum toxin A (BoNT-A)/ Occupationa therapy	Occupational therapy only all outcomes	Relative (95% CI)	Absolute	Quality
Adverse effe	cts: reported by p	arent									
1 study (Ackman 2005)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ⁶	none	1/12	0/13	-	_6	Low
Reported adv	verse effects					<u>'</u>					
1 study (Ubhi 2000)	randomised trials			no seriouss ndirectness	serious ⁷	none	6/22 ⁸ 1	I/18 ⁹	RR 4.91 (0.65 to (37.13)	17 more per 000 (from 19 ewer to 1000 nore)	Moderate

- 1 No allocation concealment. Serious attrition for many outcomes. 49 participants recruited
- 2 95% confidence interval not calculable.4 of 21 parents agreed that their child had experienced a complication/side effect. Those reported were some level of incontinence, short term muscle weakness and less specific complaints of the child being "out of sorts" and "a little sick and sore"
- 3 95% confidence interval not calculable.6 of 23 parents at 6 months agreed that their child had experienced a complication/side effect. Those reported were some level of incontinence, short term muscle weakness and less specific complaints of the child being "out of sorts" and "a little sick and sore".
- 4 95% confidence interval not calculable 7 of 23 parents at 3 months recalled their child having experienced pain
- 5 95% confidence interval not calculable 4 of 23 parents at 6 months recalled their child having experienced pain
- 6 95% confidence interval not calculable. One family whose child was in the BoNT and physical therapy group reported that their child fell more often immediately after treatment, although this resolved within 1 to 2 weeks. There were no pressure sores or injuries associated with the casts or their removal in either group and no casts were removed early
- 7 Total population less than 400, 95% confidence interval crosses null hypothesis value and is wide
- 8 This group received BoNT-A, physiotherapy and orthotic treatment. Six children treated with BoNT-A reported adverse events which were self-limiting: Significant post-injection calf pain requiring simple analgesia (2 reports), increased frequency of falls within the first 2 weeks after injection (2 reports), wheeziness (1 report), seizures (1 report in a child who was known to be liable to seizures). The clinical assessors reported no observations of excessive muscle weakness (for example, crouch gait) following trial drug administration
- 9 This group received placebo, physiotherapy and orthotic treatment. One child treated with placebo reported vomiting after injection

Table 7.10 Evidence profile for botulinum toxin type A every 4 months compared with botulinum toxin type A every 12 months; lower limb; tone and joint movement assessment

Quality access	mont						Summary of findin	gs			
Quality assess	sment						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	er sideratior		BoNT /occupational therapy every 12 months	Relative (95% CI)	Absolute	Quality
assive range	of movement (P	ROM) wors	e leg ankle dorsifle	exion (knee exter	nsion) at 12	month	s (mean change fro	om baseline) (E	Better indica	ited by lower	values)
•	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	110 ³	104 ⁴	-	MD 2 higher*	Low
PROM worse I	eg ankle dorsifle	xion (knee	extension) at 28 m	onths (mean cha	inge from b	aseline	e) (Better indicated	by lower value	es)		
•	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	110 ⁵	104 ⁶	-	MD 2.5 higher*	Low

^{*} Calculated by the NCC-WCH

¹ ITT analysis performed. Data imputed for 17% children on each treatment arm who did not complete study. It is unclear when these children left the study and how much data was imputed. Results as reported in narrative. No data extracted from graph.

² Total population less than 400, 95% confidence interval of mean difference of change not calculable

³ Mean change from baseline = -1

⁴ Mean change from baseline = -3

⁵ Mean change from baseline = -1.5

⁶ Mean change from baseline = -4

Table K.7.11 Evidence profile for botulinum toxin type A every 4 months compared with botulinum toxin type A every 12 months; lower limb; functioning assessment

Quality assess	ement						Summary of fir	dings			
Quality assess	oment.						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	lerat	Botulinum toxin (BoNT) 4 months	BoNT yearly	Relative (95% CI)	Absolute	Quality
Gross Motor F	unction Measur	e (GMFM) (vers	sion not reported):	Overall score - I	Median change fi	rom ba	seline at month	28 (Bette	er indicated I	by higher sco	re)
- 1	randomised trials	1	no serious inconsistency		serious imprecision ²		110 ³	104 ⁴		2.7 higher	Low
GMFM (version	n not reported):	Goal total scor	e - Median change	from baseline a	t month 28 (Bette	er indic	ated by higher	score)	<u>'</u>		
	randomised trials	1	no serious inconsistency		serious imprecision ²		110 ⁵	104 ⁶		2.4 higher	Low

¹ Intention to treat (ITT) analysis performed. Data inputted for 17% children on each treatment arm who did not complete study. It is unclear when these children left the study and how much data was imputed. Results as reported in narrative. No data extracted from graph.

² Total population less than 400, 95% confidence interval of mean difference of change not calculable. p=NS reported

³ Median change from baseline = 8.6

⁴ Mean change from baseline = 5.9

⁵ Mean change from baseline = 12.3

⁶ Mean change from baseline = 9

Table K.7.12 Evidence profile for botulinum toxin type A every 4 months compared with botulinum toxin type A every 12 months; lower limb; adverse events

Ouality	/ assessment						Summary o	f findings			
guanty	assessment						No. of patie	nts	Effect		
No. of studies	u Design	Limitations	verse effects at mon	Indirectness	Imprecision	erat	Botulinum toxin type A (BoNT-A) 4 months	yearly	Relative (95% CI)	Absolute	Quality
	randomised trials	serious ¹	no serious		serious ²		89/110 (81%)	88/104 (85%)	-	3 fewer per 100 (from 14 fewer to 6 more)*	Low
ropoi	tion of children e	xperiencing inf	ection at month 28								
I study Kano /sky 2009)	randomised trials		no serious inconsistency	no serious indirectness	serious ²		17/110 (15%)	18/104 (17%)	-	2 fewer per 100 (from 12 fewer to 8 more)*	
ropoi	tion of children e	xperiencing we	akness at month 28								
tudy Kano /sky 2009)	randomised trials		no serious inconsistency	no serious indirectness	serious ²		15/110 (14%)	15/104 (14%)	-	1 fewer per 100 (from 10 fewer to 9 more)*	Low

Ouglits	, accessment						Summary o	f findings			
auanty	/ assessment						No. of patie	nts	Effect		
No. of studies	Design	Limitations	nconsistency steased cough at mo	Indirectness	Imprecision	o o	Botulinum toxin type A (BoNT-A) 4 months	yearly	Relative (95% CI)	Absolute	Quality
-	Ī		reased cough at mo			ı	<u> </u>	T			
1 study (Kano vsky 2009)	randomised trials		no serious inconsistency	no serious indirectness	serious ²		15/110 (14%)	11/104 (11%)	-	3 more per 100 (from 6 fewer to 12 more)*	Low
Propor	tion of children e	xperiencing co	nvulsions at month 2	28							
1 study (Kano vsky 2009)	randomised trials		no serious inconsistency	no serious indirectness	serious ⁴		6/110 (5%)	14/104 (13%)	-	8 fewer per 100 (from 16 fewer to 0 more)*	Moderate
Propor	tion of children d	eveloping neut	ralising antibodies a	t month 28							
1 study (Kano vsky 2009)	randomised trials		no serious inconsistency	no serious indirectness	serious ²			1/103 (1%) ⁵	-	3 more per 100 *	Low

Quality	/ assessment						Summary o	f findings			
Quanty	dosessinent						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	eratior	Botulinum toxin type A (BoNT-A) 4 months	yearly	Relative (95% CI)	Absolute	Quality
Propor	rtion of children e	experiencing pa	in at month 28								
1 study (Kano vsky 2009)	randomised trials		no serious inconsistency	no serious indirectness	serious ²			22/104 (21%)	-	4 fewer per 100*	_OW

¹ Intention to treat (ITT) analysis performed. Data inputted for 17% children on each treatment arm who did not complete study. It is unclear when these children left the study and how much data was imputed.

² Total population less than 400, 95% confidence interval crosses null hypothesis and is wide. p= no statistically significant difference

³ ITT analysis performed. Data inputted for 17% children on each treatment arm who did not complete study. It is unclear when these children left the study and how much data was inputted.4/6 participants in the 4 monthly group and 10/14 participants in the yearly group had a history of epilepsy, epileptic syndrome, partial epilepsy or febrile convulsions at baseline

⁴ Total population less than 400, 95% confidence interval crosses null hypothesis and is wide. p = 0.044

⁵ Neutralising antibodies: Two patients were noted to have neutralising antibodies at entry to the study. A further 5 patients (2%) in total developed neutralising antibodies over the 2 year study period (4 monthly group = 4/110 and annual group = 1/104). In six patients the levels of antibodies were low or low-intermediate. In one patient 4 monthly group) the levels of antibodies were high although no contractures developed during the 28 month follow up and global assessments of efficacy (as subjectively assessed by physician and parent/guardian) indicated improvement

Table K.7.13 Evidence profile for electrical stimulation compared with palpation as guidance techniques for botulinum toxin type A administration; tone and joint movement assessment

Ouglity	aaaaamant						Summary of find	lings			
Quality a	ssessment						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Istimulation and	Palpation and physiotherapy	Relative (95% CI)	Absolute	Quality
Change i	n Modified A	shworth Scale	e (MAS) score at	3 months from	m baseline (Be	etter indicated by	lower values)				
1 study (Xu 2009)	randomised trials	no serious limitations		no serious indirectness	serious ¹	none	23 ²	22 ³	-	MD = 0.5 (0.74 to 0.26) lower*	Moderate
Change i	n passive rar	nge of movem	ent (PROM) at 3	months from	baseline, deg	rees (Better indic	ated by higher va	alues)			
study Xu 2009)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	23 ⁴	22 ⁵	-	MD = 3.8 (0.79 to 6.81) higher*	

^{*} Calculated by the NCC-WCH

¹ Total population less than 400, 95% confidence interval for mean difference does not cross null hypothesis but is wide

² Mean change \pm SD = -1.9 \pm 0.3

³ Mean change \pm SD = -1.4 \pm 0.5

⁴ Mean change \pm SD = 20.0 \pm 5.2

⁵ Mean change \pm SD = 16.2 \pm 5.1

Table K.7.14 Evidence profile for electrical stimulation compared with palpation as guidance techniques for botulinum toxin type A administration; functioning assessment

Quality of	coccmont						Summary of find	ings				
Quality as	ssessment						No. of patients		Effect			
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Electrical stimulation and physiotherapy	Palpation and physiotherapy	Relative (95% CI)	Absolute	Quality	
Change in Gross Motor Function Measure (GMFM): D and E (Standing, Walking, running and jumping) at 3 months from baseline (Better indicated by higher values)												
1 study (Xu 2009)		no serious limitations			no serious imprecision	none	23 ¹	22 ²	-	MD = 7.3 (5.5 to 9.10) higher*	High	
Change ii	n walking velo	ocity at 3 mon	ths from baseling	e, m/s (Better ii	ndicated by hi	gher values)						
1 study (Xu 2009)		no serious limitations			no serious imprecision	none	23 ³	22 ⁴	-	MD = 0.07 (0.04 to 0.10) higher*		

^{*} Calculated by the NCC-WCH

¹ Mean change \pm standard deviation (SD) = 8.6 \pm 4.0

² Mean change \pm SD = 11.3 \pm 1.8

³ Mean change \pm SD = 0.15 \pm 0.06

⁴ Mean change \pm SD = 0.08 \pm 0.04

Table K.7.15 Evidence profile for ultrasound compared with electrical stimulation as guidance techniques for botulinum toxin type A administration; tone assessment

Ouglity of	aaaamant						Summary of	indings			
Quality as	sessment						No. of patient	:s	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Ultrasound group	Electrical simulation group	Relative (95% CI)	Absolute	Quality
Change ir	Modified Ash	worth Scale (I	MAS) score (with I	knee extended)	at 3 months fro	om baseline (Better	indicated by	ower values)	•		
,	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	14 ³	16 ⁴	-	-	Low
Change ir	MAS score (with knee flexe	ed) at 3 months fro	om baseline (Be	tter indicated b	y lower values)			1		
1 study (Kwon 2010)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious⁵	none	14 ⁶	16 ⁷	-	-	Low

- 1 Inadequate randomisation alternate patient allocation to treatment
- 2 Total population less than 400, 95% confidence interval not calculable, the authors note that the study was underpowered and that there were no significant difference between groups p = 0.68 (Mann-Whitney U test)
- 3 Pre-treatment median (Range, 25 percentile, 75 percentile) = 3 (2-4, 3, 3), Median at 3 months = 3 (1-4, 2, 3)
- 4 Pre-treatment median (Range, 25 percentile, 75 percentile) = 3 (1-4, 2, 3), Median at 3 months = 3 (1-4, 2, 3)
- 5 Total population less than 400, 95% confidence interval not calculable, the authors note that the study was underpowered and that there were no significant difference between groups p = 0.98 reported (Mann-Whitney U test)
- 6 Pre-treatment median (Range, 25 percentile, 75 percentile) = 2 (1-4, 2, 3), Median at 3 months = 2 (1-3, 2, 2)
- 7 Pre-treatment median (Range, 25 percentile, 75 percentile) = 2 (1-3, 2, 3), Median at 3 months = 1 (1-4, 2, 2)

Table K.7.16 Evidence profile for ultrasound compared with electrical stimulation as guidance techniques for botulinum toxin type A administration; functioning assessment

Quality on	coccmont						Summary of f	indings			
Quality as	ssessment						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations		Electrical simulation group	Relative (95% CI)	Absolute	Quality
Change in	n physician's r	ating scale (sp	peed of gait) at 3 n	nonths from bas	seline, m/s (Bet	ter indicated by hig	gher values)				
,	randomised trials		no serious inconsistency	no serious indirectness	serious ²	none	14 ³	16 ⁴	-	-	Low

¹ Inadequate randomisation - alternate patient allocation to treatment

² Total population less than 400, 95% confidence interval not calculable, the authors note that the study was underpowered and that there were no significant difference between groups reported by authors p = 0.47 (Mann-Whitney U test)

³ Pre-treatment median (Range, 25 percentile, 75 percentile) = 0 (0-1, 0, 1), Median at 3 months = 1 (0-1, 0, 1)

⁴ Pre-treatment median (Range, 25 percentile, 75 percentile) = 0 (0-1, 0, 1), Median at 3 months = 0 (0-1, 0, 1)

Chapter 8 Intrathecal baclofen

Table K.8.1 Evidence profile for intrathecal baclofen testing follow up and compared with placebo; lower limb; tone assessment

Quality ass	ossmont						Summary of	findings			
Quality ass	essillelli						No. of patie	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Intrathecal baclofen testing	Placebo	Relative (95% CI)	Absolute (95% CI)	Quality
Ashworth s	scores 2, 4, and	6 hours after	start of test treat	ment (Better in	dicated by low	er values)					
1 study (Hoving 2007)	randomised trials	serious ¹	no serious inconsistency	serious ²	serious ³	none	174	17 ⁴	5	-5	Very low
Ashworth s	cores 12 month	ns after contin	uous pump-adm	inistered intrati	necal baclofen	(CITB) pump imp	lantation (Bet	ter indicate	ed by lower	values)	
1 study (Hoving 2009b)	observational study	serious ¹	no serious inconsistency	serious ²	serious ³	none	17 ⁶	-	_5	_5	Very low
Ashworth s	cores when red	eiving test tre	eatment with bac	lofen 50 µg dos	e (Better indic	ated by lower valu	ies)	L			
1 study (Gilmartin 2000)	randomised trials	no serious limitations	no serious inconsistency	serious ⁷	serious ³	none	51	51	-	_8	Low
Ashworth s	scores when red	eiving test tre	eatment with back	lofen 75 µg dos	е						
1 study (Gilmartin 2000)	randomised trials	serious ¹	no serious inconsistency	serious ⁷	serious ³	none	109	-	_5	_5	Very low
Ashworth s	cores 6 months	s after CITB pu	ump implantation	1				L		·	
1 study (Gilmartin 2000)	randomised trials	serious ¹⁰	no serious inconsistency	serious ⁷	serious ³	none	42 ¹¹	-	_5	_5	Very low

Quality ass	essment				Summary o	f findings					
Quality ass	Cooment						No. of patie	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Intrathecal baclofen testing	Placebo	Relative (95% CI)	Absolute (95% CI)	Quality
Ashworth s	cores 12 montl	ns after CITB p	oump implantatio								
1 study (Gilmartin 2000)	randomised trials	serious ¹⁰	no serious inconsistency	serious ⁷	serious ³	none	40 ¹²	-	_5	_5	Very low
Ashworth s	cores 24 montl	ns after CITB p	oump implantatio	n							
1 study (Gilmartin 2000)	randomised trials	serious ¹³	no serious inconsistency	serious ⁷	serious ³	none	33 ¹⁴	-	_5	_5	Very low

- 1 Pre-post treatment data
- 2 Ashworth scores were derived from bilateral assessment in seven lower-extremity muscle groups hip adductors, flexors and extensors; knee flexors and extensors; and ankle plantarflexors and dorsiflexors. Assessments and scores made every day before bolus administration (baseline) of random dose of baclofen 25µg-100 µg or placebo and 2, 4, and 6 hours afterward by the same experienced paediatric physiotherapist.
- 3 Total population less than 400, 95% confidence interval not calculable
- 4 After intrathecal baclofen administration the Ashworth scores, significantly decreased in comparison with baseline for all muscle groups $(0.001 \le p \le 0.040)$, except for the left hip flexors 2 hours (p=0.080). Ashworth scores after placebo did not change significantly in any muscle group at any test point $(0.083 \le p \le 1.000)$ (Moderate).
- 5 No statistical comparison was given across groups
- 6 At 12 months after CITB pump implantation (Hoving 2009b). The Ashworth score decreased significantly in 9/14 lower-extremity muscle groups (0.002 ≤ p ≤ 0.046).
- 7 Ashworth scores were derived from bilateral assessment in 4 lower-extremity muscle groups hip abductors, knee flexors and extensors; and foot dorsiflexors) 4 hours after a single dose of 50µg intrathecal baclofen/placebo bolus was delivered.
- 8 When receiving 50μg baclofen patients had a statistically significant reduction in the mean Ashworth scores as compared to when they received placebo (mean, SD; SE; range) (n=51): baclofen: 2.14 (0.85); 0.12 (1.00 to 4.75) versus placebo: 3.11 (0.69); 0.14 (1.75 to 5.00); p<0.001).
- 9 When receiving 75 μg baclofen patients had a statistically significant reduction in the mean Ashworth scores as compared to baseline (baclofen: 2.04 (0.67); 0.21 (1.37 to 3.50) versus baseline: 3.31 (0.60); 0.19 (2.00 to 4.00); p<0.001).
- 10 Pre- post treatment data. Of the 51 patients who took part in testing, 44 proceeded with pump placement. Baseline data were assessed (as above) within 2 weeks of implantation. 7/44 subsequently withdrew for the following reasons: 2 infection in the pump site (n=2); "family issues" (n=2); wished to become pregnant (n=1); died in motor vehicle accident (n-1); died from pneumonia (n=1).
- 11 When receiving CITB baclofen patients had a statistically significant reduction in the mean Ashworth scores as compared to baseline at 6 months (n=42): 2.33 (0.64); (1.0 to 3.8)

- 12 When receiving CITB baclofen patients had a statistically significant reduction in the mean Ashworth scores as compared to baseline at 12 months (n=40): 2.15 (0.60); (1.1 to 3.3);
- 13 Pre post treatment data of the 51 patients who took part in testing, 44 proceeded with pump placement. Baseline data were assessed (as above) within 2 weeks of implantation. Results for 11/44 (25% attrition) patients are missing.
- 14 When receiving CITB baclofen patients had a statistically significant reduction in the mean Ashworth scores as compared to baseline at 24 months (n=33): 2.21 (0.75); (1.0 to 3.5)

Table K.8.2 Evidence profile for intrathecal baclofen testing follow up; upper limb; tone assessment

Quality asse	ocemont						Summary of	findings			
Quality assi	essinent						No. of patie	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Intrathecal baclofen testing	Placebo	Relative (95% CI)	Absolute (95% CI)	Quality
Ashworth s	cores when re	eceiving test to	eatment with ba	clofen 50 µg do	se (Better indi	cated by lower va	lues)			1	
1 study (Gilmartin 2000)	randomised trials	serious 1	no serious inconsistency	serious ²	serious ³	none	51	-	_5	_5	Very low
Ashworth s	cores 6 month	ns after contin	uous pump-adm	inistered intrat	hecal baclofen	(CITB) pump imp	lantation			•	
1 study (Gilmartin 2000)	randomised trials	serious ⁶	no serious inconsistency	serious	serious	none	42 ⁷	-	_5	_5	Very low
Ashworth s	cores 12 mon	ths after CITB	pump implantati	on						1	
1 study (Gilmartin 2000)	randomised trials	serious ⁶	no serious inconsistency	serious	serious	none	408	-	_5	_5	Very low
Ashworth s	cores 24 mon	ths after CITB	pump implantati	on							
1 study (Gilmartin 2000)	randomised trials	serious ⁹	no serious inconsistency	serious	serious	none	33 ¹⁰	-	_5	_5	Very low

¹ Pre-post treatment data. Ashworth scores are not reported for the placebo phase.

Spasticity in children and young people with non-progressive brain disorders (appendices)

- 2 Unvalidated outcome assessment. Ashworth scores were assessed bilaterally in the upper extremities (specific muscles not described) 4 hours after a single dose of 50µg ITB/placebo bolus was delivered.
- 3 Total population less than 400, 95% confidence interval not calculable
- 4 After ITB the Ashworth scores, significantly decreased in comparison with baseline ((mean, SD; range) (n=51): baclofen: 1.92 (0.80); (1.0 to 4.4) versus baseline: 2.21 (0.80); (1.0 to 4.5); p<0.001).
- 5 No statistical comparison was given across groups
- 6 Pre-post treatment data. Of the 51 patients who took part in testing, 44 proceeded with pump placement. Baseline data were assessed (as above) within 2 weeks of implantation. 7/44 subsequently withdrew for the following reasons: 2 infection in the pump site (n=2); "family issues" (n=2); wished to become pregnant (n=1); died in motor vehicle accident (n-1); died from pneumonia (n=1).
- 7 When receiving CITB baclofen patients had a statistically significant reduction in the mean Ashworth scores as compared to baseline at 6 months after implantation (n=41): 1.80 (0.72); (1.0 to 3.8)
- 8 When receiving CITB baclofen patients had a statistically significant reduction in the mean Ashworth scores as compared to baseline at 12 months after implantation(n=40): 1.73 (0.66); (1.0 to 4.1)
- 9 Pre post treatment data Of the 51 patients who took part in testing, 44 proceeded with pump placement. Baseline data were assessed (as above) within 2 weeks of implantation. Results for 12/44 patients (27% attrition) at 24 months follow up are missing.
- 10 When receiving CITB baclofen patients had a statistically significant reduction in the mean Ashworth scores as compared to baseline at 24 months after implantation(n=32): 1.72 (0.69); (1.0 to 3.1)

Table K.8.3 Evidence profile for intrathecal baclofen testing follow up; upper and lower limb; tone assessment

Quality ass	essment						Summary of	f findings			
quality acc							No. of patie	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Intrathecal baclofen testing	Placebo	Relative (95% CI)	Absolute (95% CI)	Quality
Ashworth s	cores when red	ceiving test tre	eatment with bacl	ıes)							
1 study (Awaad 2003)	observational study	serious 1	no serious inconsistency	serious ²	serious ³	none	28 ⁴	-	_5	_5	Very low
Ashworth s	cores 12 month	ns after contin	uous pump-adm	inistered intratl	necal baclofen	(CITB) pump imp	lantation				
1 study (Awaad 2003)	observational study	serious ⁶	no serious inconsistency	serious ²	serious ³	none	_7	-	_5	_5	Very low

- 1 Pre-post treatment data
- 2 Unvalidated outcome assessment. Ashworth scores for seven lower-extremity muscle groups (hip adductors, abductors, and flexors; knee flexors and extensors; and ankle dorsiflexors and plantarflexors) and four upper extremity muscle groups (wrist and elbow flexors and extensors) were averaged as one combined score every 2 hours after the injection (total number of scores not stated). Scores were assessed by physical and occupational therapists.
- 3 Total population less than 400, 95% confidence interval not calculable
- 4 After intrathecal baclofen testing, the Ashworth scores significantly decreased in comparison with baseline before intrathecal baclofen testing (n=28) (mean, standard deviation (SD)) before trial:
- 3.19 (0.56), after trial: 1.34 (0.50), change: -1.85 (0.51); P<0.001).
- 5 No statistical comparison was given across groups
- 6 Pre-post treatment data. It is not possible to determine exactly how many children were included in the pre and post treatment samples.
- 7 When receiving CITB baclofen, patients had a statistically significant reduction in the mean Ashworth scores at 12 months after implantation as compared to baseline at 12 months after implantation (mean (SD): Ashworth score: 1.76 (0.64), change: -1.49 (0.69); P<0.001).

Table K.8.4 Evidence profile for intrathecal baclofen testing follow up and compared with placebo; functioning assessment (ease of care)

Quality ass	accment						Summary of	f findings			
Quality ass	essilient						No. of patie	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Intrathecal baclofen testing	Placebo	Relative (95% CI)	Absolute (95% CI)	Quality
Ease of car higher valu		Analogue Sca	le (VAS) score ra	ated once befor	e the test treat	ment started (bas	eline) and at	the end of	each test da	ay (better indica	ated by
1 study (Hoving 2007)	randomised trial	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	14 ¹	13 ²	-	MD 4.20 (2.68 higher to 5.72 higher)*	High
Ease of car	e: Mean VAS so	core at 6 mont	hs after pump im	plantation (bet	ter indicated b	y higher values)					
1 study (Hoving 2009b)	observational study	serious ³	no serious inconsistency	no serious indirectness	serious ⁴	none	17 ⁵	-	_6	_6	Very low
Ease of car	e: Mean Mean \	/AS score at 1	2 months after p	ump implantati	on (better indi	cated by higher va	alues)				
1 study (Hoving 2009b)	observational study	serious ³	no serious inconsistency	no serious indirectness	serious ⁴	none	17 ⁷	-	_6	_6	Very low

^{*} Calculated by the NCC-WCH

¹ Mean 5.1 standard deviation (SD) (2.1) p=0.001 compared to baseline.

² Mean 0.9 SD (1.7) p=0.093 compared to baseline.

³ Pre-post treatment data. Baseline data for n=17 Mean change data for n=16

⁴ Total population less than 400, 95% confidence interval not calculable

⁵ Mean 4.4 SD (2.1) p<0.001

⁶ No statistical comparison was given across groups

⁷ Mean 5.2 SD (2.1) p<0.001

Table K.8.5 Evidence profile for intrathecal baclofen testing follow up; functioning assessment (individually formulated problems)

Quality ass	essment						Summary o	f findings			
Quality ass	Comment						No. of patie	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Intrathecal baclofen testing	Placebo	Relative (95% CI)	Absolute (95% CI)	Quality
Accomplish	nment of indivi	dually formula	ted problems aft	er test treatme	nt						
1 study (Hoving 2007)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	17 ³	-	_4	_4	Very low
Mean Mean	Visual Analogi	ue Scale (VAS) score at 6 mont	hs after pump	implantation (b	etter indicated by	higher value	s)			·
1 study (Hoving 2009b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	17 ⁵	-	_4	_4	Very low
Mean VAS	score at 12 mor	nths after pum	p implantation (b	etter indicated	by higher valu	es)					
1 study (Hoving 2009b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	17 ⁶	-	_4	_4	Very low

¹ Pre-post treatment data

² Total population less than 400, 95% confidence interval not calculable

^{3 14} of the 17 children were bed bound after the test treatment (due to symptoms of lowered cerebrospinal fluid (CSF) pressure) preventing assessment of some of the individually formulated problems. The study authors noted that there were improvements for individuals in transfers, voiding, startle responses, electric wheelchair operation and arm function, and for one participant, there was improvement in hamstring pain and gait efficiency

⁴ No statistical comparison was given across groups

⁵ Mean 4.1 standard deviation (SD) (2.1) p<0.001 compared to baseline

⁶ Mean 4.7 SD (2.0) p<0.001 compared to baseline

Table K.8.6 Evidence profile for intrathecal baclofen testing follow up and compared with placebo; pain assessment

Quality ass	essment						Summary o	f findings			
Quality ass	Coomen						No. of patie	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Intrathecal baclofen testing	Placebo	Relative (95% CI)	Absolute (95% CI)	Quality
Mean Visua	l Analogue Sca	le (VAS) score	e rated once befo	ore the test trea	tment started	(baseline) and at t	he end of eac	h test day	(better indic	cated by higher	values)
1 study (Hoving 2007)	randomised trial	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	11 ³	10 ⁴	-	MD 2.2 higher (0.72 lower to 5.12 higher)*	Low
Mean VAS	score at 6 mont	hs after pump	implantation (be	etter indicated b	y higher value	es)					
1 study (Hoving 2009b)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ²	none	17 ⁶	-	_7	_7	Very low
Mean VAS	score at 12 mor	nths after pum	p implantation (b	etter indicated	by higher valu	ies)					
1 study (Hoving 2009b)	observational study	serious ⁸	no serious inconsistency	no serious indirectness	serious ²	none	17 ⁹	-	_7	_7	Very low

^{*} Calculated by the NCC-WCH

¹ At least 41% patients with no available outcome data (low cerebrospinal fluid (CSF) pressure)

² Total population less than 400, 95% confidence interval not calculable

³ Mean change 3.3 standard deviation (SD) (2.9) p=0.010 compared to baseline

⁴ Mean change 1.1 SD (3.5) p=0.262 compared to baseline (not statistically significant)

⁵ Pre-post treatment data. Baseline data for n=17 Mean change data for n=16

⁶ Mean 4.5 SD (2.6) p=0.002

⁷ No statistical comparison was given across groups

⁸ Pre-post treatment data. Baseline data for n=17 Mean change data for n=12 (29% patients with no available outcome data)

⁹ Mean 5.4 SD (2.7) p=0.002

Table K.8.7 Evidence profile for intrathecal baclofen testing follow up and compared with placebo; adverse events

Quality asses	sment						Summary o	f findings			
Quality asses	Silielit						No. of patie	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other consider-ations	Intrathecal baclofen testing	Placebo	Relative (95% CI)	Absolute (95% CI)	Quality
Drug related a	dverse effects of	luring intrathe	cal baclofen test	ing			1				•
1 study (Hoving 2007)	randomised trial	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	8/17 ²	0/17 ³	-	-	Moderate
Procedure rel	ated adverse eff	ects during in	trathecal baclofe	n testing							
1 study (Hoving 2007)	randomised trial	serious ⁴	no serious inconsistency	no serious indirectness	serious ¹	none	_5	-	-	-	Low
Adverse even	ts during intrath	ecal baclofen	testing								1
1 study (Gilmartin 2000)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	_6	_7	-	-	Very low
1 study (Awaad 2003)	observational study	serious ⁸	no serious inconsistency	no serious indirectness	serious ²	none	-	-	-	_8	Very low

¹ Total population less than 400, 95% confidence interval not calculable

² Eight children experienced nine adverse effects associated with intrathecal baclofen during the testing (see Table M.1 - note e)

³ No adverse effects were noted with placebo

⁴ Descriptive data from all children within the group

⁵ Sixteen children were affected by a total number of nineteen complications related to the procedure (see Table M.1 note g). None of these symptoms were observed in three children in whom the neurosurgeon had tunnelled the catheter subcutaneously for a few centimetres

⁶ During the testing phase of the American study (Gilmartin 2000) reported twenty nine adverse effects, affecting eighteen patients (the respective numbers of children and adults is unclear) (see Table M.1 - note f). Twenty two adverse effects occurred during the intrathecal baclofen period and affected fourteen patients

⁷ Seven adverse effects occurred during the placebo period and affected four patients

⁸ No adverse effects reported during the ITB testing phase; but it is not clear that this was recorded, so it cannot be assumed that no adverse effects occurred

Table K.8.8 Evidence profile for continuous pump administered intrathecal baclofen follow up and compared with standard treatment; lower limb; tone assessment

Quality	na a a mant						Summary of fi	ndings			
Quality ass	sessment						No. of patients	<u> </u>	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump- administered intrathecal baclofen therapy (CITB) and standard treatment	Standard treatment	Relative (95% CI)	Absolute (95% CI)	Quality
Ashworth	scores 6 month	s after CITB p	ump implantatio	n (better indica	ted by lower v	alues)					
1 study (Hoving 2009a)	randomised trials	no serious limitations	no serious inconsistency	serious ¹	serious ²	none	93	8 ³	-	-	Low
Ashworth	scores 12 mont	hs after CITB	pump implantation	on (better indic	ated by lower	values)					
1 study (Hoving 2009b)	observational study	serious ⁴	no serious inconsistency	serious ¹	serious ²	none	17 ⁵	-	_6	_6	Very low
Ashworth	scores 6 month	s after CITB p	ump implantatio	n							
1 study (Gilmartin 2000)	randomised trials	serious ⁷	no serious inconsistency	serious ⁸	serious ²	none	429	-	_6	_6	Very
Ashworth	scores 12 mont	hs after CITB	pump implantation	on						l	1
1 study (Gilmartin 2000)	randomised trials	serious ¹⁰	no serious inconsistency	serious ⁸	serious ²	none	40 ¹⁰	-	_6	_6	Very

Quality ass	sessment						Summary of fi	ndings			
Quality uoc	,000,1110,111						No. of patients	3	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump-administered intrathecal baclofen therapy (CITB) and standard treatment	Standard treatment	Relative (95% CI)	Absolute (95% CI)	Quality
Ashworth s	scores 24 mont		pump implantation	on							
1 study (Gilmartin 2000)	randomised trials	serious ¹¹	no serious inconsistency	serious ⁸	serious ²	none	33 ¹²	-	_6	6	Very low

- 1 After 6 months Ashworth scores were assessed bilaterally in 7 lower-extremity muscle groups (hip adductors, flexors and extensors; knee flexors and extensors; and ankle plantarflexors and dorsiflexors). Scores of the total 14 muscles were separately analysed. Scores were determined by an experienced paediatric physiotherapist, and for each individual the scores were rated on every occasion by the same physiotherapist
- 2 Total population less than 400, 95% confidence interval not calculable
- 3 The 6-month score change score differed significantly in favour of the CITB group for the left hip adductors (p=0.0025) and for both hip flexors (right p=0.022; left p=0.043) but there were no significant differences for any of the other muscle groups
- 4 Pre and post treatment data
- 5 At 12 months after CITB pump implantation (Hoving 2009b). The Ashworth score decreased significantly in 9/14 lower-extremity muscle groups (0.002 \leq p \leq 0.046). The actual scores were not reported
- 6 No statistical comparison was given across groups
- 7 Pre-post treatment data. Of the 51 patients who took part in testing, 44 proceeded with pump placement. Baseline data were assessed (as above) within 2 weeks of implantation. 7/44 subsequently withdrew for the following reasons: 2 infection in the pump site (n=2); "family issues" (n=2); wished to become pregnant (n=1); died in motor vehicle accident (n-1); died from pneumonia (n=1)
- 8 Ashworth scores were derived from bilateral assessment in 4 lower-extremity muscle groups hip abductors, knee flexors and extensors; and foot dorsiflexors)
- 9 When receiving CITB baclofen patients had a reduction in the mean Ashworth scores as compared to baseline (n=44) (mean, standard deviation (SD); range) 3.64 (0.57); (3.0 to 5.0) at 6 months (n=42): (mean, SD; range) 2.33 (0.64); (1.0 to 3.8)
- 10 When receiving CITB baclofen patients had a significant reduction in the mean Ashworth scores as compared to baseline (n=44) (mean, SD; range) 3.64 (0.57); (3.0 to 5.0) at 12 months (n=40): (mean, SD; range) 2.15 (0.60); (1.1 to 3.3)

Table K.8.9 Evidence profile for continuous pump administered intrathecal baclofen follow up and compared with placebo; upper limb; tone assessment

Quality ass	eassmant						Summary of fi	ndings			
Quality as	3C33IIICIII						No. of patients	3	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump-administered intrathecal baclofen therapy (CITB)	Placebo	Relative (95% CI)	Absolute (95% CI)	Quality
Ashworth	scores 6 month	s after CITB p	ump implantatio	n (Better indica	ited by lower v	alues)					
1 study (Hoving 2009a)	randomised trials	serious ¹	no serious inconsistency	serious ²	serious ³	none	9	8	_4	_4	Very low
Ashworth	scores 12 mont	hs after CITB	pump implantation	on (Better indic	ated by lower	values)					
1 study (Hoving 2009b)	observational study	serious ⁵	no serious inconsistency	serious ²	serious ³	none	17 ⁶	-	_7	_7	Very low
Ashworth	scores 6 month	s after CITB p	ump implantatio	n							
1 study (Gilmartin 2000)	randomised trials	serious ⁵	no serious inconsistency	serious ²	serious ³	none	418	-	_7	_7	Very low

¹¹ Pre post treatment data of the 51 patients who took part in testing, 44 proceeded with pump placement. Baseline data were assessed (as above) within 2 weeks of implantation. Results for 11/44 (25% attrition) patients are missing

¹² When receiving CITB baclofen patients had a significant reduction in the mean Ashworth scores as compared to baseline (n=44) (mean, SD; range) 3.64 (0.57); (3.0 to 5.0) at 24 months (n=33): (mean, SD; range) 2.21 (0.75); (1.0 to 3.5)

Quality as:	eassmont						Summary of fi	ndings			
Quality as	sessille iii						No. of patients	5	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump-administered intrathecal baclofen therapy (CITB)	Placebo	Relative (95% CI)	Absolute (95% CI)	Quality
Ashworth	scores 12 mont	hs after CITB	pump implantation	on							
1 study (Gilmartin 2000)	randomised trials	serious ⁵	no serious inconsistency	serious ²	serious ³	none	409	-	_7	-7	Very low
Ashworth	scores 24 mont	hs after CITB	pump implantation	on							
1 study (Gilmartin 2000)	randomised trials	serious ¹⁰	no serious inconsistency	serious ²	serious ³	none	32 ¹¹	-	_7	_7	Very low

- 1 Pre and post treatment data. Ashworth scores are not reported for the placebo phase
- 2 Ashworth scores were bilaterally assessed in 4 upper extremity muscle groups (elbow and wrist flexors and extensors). Scores of the total 8 muscles were separately analysed. Scores were assessed by an experienced paediatric physiotherapist. For each child scores were always rated by the same physiotherapist
- 3 Total population less than 400, 95% confidence interval not calculable
- 4 The 6-month-change score between both groups significantly differed in favour of the CITB group for the right wrist flexors (p=0.038). There were no significant differences for other muscle groups
- 5 Pre and post treatment data
- 6 The Ashworth score decreased significantly in 5/8 upper extremity muscle groups (0.008 ≤ p ≤ 0.046)
- 7 No statistical comparison was given across groups
- 8 When receiving CITB baclofen patients had a statistically significant reduction in the mean Ashworth scores as compared to baseline at 6 months after implantation (n=41): 1.80 (0.72); (1.0 to 3.8)
- 9 When receiving CITB baclofen patients had a statistically significant reduction in the mean Ashworth scores as compared to baseline at 12 months after implantation(n=40): 1.73 (0.66); (1.0 to 4.1)
- 10 Pre and post treatment data. Of the 51 patients who took part in testing, 44 proceeded with pump placement. Baseline data were assessed (as above) within 2 weeks of implantation. Results for 12/44 patients (27% attrition) at 24 months follow up are missing
- 11 When receiving CITB baclofen patients had a statistically significant reduction in the mean Ashworth scores as compared to baseline at 24 months after implantation(n=32): 1.72 (0.69); (1.0 to 3.1)

Table K.8.10 Evidence profile for continuous pump administered intrathecal baclofen follow up; upper and lower limb; tone assessment

Quality ass	essment						Summary of				
							No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Intrathecal baclofen therapy (CITB)	Placebo	Relative (95% CI)	Absolute (95% CI)	Quality
Ashworth s	cores 12 month	ns after CITB p	oump implantatio	n							
1 study (Awaad 2003)	observational study	serious 1	no serious inconsistency	serious ²	serious ³	none	_4	-	_5	_5	Very low

¹ Pre-post treatment data. It is not possible to determine exactly how many children were included in the pre and post treatment samples

² Unvalidated outcome assessment. Ashworth scores for seven lower-extremity muscle groups (hip adductors, abductors, and flexors; knee flexors and extensors; and ankle dorsiflexors and plantarflexors) and four upper extremity muscle groups (wrist and elbow flexors and extensors) were averaged as one combined score. Assessors were physician, nurse and/or physical therapist.

³ Total population less than 400, 95% confidence interval not calculable

⁴ When receiving CITB baclofen, patients had a statistically significant reduction in the mean Ashworth scores at 12 months after implantation as compared to baseline: 12 months after implantation (mean, SD): Ashworth score: 1.76 (0.64), change: -1.49 (0.69); P<0.001)

⁵ No statistical comparison was given across groups

Table K.8.11 Evidence profile for continuous pump administered intrathecal baclofen follow up; upper and lower limb; tone assessment (dystonia)

Quality as:	eacement						Summary of fi	ndings			
Quality as:	sessille iii						No. of patients	5	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump- administered intrathecal baclofen therapy (CITB)	Placebo	Relative (95% CI)	Absolute (95% CI)	Quality
Overall Ba	rry-Albright dsy	ytonia scale (E	BAD) score 12 mg	onths after CITE	3 pump implan	tation (Better indi	cated by lower	values)			
1 study (Motta 2008)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	19 ³	-	_4	_4	Very low
Overall Bu	rke-Fahn-Marso	den scale (BFI	M) scores 12 mor	nths after CITB	pump implanta	ation (Better indic	ated by lower va	alues)			
1 study (Motta 2008)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	19 ⁵	-	_4	_4	Very low

- 1 Pre and post treatment data
- 2 Total population less than 400, 95% confidence interval not calculable
- 3 Assessment was conducted pre-implant and at 12 months post-implant by the same team of 2 rehabilitation therapists and same orthopaedic physician. Overall BAD scores (mean, SD) significantly improved at 12 months when compared to baseline ((mean, standard deviation (SD)) 12 months: 17.79 ± 3.3 versus baseline: 23.84 ± 4.11 ; P<0.001). Individual BAD scores were not reported for each region, only p values for change. Dystonia significantly improved at 12 months when compared to baseline in all body regions assessed (eyes: <0.05; mouth: <0.01, neck: <0.001, upper limb R: <0.001, trunk: <0.001, lower limb R: <0.001)
- 4 No statistical comparison was given across groups
- 5 Overall BFM scores-movement components significantly improved at 12 months when compared to baseline ((mean, SD): 12 months: 77.60 ± 20.56 versus baseline: 98.57 ± 13.07 ; p<0.001). Individual BFM scores- movement components were not reported for each region, only p values for change. Dystonia significantly improved at 12 months when compared to baseline in all body regions assessed except in the eyes and the language swallowing area (eyes: NS, mouth: <0.05, language-swallowing: NS, neck: <0.05, upper limb R: <0.05, upper limb L: <0.05, trunk: <0.001, lower limb L: <0.001)

Table K.8.12 Evidence profile for continuous pump administered intrathecal baclofen follow up; upper and lower limb; functioning assessment (individually formulated problems; dystonia)

Quality as	ssessment						Summary of fi	ndings			
quality ac							No. of patients	3	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump-administered intrathecal baclofen therapy (CITB)	Usual care	Relative (95% CI)	Absolute (95% CI)	Quality
Mean Visi	ual Analogue S	cale (VAS) sco	ore at 6 months a	fter pump impl	antation (bette	r indicated by hig	her values)				
1 study Hoving 2009a)	randomised trial	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	9 ²	8 ³	_4	_4	Moderate
Mean VAS	Mean VAS score at 12 months after pump implantation (better indicated by higher values)										
1 study (Hoving 2009b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	17 ⁵	-	_6	_6	Very low

¹ Total population less than 400, 95% confidence interval not calculable

² Mean 4.0 standard deviation (SD) (1.7) p=0.001 compared to baseline

³ Mean -0.2 SD (1.3) p=not stated compared to baseline

⁴ No statistical comparison was given across groups

⁵ Pre-post treatment data

⁶ Mean 4.7 SD (2.0)) p<0.001 compared to baseline

Table K.8.13 Evidence profile for continuous pump administered intrathecal baclofen follow up and compared with usual care; functioning assessment

Quality as	sessment						Summary of fi	ndings			
quality do							No. of patients	3	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump-administered intrathecal baclofen therapy (CITB)	Usual care	Relative (95% CI)	Absolute (95% CI)	Quality
Gross Mot	or Function Me	asure (GMFM)	-66: Overall sco	re at 6 months	(better indicat	ed by higher value	es)				
1 study (Hoving 2009a)	randomised trial	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	7 ²	5 ³	_4	_4	Moderate
GMFM-66:	Total score at	6 months (Rar	nstad 2010) (bett	er indicated by	higher values)					
1 study (Ramstad 2010)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	32 ⁶	-	_4	_4	Very low
GMFM-66:	General score	at 12 months	after pump impla	ntation (better	indicated by h	igher values)					
1 study (Hoving 2009b)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	12 ⁷	-	_4	_4	Very low
GMFM-66	total score at 18	8 months (bett	er indicated by h	igher values)	_	1	1			1	
1 study (Ramstad 2010)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	318	-	_4	_4	Very low

Ouglity as	aaamant						Summary of fi	ndings			
Quality as	sessment						No. of patients	•	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump- administered intrathecal baclofen therapy (CITB)	Usual care	Relative (95% CI)	Absolute (95% CI)	Quality
GMFM-88	: Dimension A (Lying and roll	ing) score at 6 m	onths (better in	ndicated by hig	gher values)					
1 study (Hoving 2009a)	randomised trial	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	7 ⁹	5 ¹⁰	-	_11	Moderate
GMFM-88	: Dimension A (Lying and roll	ing) score at 12 i	months after pu	ımp implantati	on (better indicate	ed by higher val	ues)			
1 study (Hoving 2009b)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	12 ¹²	-	_4	_4	Very low
GMFM-88	: Dimension B (Sitting) score	at 6 months (bet	ter indicated by	y higher values	5)			1		1
1 study (Hoving 2009a)	randomised trial	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	7 ¹³	5 ¹⁴	_4	_15	Moderate
GMFM-88	: Dimension B (Sitting) score	at 12 months aft	er pump implar	ntation (better	indicated by high	er values)				
1 study (Hoving 2009b)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	12 ¹⁶	-	_4	_4	Very low
GMFM-88:	Goal dimensio	n score at 6 m	onths (better ind	licated by highe	er values)						•
1 study (Hoving 2009a)	randomised trial	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	5 ¹⁷	4 ¹⁸	_4	_19	Moderate

Quality ass	cocomont						Summary of fi	ndings			
Quality as:	sessillelli						No. of patients	<u> </u>	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump-administered intrathecal baclofen therapy (CITB)	Usual care	Relative (95% CI)	Absolute (95% CI)	Quality
GMFM-88:	Goal dimensio	n score at 12 i	months after pun	np implantation	(better indica	ted by higher valu	ies)				•
1 study (Hoving 2009b)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	9 ²⁰	-	_4	_4	Very low
Paediatric	evaluation of d	isability inven	tory (PEDI): Fund	ctional skills so	ale, overall sc	ore at 6 months (I	better indicated	by highe	r values)		
1 study (Hoving 2009a)	randomised trial	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	9 ²¹	8 ²²	_4	_23	Moderate
PEDI: Fund	ctional skills sc	ale, overall so	ore at 12 months	after pump im	plantation (be	tter indicated by h	nigher values)				
1 study (Hoving 2009b)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	17 ²⁴	-	_4	_4	Very low
PEDI: Fund	ctional Skills so	ale, self care	domain score at	6 months (bette	er indicated by	higher values)					
1 study (Ramstad 2010)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	28 ²⁵	-	_4	_4	Very low
PEDI: Fund	ctional Skills so	ale, self care	domain score at	12 months afte	r pump implan	tation (better indi	cated by higher	values)			
1 study (Awaad 2003)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	28 ²⁶	-	_4	_4	Very low

Ouglity	aaamant						Summary of fi	ndings			
Quality as:	sessment						No. of patients	}	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump- administered intrathecal baclofen therapy (CITB)	Usual care	Relative (95% CI)	Absolute (95% CI)	Quality
PEDI: Fun	ctional Skills so	cale, self care	domain score at	18 months (bet	ter indicated b	y higher values)					_
1 study (Ramstad 2010)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	27 ²⁷	-	_4	_4	Very low
PEDI: Fun	ctional skills so	ale, Mobility o	lomain score at 6	months (bette	r indicated by	higher values)					•
1 study (Ramstad 2010)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	27 ²⁸	-	_4	_4	Very low
PEDI: Fun	ctional skills so	ale, Mobility o	lomain score at 1	2 months after	pump implant	ation (better indic	ated by higher	/alues)			
1 study (Awaad 2003)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	28 ²⁹	-	_4	_4	Very low
PEDI: Fun	ctional skills so	ale, Mobility o	lomain score at	18 months (bet	ter indicated b	y higher values)					
1 study (Ramstad 2010)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	27 ³⁰	-	_4	_4	Very low
PEDI : Fun	nctional skills s	cale, Social fu	nction domain so	core at 6 month	ns (better indic	ated by higher va	lues)		1		
1 study (Ramstad 2010)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	27 ³¹	-	_4	_4	Very low

Quality as:	nocemont.						Summary of fire	ndings			
Quality as:	sessment						No. of patients	•	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump-administered intrathecal baclofen therapy (CITB)	Usual care	Relative (95% CI)	Absolute (95% CI)	Quality
PEDI : Fun	ctional skills s	cale, Social fu	nction domain so	ore at 12 mon	ths after pump	implantation (be	tter indicated by	higher	values		
1 study (Awaad 2003)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	28 ³²	-	_4	_4	Very low
PEDI : Fun	ctional skills s	cale, Social fu	nction domain so	ore at 18 mon	ths (better indi	icated by higher v	alues)				
1 study (Ramstad 2010)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	27 ³³	-	_4	_4	Very low
PEDI careç	giver assistance	e (overall scor	e) at 6 months (b	etter indicated	by higher valu	ies)					1
1 study (Hoving 2009a)	randomised trial	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	9 ³⁴	8 ³⁵	_4	_36	Moderate
PEDI: Care	egiver assistan	ce scale, over	all score at 12 mo	onths after pum	p implantation	(better indicated	by higher value	es)			
1 study (Hoving 2009b)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	17 ³⁷	-	_4	_4	Very low
PEDI: Care	egiver assistan	ce scale, Self	care domain scor	e at 6 months	(better indicate	ed by higher value	es)				•
1 study (Ramstad 2010)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	28 ³⁸	-	_4	_4	Very low

Quality as:	nocement.						Summary of fi	ndings			
Quality as:	sessment						No. of patients	•	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump- administered intrathecal baclofen therapy (CITB)	Usual care	Relative (95% CI)	Absolute (95% CI)	Quality
PEDI: Care	egiver assistan	ce scale, Self	care domain sco	e at 12 months	after pump im	plantation (better	indicated by hi	gher val	ues)		
1 study (Awaad 2003)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	28 ³⁹	-	_4	_4	Very low
PEDI: Care	egiver assistan	ce scale, Self	care domain sco	e at 18 months	(better indicate	ted by higher valu	ies)				
1 study (Ramstad 2010)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	27 ⁴⁰	-	_4	_4	Very low
PEDI: Care	egiver assistan	ce scale, Mob	ility domain scor	e at 6 months (better indicate	d by higher value	s)				
1 study (Ramstad 2010)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	28 ⁴¹	-	_4	_4	Very low
PEDI: Care	egiver assistan	ce scale, Mob	ility domain scor	e at 12 months	after pump im	plantation (better	indicated by hig	gher valu	ies)		
1 study (Awaad 2003)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	28 ⁴²	0	_4	_4	Very low
PEDI: Care	egiver assistan	ce scale, Mob	ility domain scor	e at 18 months	(better indicat	ed by higher valu	es)				•
1 study (Ramstad 2010)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	27 ⁴³	0	_4	_4	Very low

Quality	cocomont						Summary of fi	ndings			
Quality as:	sessillelli						No. of patients	;	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump-administered intrathecal baclofen therapy (CITB)	Usual care	Relative (95% CI)	Absolute (95% CI)	Quality
PEDI: Care	egiver assistand	ce scale, Soci	al function doma	in score at 6 n	nonths (better	indicated by high	er values)				
1 study (Ramstad 2010)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	28 ⁴⁴	0	_4	_4	Very low
PEDI: Care	egiver assistand	ce scale, socia	al function domai	n score at 12 r	nonths after p	ump implantation	(better indicate	d by hig	ner values)		
1 study (Awaad 2003)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	28 ⁴⁵	0	_4	_4	Very low
PEDI: Care	egiver assistand	ce scale, Soci	ial function doma	in score at 18	months (better	r indicated by high	her values)	L	ı	1	1
1 study (Ramstad 2010)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	26 ⁴⁶	0	_4	_4	Very low

- 1 Total population less than 400, 95% confidence interval not calculable
- 2 Mean 1.2 standard deviation (SD) (2.3) p-value not stated compared to baseline
- 3 Mean -1.6 SD (3.0) p=0.028 compared to baseline
- 4 No statistical comparison was given across groups
- 5 Pre-post treatment data
- 6 Baseline median (range) = 22.7 (0-48.3) n=35, at 6 months = 22.0 (0.0 45.9) n=32, p=0.032 reported
- 7 Mean 1.6 SD (3.1) p=0.110 compared to baseline
- 8 Baseline median (range) = 22.7 (0-48.3) n=35, at 18 months = 24.0 (0.0 47.1) n=31, p=0.005 reported
- 9 Median 3.9 Range (-12.0 to 10.0) compared to baseline
- 10 Median 0.0 Range (-10.0 to 0.0) compared to baseline

- 11 p=0.512 (NS)
- 12 Median -1.0 Range (-25.0 to 11.0). No significant difference reported compared to baseline
- 13 Median 3.3 Range (0.0 to 10.0). p value not reported compared to baseline
- 14 Median 0.0 Range (-7.0 to 7.0) p value not reported compared to baseline
- 15 p=0.022
- 16 Median 3.3 Range (-4.0 to 22.0) p=0.022 compared to baseline
- 17 Median 3.0 Range (2.0 to 10.0) p value not reported compared to baseline
- 18 Median 1.3 Range (-6.0 to 6.0) p value not reported compared to baseline
- 19 p=NS reported
- 20 Median 4.0 Range (0.0 to 26.0) p=0.007
- 21 Median 0.0 Range (-7.4 to 5.7) p value not reported compared to baseline
- 22Median 0.0 Range (-5.4 to 2.1) p value not reported compared to baseline
- 23 p=NS reported
- 24 Median 0.0 Range (-15.0 to 15.8) No significant difference reported compared to baseline
- 25 Baseline median (range) = 33.6 (0-58.6) n=32, at 6 months = 33.0 (0.0 61.8) n=28, p=0.246 reported
- 26 Mean 6.36 SD (7.99) p=0.005
- 27 Baseline median (range) = 33.6 (0-58.6) n=32, at 18 months = 36.0 (0.0 73.6) n=28, p=0.027 reported
- 28 Baseline median (range) = 23.2 (0-53.1) n=32, at 6 months = 20.9 (0.0 48.8) n=27, p=0.285 reported
- 29 26 Mean 2.88 SD (8.08) No significant difference reported compared to baseline
- 30 Baseline median (range) = 23.2 (0-53.1) n=32, at 18 months = 35.9 (0.0 54.8) n=27, p=0.017 reported
- 31 Baseline median (range) = 57.9 (0.96.3) n=31, at 6 months = 59.2 (0.0 96.3) n=27, p=0.041 reported
- 32 Mean 5.96 SD (10.35) No significant difference reported compared to baseline
- 33 Baseline median (range) = 57.9 (0-96.3) n=31, at 18 months = 64.1 (0.0 100.0) n=27, p=0.002 reported
- 34 Median 0.0 Range (-11.7 to 4.1) p-value not reported compared to baseline
- 35 Median 0.0 Range (-16.0 to 16.0) 1 p value not reported compared to baseline
- 36 p= NS reported
- 37 Median 0.0 Range (-16.0 to 26.3) No significant difference reported compared to baseline
- 38 Baseline median (range) = 15.9 (0-57.9) n=32, at 6 months = 11.6 (0.0 63.4) n=28, p=1.000 reported
- 39 Mean 7.78 SD (21.43) No significant difference reported compared to baseline
- 40 Baseline median (range) = 15.9 (0-57.9) n=32, at 18 months = 11.6 (0.0 76.7) n=28, p=0.272 reported
- 41 Baseline median (range) = 11.7 (0-70.5) n=32, at 6 months = 29.0 (0.0 58.8) n=28, p=0.066 reported
- 42 Mean 11.52 SD (19.62) p=0.028 compared to baseline
- 43 Baseline median (range) = 11.7 (0-70.5) n=32, at 18 months = 36.9 (0.0 72.7) n=28, p=0.008 reported
- 44 Baseline median (range) = 58.3 (0-100) n=30, at 6 months = 66.9 (0.0 100) n=28, p=0.035 reported
- 45 Mean 7.86 SD (19.50) No significant difference reported compared to baseline
- 46 Baseline median (range) = 58.3 (0-100) n=30, at 18 months = 65.9 (0.0 100) n=26, p=0.004 reported

Table K.8.14 Evidence profile for continuous pump administered intrathecal baclofen follow up and compared with usual care; functioning assessment (ease of care)

Quality as	ssessment						Summary of fi	ndings			
Quality as	osessinent						No. of patients	;	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump-administered intrathecal baclofen therapy (CITB)	Usual care	Relative (95% CI)	Absolute (95% CI)	Quality
Ease of ca	are Mean Visua	l Analogue Sc	ale (VAS) score a	at 6 months (be	tter indicated	by higher values)					
1 study (Hoving 2009a)	randomised trial	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	9 ²	7 ³	_4	_4	Moderate
Ease of ca	are Mean VAS s	core at 6 mon	ths after pump in	nplantation (be	tter indicated l	y higher values)					
1 study (Hoving 2009b)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	16 ⁶		_7	_7	Very low
Mean VAS	S score at 12 m	onths after pu	mp implantation	(better indicate	d by higher va	lues)		ı	•		1
1 study (Hoving 2009b)	observational study	serious ⁵	no serious inconsistency	no serious indirectness	serious ¹	none	16 ⁸	-	_7	_7	Very low

¹ Total population less than 400, 95% confidence interval not calculable

² Mean 3.9 standard deviation (SD) (2.2) p value not reported compared to baseline

³ Mean 0.1 SD (1.6) p value not reported compared to baseline

⁴ p=0.008

⁵ Pre-post treatment data

⁶ Mean 4.4 SD (2.1) p<0.001 compared to baseline

⁷ No statistical comparison was given across groups

⁸ Mean 5.2 SD (2.1) p<0.001 compared to baseline

Table K.8.15 Evidence profile for continuous pump administered intrathecal baclofen follow up and compared with usual care; pain assessment

Ouglity	na a a mant						Summary of fi	ndings			
Quality ass	sessment						No. of patients	}	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump-administered intrathecal baclofen therapy (CITB)	Usual care	Relative (95% CI)	Absolute (95% CI)	Quality
Pain Mean	Visual Analogu	ie Scale (VAS)	score at 6 mont	hs (better indic	ated by higher	values)					
1 study (Hoving 2009a)	randomised trial	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	6 ³	6 ⁴	_5	_5	Low
Pain Mean	VAS score at 1	2 months afte	r pump implanta	tion (better indi	cated by highe	er values)					·
1 study (Hoving 2009b)	observational study	serious ^{1,6}	no serious inconsistency	no serious indirectness	serious ²	none	12 ⁷	-	_8	_8	Very low
Sleeping a	ssessed using	a non-validate	d questionnaire								
1 study (Motta 2008)	observational study	serious ⁶	no serious inconsistency	serious ⁹	serious ²	none	19 ¹⁰	-	_8	_8	Very low
Pain asses	sed using a no	n-validated qเ	iestionnaire								
1 study (Motta 2008)	observational study	serious ^{1,6}	no serious inconsistency	serious ⁹	serious ²	none	19 ¹¹	-	_8	_8	Very low
Average fr	equency of awa	kenings durin	g night in previo	us 4weeks at 6	months after	pump implantation	n (better indicat	ed by low	er values)		
1 study (Ramstad 2010)	observational study	serious ⁶	no serious inconsistency	no serious indirectness	serious ²	none	29 ¹²	-	_8	- 8	Very

0							Summary of fi	ndings			
Quality ass	sessment						No. of patients	;	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump- administered intrathecal baclofen therapy (CITB)	Usual care	Relative (95% CI)	Absolute (95% CI)	Quality
Average fr	equency of awa	kenings durin	ig night in previo	us 4weeks at 1	2 months after	pump implantation	on (better indica	ted by lo	wer values)		
1 study (Ramstad 2010)	observational study	serious ⁶	no serious inconsistency	no serious indirectness	serious ²	none	30 ¹³	-	_8	_8	Very low
Pain freque	ency when not	sleeping in pr	evious 4weeks a	t 6 months afte	r pump implan	tation (better indi	cated by lower v	alues)			
1 study (Ramstad 2010)	observational study	serious ⁶	no serious inconsistency	no serious indirectness	serious ²	none	31 ¹⁴	-	_8	_8	Very low
Pain freque	ency when not	sleeping in pr	evious 4weeks a	t 12 months aft	er pump impla	ntation (better ind	licated by lower	values)			
1 study (Ramstad 2010)	observational study	serious ⁶	no serious inconsistency	no serious indirectness	serious ²	none	31 ¹⁵	-	_8	_8	Very low
Pain sever	ity (using a sca	le 0-4) in prev	ious 4weeks at 6	months after p	ump implanta	tion (better indica	ted by lower val	ues)			
1 study (Ramstad 2010)	observational study	serious ⁶	no serious inconsistency	no serious indirectness	serious ²	none	31 ¹⁶	-	_8	_8	Very low
Pain sever	ity (using a sca	le 0-4) in prev	ious 4weeks at 1	2 months after	pump implanta	ation (better indic	ated by lower va	alues)			
1 study (Ramstad 2010)	observational study	serious ⁶	no serious inconsistency	no serious indirectness	serious ²	none	31 ¹⁷	-	-8	_8	Very

Spasticity in children and young people with non-progressive brain disorders (appendices)

- 1 29% of participants had no available outcome data
- 2 Total population less than 400, 95% confidence interval not calculable
- 3 Mean 4.2 standard deviation (SD) (2.9) compared to baseline
- 4 Mean -1.3 SD (2.4) compared to baseline
- 5 p=0.016
- 6 Pre-post treatment data
- 7 Mean 5.4 SD (2.7) p=0.002 compared to baseline
- 8 No statistical comparison was given across groups
- 9 Unvalidated questionnaire
- 10 53% of patients/caregivers indicated improved sleep
- 11 53% of patients/caregivers indicated decreased pain.
- 12 Baseline median (range) = 1.0 (0-25) n=32, at 6 months = 0.0 (0-10) n=29, p=0.005 reported
- 13 Baseline median (range) = 1.0 (0-25) n=32, at 12 months = 0.0 (0-10) n=30, p=0.006 reported
- 14 Baseline median (range) = 2.0 (0-3) n=35, at 6 months = 1.0 (0-3) n=31, p<0.001(reported as p=0.000)
- 15 Baseline median (range) = 2.0 (0-3) n=35, at 12 months = 1.0 (0-3) n=31, p=0.005 reported
- 16 Baseline median (range) = 2.0 (0-3) n=35, at 6 months = 1.0 (0-3) n=31, p=0.005 reported
- 17 Baseline median (range) = 2.0 (0-3) n=35, at 12 months = 1.0 (0-3) n=31, p=0.011 reported

Table K.8.16 Evidence profile for continuous pump administered intrathecal baclofen follow up; treatment acceptability assessment

Quality ass	eassmant						Summary of fi	ndings			
Quality as:	oessillellt						No. of patients	3	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump-administered intrathecal baclofen therapy (CITB)	Placebo	Relative (95% CI)	Absolute (95% CI)	Quality
Satisfactio	n with treatmer	nt assessed us	sing a non-valida	ted questionna	ire						
1 study (Motta 2008)	observational study	serious ¹	no serious inconsistency	serious ²	serious ³	none	19 ⁴	-	_5	_5	Low
Acceptabil	ity and tolerabi	lity assessed	at least 12 month	ns post implant	ation						
1 study (Hoving 2009b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ¹	none	17 ⁶	-	_4	_4	Low

- 1 Pre and post treatment data, no comparison with other treatment options
- 2 Unvalidated questionnaire
- 3 Total population less than 400, 95% confidence interval not calculable
- 4 15 parents or children were satisfied with the implant, 13 said they would do it again, 3 were not totally satisfied, 3 were uncertain of whether to do it again, 1 was dissatisfied and 1 said he/she would not do it again and chose to explant the pump 4 years after implant
- 5 No statistical comparison was given across groups
- 6 Children and/or their parents were asked if they would participate in the test treatment and implantation procedures again. 15/17 children and/or their parents stated that they would participate in all procedures again. Two parents were not sure in spite of the achieved individual treatment goals for their children. The doubts in one case were based on both new onset seizures and the child's stress during pump refills and in another case were based on a worsened trunk and head balance

Table K.8.17 Evidence profile for continuous pump administered intrathecal baclofen follow up and compared with usual care; quality of life assessment

Ouglity							Summary of fi	ndings			
Quality as	ssessment						No. of patients	3	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Continuous pump- administered intrathecal baclofen therapy (CITB)	Usual care	Relative (95% CI)	Absolute (95% CI)	Quality
Child hea	lth questionnai	re - Parent Fo	rm 50 (CHQ-PF50)): physical fun	ctioning doma	in score at 6 mon	ths (better indic	ated by h	igher value	es)	
1 study (Hoving 2009a)	randomised trial	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	8 ²	8 ³	_4	_4	Moderate
CHQ-PF5	0: Psychosocia	I summary sc	ore at 6 months (better indicated	d by higher val	ues)					
1 study (Hoving 2009a)	randomised trial	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	8 ⁵	8 ⁶	_7	_7	Moderate
CHQ-PF5	0:Physical sum	mary score at	12 months after	pump implanta	tion (better inc	dicated by higher	values)		l	L	
1 study (Hoving 2009b)	observational study	serious ⁸	no serious inconsistency	no serious indirectness	serious ¹	none	16 ⁹	-	_10	_10	Very low
CHQ-PF5	0: Psychosocia	I summary sc	ore at 12 months	after pump imp	plantation (bet	ter indicated by h	igher values)				
1 study (Hoving 2009b)	observational study	serious ⁸	no serious inconsistency	no serious indirectness	serious ¹	none	16 ¹¹	-	_10	_10	Very low

¹ Total population less than 400, 95% confidence interval not calculable

² Mean 2.1 standard deviation (SD) (10.3) compared to baseline

³ Mean -7.5 SD (6.9) compared to baseline

4 p=0.074

5 Mean 3.4 SD (7.9)

6 Mean - 5.7 SD (8.8)

7 p=0.027

8 Pre-post treatment data

9 Mean 4.6 SD (10.7) No significant difference reported compared to baseline

10 No statistical comparison was given across groups

11 Mean 5.4 SD (9.0) No significant difference reported compared to baseline

Table K.8.18 Evidence profile for continuous pump administered intrathecal baclofen follow up; hip displacement assessment

Quality assess	ment						Summary of fi	ndings			
							No. of patients	3	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other consider- ations	Continuous pump-administered intrathecal baclofen therapy (CITB)	Usual care	Relative (95% CI)	Absolute (95% CI)	Quality
Absolute migra	tion percentag	e at 12 months	in children unde	er 8 years old (k	etter indicated	by lower val	ues)				
1 study (Krach 2004)	observational study	serious 1,2	no serious inconsistency	no serious indirectness	serious ³	none	11 (22 hips) ⁴	-	_5	_5	Very low
Absolute migra	ation percentag	e at 12 months	in children 8 to	18 years old (b	etter indicated	by lower valu	ues)				
1 study (Krach 2004)	observational study	serious 1,2	no serious inconsistency	no serious indirectness	serious ³	none	17 (34 hips) ⁶	-	_5	_5	Very low

CI confidence interval

¹ Pre-post treatment data

² The pharmaceutical company providing the pump and the drug baclofen also provided some support for data collection and analysis, including assisting with statistical analysis and reviewing the manuscript

³ Total population less than 400, 95% confidence interval not calculable

⁴ Mean 0.0 standard deviation (SD) (8.4) p<0.05 compared to baseline

⁵ No statistical comparison was given across groups

⁶ Mean 1.2 SD (12.8) p<0.05 compared to baseline

Table K.8.19 Evidence profile for continuous pump administered intrathecal baclofen compared with usual care; adverse events and complications

Quality asse	ssment						Summary of fi	ndings			
quanty acco							No. of patients	3	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other consider- ations	Continuous pump-administered intrathecal baclofen therapy (CITB)	Usual care	Relative (95% CI)	Absolute (95% CI)	Quality
Final Cobb a	ngles (degrees)	at approxima	tely 3 years after	pump insertion	n (better indica	ted by lower v	alues)				-
1 study (Shilt 2008)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	50 ³	50 ⁴	5	_5	Very low
Final Cobb a	ngles (degrees)	at approxima	tely 3 years after	pump insertion	n (better indica	ted by lower v	ralues)		1		
1 study (Senaran 2007)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	26 ⁶	25 ⁷	_8	_8	Very low
Mean annual	progression of	Cobb angles	(degrees) (better	indicated by lo	wer values)	_					•
1 study (Shilt 2008)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	50 ⁹	50 ¹⁰	_11	_11	Very low

CI confidence interval, SD standard deviation

¹ Nothing was reported on the characteristics of the outcomes assessors

² Total population less than 400, 95% confidence interval not calculable

³ Mean 28 SD (20)

⁴ Mean 27 SD (21)

⁵ MD 1 higher (7.14 lower to 9.14 higher) p=NS

⁶ Mean 65.19 SD (24.74)

⁷ Mean 73 SD (21.81)

⁸ MD 7.8 lower (20.95 lower to 5.33 higher) p=NS

⁹ Mean 6.6 SD (11.3)

¹⁰ Mean 5.0 SD (6.1)

¹¹ MD 1.6 lower (2 lower to 5.2 higher) p=NS

Chapter 9 Orthopaedic surgery

Table K.9.1 Evidence profile for hip adductor lengthening surgery compared with no intervention in children under 6 years of age with bilateral spasticity; hip displacement assessment

Quality as:	coccmont						Summary	of findings			
Quality as:	sessillelli						No. of par	tients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Soft tissue surgery	No intervention	Relative (95% CI)	Absolute (95% CI)	Quality
Mean char	ge hip migration	n percentage	over at least 18n	nonths (Better i	ndicated by lo	wer values)					
1 study (Yang 2008)	observational study	no serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	60 ²	69 ³	-	MD 8.00 lower (10.88 lower to 5.12 lower)*	Low
Mean char	nge hip migration	n percentage	per year (Better	indicated by lo	wer values)						
1 study (Yang 2008)	observational study	no serious limitations ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	60 ⁵	69 ⁶	-	MD 6 lower (8.89 to 3.11 lower)* ⁴	Low

¹ Retrospective study

² Change from baseline Mean (SD) = -3.3 (6.1)

³ Change from baseline Mean (SD) = 4.7 (10.3) p<0.05 from baseline

⁴ p<0.05 reported by authors

⁵ Mean change (SD) -1.6 (4.4)

⁶ Mean change (SD) 4.4 (11.3)

Table K.9.2 Evidence profile for high functional ability (GMFCS levels I and II) compared with low functional ability (GMFCS levels III and IV) in children under 6 years of age with bilateral spasticity following hip adductor lengthening surgery; hip displacement assessment

Quality ass	sassmant						Summary of fire	ndings			
Quanty as	ocoonient						No. of patients		Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Soft tissue surgery – gross motor function classification system (GMFCS) level I and II	Soft tissue surgery - (GMFCS) level III and IV	Relative (95% CI)	Absolute (95% CI)	Quality
Mean chan	ge hip migration	n percentage	per year (Better	indicated by lov	wer values) – s	sub group analysis	s by functional a	bility			
1 study (Yang 2008)	observational study	no serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	28 legs	72 legs	1	MD 2 lower	4 Very low

CI confidence interval, MD mean difference

^{*} Calculated by the NCC-WCH

¹ Retrospective study

² Total population less than 400, 95% confidence interval for mean difference of change not calculable,

³ Mean change (SD) -3.4 (4.8)

⁴ Mean change (SD) -1.0 (4.1)

⁵ p<0.05 reported by authors

Table K.9.3 Evidence profile for lower extremity bony or soft tissue surgery compared with standard care (no surgery) in ambulatory children; functioning assessment

Quality ass	ossmant						Summary	of findings			
Quality ass	essinent						No. of pati	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Bony and/or soft tissue	Standard care	Relative (95% CI)	Absolute (95% CI)	Quality
Velocity (m	etres/second)	at 1 year (indi	cated by higher v	alues)							
1 study (Gorton 2009)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	75 ²	75 ³	-	MD 1. 6 higher* ⁴	Very low
Gross moto	or function mea	sure (GMFM)	(version not repo	orted): Dimensio	on D (Standing) score at 1 year (Better indic	ated by high	er values)		
1 study (Gorton 2009)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	75 ⁵	75 ⁶	-	MD 2.4 lower* ⁴	Very low
GMFM (vers	sion not reporte	ed): Dimension	n E (Walking, run	ning and jumpi	ng) score at 1	year (Better indic	ated by high	ner values)			
1 study (Gorton 2009)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	75 ⁷	75 ⁸	-	MD 2.8 lower* ⁴	Very low
GMFM-66 a	t 1 year (Better	indicated by h	nigher values)							_	'
1 study (Gorton 2009)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	75 ⁹	75 ¹⁰	-	MD 1.8 lower* ⁴	Very low

^{*} Calculated by the NCC-WCH

¹ Total population less than 400, 95% confidence interval is not calculable

² Mean change from baseline at 1 year = 1.3

³ Mean change from baseline at 1 year = - 0.3

⁴ No statistically significant difference (p > 0.05) by analysis of covariance (ANCOVA) with baseline means adjusted for Parent Pediatric Outcomes Data Collection Instrument (PODCI) transfers and Basic Mobility, Gillette Gait Index, velocity< earlier BoNT injection, earlier surgical procedure and study site (as a proxy for surgeon)

⁵ Mean change from baseline at 1 year = 0.0

Table K.9.4 Evidence profile for lower extremity bony or soft tissue surgery compared with standard care (no surgery); quality of life assessment

Quality ass	cossmont						Summary	of findings			
Quality as:	sessillelli						No. of pat	tients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Early bony and/or soft tissue	No intervention	Relative (95% CI)	Absolute (95% CI)	Quality
Pediatric q	uality of life inv	entory (Pedso	QL): Physical Fur	nctioning scale	score at 1 year	r (indicated by hig	gher values	5)			
1 study (Gorton 2009)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	75 ²	75 ³	-	MD 9 higher* ⁴	Very low
Pediatric q	uality of life inv	entory (Pedso	QL): Emotional F	unctioning sca	le score at 1 ye	ear (indicated by h	nigher value	es)			
1 study (Gorton 2009)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	75 ⁵	75 ⁶	-	MD 3.4 higher* ⁷	Very low
PedsQL: S	ocial Functioni	ng scale score	e at 1 year (indica	ated by higher v	values)					_	
1 study (Gorton 2009)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	75 ⁸	75 ⁹	-	MD 5.4 higher* ⁷	Very low
PedsQL: S	chool Function	ing scale sco	re at 1 year (indic	ated by higher	values)						
1 study (Gorton 2009)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	75 ¹⁰	75 ¹¹	-	MD 0.6 lower* ⁷	Very low

⁶ Mean change from baseline at 1 year = 2.4

⁷ Mean change from baseline at 1 year = -0.7

⁸ Mean change from baseline at 1 year = 2.1

⁹ Mean change from baseline at 1 year = 0.0

¹⁰ Mean change from baseline at 1 year = 1.8

- * Calculated by the NCC-WCH
- 1 Total population less than 400, 95% confidence interval not calculable
- 2 Mean change from baseline at 1 year = 4.7
- 3 Mean change from baseline at 1 year = -4.3
- 4 P= 0.039 by analysis of covariance (ANCOVA)
- 5 Mean change from baseline at 1 year = 1.2
- 6 Mean change from baseline at 1 year = -2.2
- 7 No statistically significant difference (p>0.05) by ANCOVA with baseline means adjusted for Parent Pediatric Outcomes Data Collection Instrument (PODCI) transfers and Basic Mobility, Gillette Gait Index, velocity< earlier BoNT injection, earlier surgical procedure and study site (as a proxy for surgeon)
- 8 Mean change from baseline = 4.3
- 9 Mean change from baseline = -1.1
- 10 Mean change from baseline = 2.2
- 11 Mean change from baseline = 2.8

Table K.9.5 Evidence profile for lower extremity SEMLS and intensive therapy versus multilevel botulinum toxin injections and casting in children and young people with unilateral or bilateral spasticity and generalised joint impairments

Quality ass	eacement						Summary	of findings			
Quality ass	essille iii						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Soft tissue surgery	Botulinum toxin (BoNT)	Relative (95% CI)	Absolute (95% CI)	Quality
Mean chan	ge hip migratio	n percentage	at least at 18 mo	nths (Better inc	licated by lowe	er values)					
1 study (Yang 2008)	observational study	no serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	60 ³	65 ⁴	-	MD 1.7 lower (4.26 lower to 0.86 higher)*5	Very low

Quality ass	occmont.						Summary	of findings			
Quality ass	sessille iii						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Soft tissue surgery	Botulinum toxin (BoNT)	Relative (95% CI)	Absolute (95% CI)	Quality
Mean chan	ge hip migratio	n percentage	per year - all chil	dren (Better ind	dicated by low	er values)					
1 study (Yang 2008)	observational study	no serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	60 ⁶	65 ⁷	-	MD 0.9 lower (2.83 lower to 1.03 higher)* ⁵	Very low
Mean chan lower value		n percentage	per year - High fu	unctioning child	dren gross mo	tor function class	ification sy	stem (GMFCS) levels I and	d II (Better indi	cated by
1 study (Yang 2008)	observational study	no serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	28 legs ⁸	40 legs ⁹	-	MD 1 lower (3.4 lower to 1.4 higher)* ¹⁰	Very low
Mean chan	ge hip migratio	n percentage	per year - Low fu	inctioning child	Iren GMFCS le	vels III and IV (Be	tter indicate	ed by lower va	lues)		
1 study (Yang 2008)	observational study	no serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	72 legs ¹¹	90 legs ¹²	-	MD 1 lower (2.71 lower to 0.71 higher)* ¹⁰	Very low

^{*} Calculated by the NCC-WCH

¹ Retrospective study

² Total population is less than 400, 95% confidence interval crosses null effect and is wide

³ Change from baseline Mean (standard deviation; SD) = -3.3 (6.1)

⁴ Change from baseline Mean (SD) = -1.6 (8.4)

⁵ p=NS reported

⁶ Change from baseline Mean (SD) = -1.6 (4.4)

⁷ Change from baseline Mean (SD) = -0.7 (6.5)

⁸ Change from baseline Mean (SD) = -3.4 (4.8)

- 9 Change from baseline Mean (SD) = -2.4 (5.2)
- 10 Significance test not reported
- 11 Change from baseline Mean (SD) = -1.0 (4.1)
- 12 Change from baseline Mean (SD) = 0.0 (6.9)

Table K.9.6 Evidence profile for hip adductor lengthening surgery compared with injection of botulinum toxin type A in children under 6 years of age with bilateral spasticity; functioning assessment

Quality asso	esmont						Summary	of findings			
Quality asse	:55mem						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Single event multi- level surgery (SEMLS) and physical therapy	Physical therapy alone	Relative (95% CI)	Absolute (95% CI)	Quality
Gross moto	r function mea	asure (GMFM)	-66 at 12 months	(Better indicate	d by higher va	lues)					
1 study (Thomason 2011)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	11 ³	84	-	MD 1.3 higher*	Low
GMFM-66 at	24 months(B	etter indicated	by higher values	s)							
1 study (Thomason 2011)	randomised study	very serious limitations ^{1,5}	no serious inconsistency	no serious indirectness	serious ⁶	none	11 ⁷	-	-	MD 4.9 higher (0.98 higher to 8.7 higher)*	Very low
Gillette Gait	Index at 12 m	onths (Better	indicated by low	er values)							
1 study (Thomason 2011)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	11 ⁸	8 ⁹	-	MD 211 lower*	Low

Quality asse	esmont						Summary	of findings			
Quality asse	zooment						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Single event multi- level surgery (SEMLS) and physical therapy	Physical therapy alone	Relative (95% CI)	Absolute (95% CI)	Quality
Gillette Gait	Index at 24 m	onths (Better	indicated by low	er values)							
1 study (Thomason 2011)	randomised study	very serious limitations ^{1,5}	no serious inconsistency	no serious indirectness	no serious imprecision ¹⁰	none	11 ¹¹	-	-	MD 213 lower (327 lower to 100 lower)*	Low

- 1 No blinding used.
- 2 Total population less than 400, 95% confidence interval for mean difference of change not calculable,
- 3 Baseline mean (standard deviation; SD) = 65.3 (11.1), Score at 12 months mean (SD) = 66.1 (8.9)
- 4 Baseline mean (SD) = 70.3 (11.3), Score at 12 months mean (SD) = 69.8 (11.4)
- 5 Pre-post treatment outcome assessed at 24 months in the surgery and therapy group only. No comparison to therapy only group
- 6 Total population less than 400, 95% confidence interval does not cross null hypothesis but confidence intervals are wide
- 7 Baseline mean (SD) = 65.3 (11.1), Score at 24 months mean (SD) = 70.2 (10.1) Difference (from baseline reported as p<0.05
- 8 Baseline mean (SD) = 353 (211), Score at 12 months mean (SD) = 153 (81)
- 9 Baseline mean (SD) = 370 (194), Score at 12 months mean (SD) = 381 (196)
- 10 Total population less than 400, 95% confidence interval does not cross null hypothesis
- 11 Baseline mean (SD) = 353 (211), Score at 24 months mean (SD) = 139 (80) Difference from baseline reported as p<0.05

^{*} Calculated by the NCC-WCH

Table K.9.7 Evidence profile for hip adductor lengthening surgery compared with injection of botulinum toxin type A in children under 6 years of age with bilateral spasticity; quality of life (parental report)

							Summary	of findings			
Quality asse	essment						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Single event multi- level surgery (SEMLS) and physical therapy	Physical therapy alone	Relative (95% CI)	Absolute (95% CI)	Quality
Child health	questionnaire	e - Parent For	m 50 (CHQ-PF50)	: physical func	tioning domaii	n score at 12 mon	ths (Better	indicated by	y higher valu	es)	
1 study (Thomason 2011)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	11 ³	84	-	MD 3 lower	Low
CHQ-PF50:	ohysical funct	ioning domai	n score at 24 mo	nths (Better inc	licated by high	er values)					
1 study (Thomason 2011)	randomised study	very serious limitations ⁵	no serious inconsistency	no serious indirectness	serious ⁶	none	11 ⁷	-	-	MD 22 higher (from 4 higher to 39 higher)	Very low
CHQ-PF50:	social/emotion	nal function d	omain score at 12	2 months (Bette	er indicated by	higher values)					
1 study (Thomason 2011)	randomised study	serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	11 ⁸	8 ⁹	-	MD 12 lower	Low
CHQ-PF50 fa	amily cohesio	n domain sco	re at 12 months (Better indicate	d by higher va	lues)					
1 study (Thomason 2011)	randomised study	serious limitations ¹⁰	no serious inconsistency	no serious indirectness	serious ²	none	11 ¹¹	812	-	MD 11 higher	Low

Spasticity in children and young people with non-progressive brain disorders (appendices)

- * Calculated by the NCC-WCH
- 1 No blinding used. Baseline score is lower in the surgery and therapy group compared to the therapy group, the authors do not clarify whether the difference is significant
- 2 Total population less than 400, 95% confidence interval for mean difference of change not calculable,
- 3 Baseline mean (standard deviation; SD) = 47 (26), Score at 12 months mean (SD) = 58 (26)
- 4 Baseline mean (SD) = 62 (35), Score at 12 months mean (SD) = 76 (25)
- 5 Pre-post treatment outcome assessed at 24 months in the surgery and therapy group only. No comparison to therapy only group
- 6 Total population less than 400, 95% confidence interval does not cross null hypothesis but confidence intervals are wide
- 7 Baseline mean (SD) = 47 (26), Score at 24 months mean (SD) = 69 (18) Difference (95% CI): reported as p<0.05
- 8 Baseline mean (SD) = 69 (34), Score at 12 months mean (SD) = 65 (36)
- 9 Baseline mean (SD) = 89 (21) Score at 12 months mean (SD) = 97 (8)
- 10 No blinding used
- 11 Baseline mean (SD) = 72 (20), Score at 12 months mean (SD) =83 (13)
- 12 Baseline mean (SD) = 69 (20), Score at 12 months mean (SD) = 69 (20)

Table K.9.8 Evidence profile for single-event multilevel surgery compared with physical therapy; functioning assessment

Quality asse	ecement						Summary	of findings			
Quality asse	233ment						No. of pat	ients	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Single event toxin (BoNT) level surgery (SEMLS)		Relative (95% CI)	Absolute (95% CI)	Quality
Walking vel	ocity (metres/s	econd) (Better	indicated by hig	her values)							
1 study (Molenaers 2001)	observational study	no serious limitations ¹	no serious inconsistency	no serious indirectness	serious ²	none	43 limbs ³	43 limbs ⁴	-	MD 0.07 lower* ⁵	Very low

^{*} Calculated by the NCC-WCH

¹ Retrospective study

² Total population less than 400, 95% confidence interval not calculable

³ Mean change from baseline -0.1, p = NS reported

⁴ Mean change from baseline -0.03, p = NS reported

⁵ No comparison across treatment groups given

Chapter 10 Selective dorsal rhizotomy

Table K.10.1 Evidence profile for selective dorsal rhizotomy and therapy compared with therapy only in children with diplegia; tone and joint movement assessment

Quality asses	cemont						Summary o	f findings			
Quality asses	Samerit						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	in active range	e of movemen	t (AROM) trunk r	otation at 8 mo	nths (Better in	dicated by higher	values)				
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ²	36 ³	-	MD = 4 lower*	Very low
Mean change	in AROM trun	k rotation at 2	0 months (Better	indicated by hi	gher values)						
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ⁴	36 ⁵	-	MD = 3 lower*	Very low
Mean change	in AROM pelv	is rotation at 8	months (Better	indicated by hi	gher values)						
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ⁶	36 ⁷	-	MD = 1 lower*	Very low
Mean change	in AROM pelv	is rotation at 2	20 months (Bette	r indicated by h	igher values)						
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ⁸	36 ⁹	-	MD = 2 lower*	Very low

Quality acces							Summary o	f findings			
Quality asses	ssment						No. of patie	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	in AROM pelv	ic tilt at 8 mon	ths (Better indicate	ated by higher	values)						
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ¹⁰	36 ¹¹	-	MD = 2 lower*	Very low
Mean change	e in AROM pelv	ic tilt at 20 mo	nths (Better indi	cated by higher	values)		l				
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹²	none	29 ¹³	36 ¹⁴	-	MD = 2 lower*	Very low
Mean change	e modified Ash	worth scale (M	AS) score hip ad	ductors at 9 m	onths (Better i	ndicated by lower	values)				
1 study (Steinbok 1997)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹⁵	none	14	14	-	MD 1.1 lower (1.54 to 0.66 lower)*	Moderate
Mean change	in AROM hip e	extension at 6	months (Better i	ndicated by hig	her values)						
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ¹⁶	12 ¹⁷	-	MD = 19.6 lower*	Moderate

Ovelity sees							Summary o	f findings			
Quality asses	ssment						No. of patie	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	in AROM hip f	lexion/extensi	on at 8 months (Better indicated	d by higher val	ues)					
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ¹⁸	36 ¹⁹	-	MD = 3 higher*	Very low
Mean change	in AROM hip	extension at 9	months (Better i	ndicated by hig	her values)						
1 study (Steinbok 1997)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	14	14	-	MD 19.1 higher (11.95 to 26.25 higher)*	High
Mean change	in AROM hip	extension at 12	2 months (Better	indicated by hi	gher values)						
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ²⁰	12 ²¹	-	MD = 3.7 lower*	Moderate
Mean change	in AROM hip f	lexion/extensi	on at 20 months	(Better indicate	ed by higher va	alues)					
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹²	none	29 ²²	36 ²³	-	MD = 3 higher*	Very low

Ovelity cook							Summary o	f findings			
Quality asse	ssment						No. of patie	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	e in passive ran	ige of moveme	ent (PROM) hip e	xtension at 6 m	onths (Better i	ndicated by highe	er values)				
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ²⁴	12 ²⁵	-	MD = 5.5 higher*	Moderate
Mean change	e in PROM hip e	extension at 12	2 months (Better	indicated by hi	gher values)						
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ²⁶	12 ²⁷	-	MD = 0*	Moderate
Mean change	MAS score at	knee at 6 mon	ths (Better indic	ated by lower v	alues)		ı		l		
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ²⁸	none	12 ²⁹	12 ³⁰	-	MD = 1 lower*	Moderate
Mean change	MAS score at	knee at 9 mor	ths (Better indicate	ated by lower v	alues)						
1 study (Steinbok 1997)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹⁵	none	14	14	-	MD 1 lower (1.45 to 0.55 lower)*	Moderate

Quality appa							Summary o	f findings			
Quality asse	ssment						No. of patie	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only	Relative (95% CI)	Absolute (95% CI)	Quality
Mean MAS s	core at knee at	12 months (Be	etter indicated by	lower values)							
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ²⁸	none	12 ²⁹	12 ³⁰	-	MD = 1 lower*	Moderate
Mean change	e in AROM knee	extension at	6 months (Better	indicated by h	igher values)						
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ³¹	12 ³²	-	MD = 12.6 higher*	Moderate
Mean change	e in AROM knee	flexion/exten	sion at 8 months	(Better indicat	ed by higher v	alues)					
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ³³	36 ³⁴	-	MD = 4 higher*	Very low
Mean change	e range of move	ement at knee	at 9 months (Bet	ter indicated by	y higher values	s)					
1 study (Steinbok 1997)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	14	14	-	MD 17.7 higher (7.73 to 27.67 higher)*	High

0							Summary o	f findings			
Quality asses	ssment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	in AROM knee	extension at	12 months (Bette	er indicated by	higher values)						
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ³⁵	12 ³⁶	-	MD = 7.2 higher*	Moderate
Mean change	in AROM knee	flexion/exten	sion at 20 month	s (Better indica	ted by higher	values)					
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ³⁷	36 ³⁸	-	MD = 4 higher*	Very low
Mean change	in AROM knee	flexion at init	tial contact at 8 n	nonths (Better i	ndicated by hi	gher values)	<u>I</u>			<u>I</u>	
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ³⁹	36 ⁴⁰	-	MD = 3 lower*	Very low
Mean change	in AROM knee	e flexion at init	tial contact at 20	months (Better	indicated by h	nigher values)					
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ⁴¹	36 ⁴²	-	MD = 5 lower*	Very low
Mean change	in PROM knee	extension at	6 months (Better	indicated by h	igher values)						
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ⁴³	12 ⁴⁴	-	MD = 7.5 lower*	Moderate

Quality asses	ssment						Summary o	f findings			
Quality asset	Samoni						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	e in PROM knee	e extension at	12 months (Bette	er indicated by	higher values)						
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ⁴⁵	12 ⁴⁶	-	MD = 3 higher*	Moderate
Mean change	e in PROM pop	liteal angle at	6 months (Better	indicated by h	igher values)						
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ⁴⁷	12 ⁴⁸	-	MD = 8.4 lower*	Moderate
Mean change	in PROM pop	liteal angle at	12 months (Bette	r indicated by h	nigher values)					L	
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ⁴⁹	12 ⁵⁰	-	MD = 4.7 lower*	Moderate
Mean MAS so	core at ankle at	6 months (Be	tter indicated by	lower values)				L	L	ı	
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ²⁸	none	12 ⁵¹	12 ⁵²	-	MD = 1 lower*	Moderate

Ovelity sees							Summary o	f findings			
Quality asses	ssment						No. of patie	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	MAS score at	ankle at 9 mo	nths (Better indic	ated by lower v	/alues)						
1 study (Steinbok 1997)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	14	14	-	MD 1.5 lower (2.02 to 0.98 lower)*	High
Mean change	MAS score at	ankle at 12 mo	onths (Better ind	icated by lower	values)						
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ²⁸	none	12 ⁵³	12 ⁵⁴	-	MD = 0.5 lower*	Moderate
Mean change	e in AROM at ar	nkle dorsiflexi	on 6 months (Bet	ter indicated by	y higher values	5)					
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ²⁸	none	12 ⁵⁵	12 ⁵⁶	-	MD = 17.6 higher*	Moderate
Mean change	in AROM ankl	e dorsiflexion	/plantarflexion at	8 months (Bet	ter indicated by	y higher values)					
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ⁵⁷	36 ⁵⁸	-	MD = 1 higher*	Very low

Quality asses	namant						Summary o	f findings			
Quality asses	SSIIIeiii						No. of patie	nts	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	AROM at ankl	e at 9 months	(Better indicated	by higher valu	es)						
1 study (Steinbok 1997)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	14	14	-	MD 0.5 higher (7.51 lower to 8.51 higher)*	Moderate
Mean change	in AROM ankl	e dorsiflexion	12 months (Bette	er indicated by	higher values)						
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ²⁸	none	12 ⁵⁹	12 ⁶⁰	-	MD = 27 higher*	Moderate
Mean change	in AROM ankl	e dorsiflexion	/plantarflexion at	20 months (Be	tter indicated l	by higher values)					
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ⁶¹	36 ⁶²	-	MD = 1 lower*	Very low
Mean change	in AROM ankl	e dorsiflexion	/plantarflexion at	initial contact	at 8 months (B	etter indicated by	higher value	es)			
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ⁶³	36 ⁶⁴	-	MD = 1 higher*	Very low

0							Summary o	f findings			
Quality asses	ssment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	e in AROM dors	iflexion/planta	arflexion at initial	contact at 20 r	nonths (Better	indicated by high	er values)				
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ⁶⁵	36 ⁶⁶	-	MD = 0*	Very low
Mean change	e in extension f	oot progression	on angle at 8 mor	nths (Better ind	icated by high	er values)					
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ⁶⁷	36 ⁶⁸	-	MD = 3 lower*	Very low
Mean change	e in extension f	oot progression	on angle at 20 mo	onths (Better in	dicated by hig	her values)					
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹²	none	29 ⁶⁹	36 ⁷⁰	-	MD = 8 lower*	Very low
Mean change	e in PROM ankl	e dorsiflexion	(knee extended)	at 6 months (B	etter indicated	by higher values)				
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ²⁸	none	12 ⁷¹	12 ⁷²	-	MD = 9.7 higher*	Moderate
Mean change	e in PROM ankl	e dorsiflexion	(knee extended)	at 12 months (I	Better indicate	d by higher value	s)			<u> </u>	
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ²⁸	none	12 ⁷³	12 ⁷⁴	-	MD = 11.2 higher*	Moderate

Quality acces	ocmont.						Summary o	f findings			
Quality asses	ssment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	MAS total sco	re at 6 months	s (read from grap	h) (Better indic	ated by lower	values)					
1 study (McLaughlin 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	21 ⁷⁵	17 ⁷⁶	-	MD = 0.85 lower*	Moderate
Mean change	MAS total sco	ore at 12 month	ns (Better indicat	ed by lower val	ues)						
1 study (McLaughlin 1998)	randomised trials	serious ⁷⁷	no serious inconsistency	no serious indirectness	serious ²⁸	none	21 ⁷⁸	17 ⁷⁹	-	MD = 0.55 lower*	Low
Mean change	MAS total sco	re at 24 month	ns (Better indicat	ed by lower val	lues)						
1 study (McLaughlin 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ²⁸	none	Mean change = - 0.88 n=21 ⁸⁰	Mean change = 0 n=17 ⁸¹	-	MD = 0.88 lower*	Moderate

^{*} Calculated by the NCC-WCH

¹ Total population less than 400, 95% confidence interval for mean difference not calculable, no significant differences between groups reported by authors

² Baseline mean (standard deviation; SD) = 15 ± 9 , Score at 8 months mean (SD) = 11 ± 5

³ Baseline mean (SD) = 12 ± 6 , Score at 8 months mean (SD) = 12 ± 6

⁴ Baseline mean (SD) = 15 ± 9 , Score at 20 months mean (SD) = 12 ± 7

⁵ Baseline mean (SD) = 12 ± 6 , Score at 20 months mean (SD) = 12 ± 6

⁶ Baseline mean (SD) = 19 ± 7 , Score at 8 months mean (SD) = 17 ± 6

⁷ Baseline mean (SD) = 17 \pm 7, Score at 8 months mean (SD) = 18 \pm 7

⁸ Baseline mean (SD) = 19 ± 7, Score at 20 months mean (SD) = 18 ± 4 reported as significant difference to baseline

9 Baseline mean (SD) = 17 ± 7 , Score at 20 months mean (SD) = 18 ± 7 10 Baseline mean (SD) = 8 ± 3 , Score at 8 months mean (SD) = 7 ± 3 11 Baseline mean (SD) = 7 ± 3 , Score at 8 months mean (SD) = 8 ± 3 12 Total population less than 400, 95% confidence interval not calculable, significant difference between groups reported by authors 13 Baseline mean (SD) = 8 ± 3 , Score at 20 months mean (SD) = 6 ± 3 14 Baseline mean (SD) = 7 ± 3 , Score at 20 months mean (SD) = 7 ± 3 15 Total population less than 400, 95% confidence interval does not cross null effect but is wide 16 Mean change from baseline =-4 17 Mean change from baseline =15.6 18 Baseline mean (SD) = 43 ± 7 , Score at 8 months mean (SD) = 46 ± 7 19 Baseline mean (SD) = 43 ± 7 , Score at 8 months mean (SD) = 43 ± 7 20 Mean change from baseline =2.2 21 Mean change from baseline =5.9 22 Baseline mean (SD) = 43 ± 7 , Score at 8 months mean (SD) = 46 ± 8 23 Baseline mean (SD) = 43 ± 7 , Score at 8 months mean (SD) = 43 ± 7 24 Mean change from baseline =7.3 25 Mean change from baseline=1.8 26 Mean change from baseline =7.5 27 Mean change from baseline= = 7.5 28 Total population less than 400, 95% confidence interval not calculable, significant difference between groups reported by authors p<0.001 29 Mean change from baseline = -1 30 Mean change from baseline = 0 31 Mean change from baseline = 16.5 32 Mean change from baseline = -3.9 33 Baseline mean (SD) = 44 ± 13 , Score at 8 months mean (SD) = 49 ± 12 34 Baseline mean (SD) = 45 ± 12 , Score at 8 months mean (SD) = 46 ± 13 35 Mean change from baseline = 15.4 36 Mean change from baseline = 8.2 37 Baseline mean (SD) = 44 ± 13, Score at 20 months mean (SD) = 52 ± 13 reported as significant difference compared to baseline 38 Baseline mean (SD) = 45 ± 12 , Score at 20 months mean (SD) = 47 ± 13 39 Baseline mean (SD) = 32 ± 12 , Score at 8 months mean (SD) = 28 ± 11 40 Baseline mean (SD) = 29 ± 8 , Score at 8 months mean (SD) = 28 ± 9 41 Baseline mean (SD) = 32 \pm 12, Score at 20 months mean (SD) = 28 \pm 12 42 Baseline mean (SD) = 29 ± 8 , Score at 20 months mean (SD) = 30 ± 8 43 Mean change from baseline = 4.5 44 Mean change from baseline = 12 45 Mean change from baseline = 6.4

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46 Mean change from baseline = 3.4
47 Mean change from baseline = -4.6
48 Mean change from baseline = 3.8
49 Mean change from baseline = -4.6
50 Mean change from baseline = 0.1
51 Mean change from baseline = -1
52 Mean change from baseline = 0
53 Mean change from baseline =-0.5
54 Mean change from baseline = 0
55 Mean change from baseline = 12.8
56 Mean change from baseline = --4.8
57 Baseline mean (SD) = 15 \pm 8, Score at 8 months mean (SD) = 16 \pm 6
58 Baseline mean (SD) = 17 \pm 7, Score at 8 months mean (SD) = 17 \pm 6
59 Mean change from baseline = 19.5
60 Mean change from baseline = -7.5
61 Baseline mean (SD) = 15 \pm 8, Score at 20 months mean (SD) = 16 \pm 4
62 Baseline mean (SD) = 17 \pm 7, Score at 20 months mean (SD) = 19 \pm 7
63 Baseline mean (SD) = -5 \pm 7, Score at 8 months mean (SD) = -4 \pm 6
64 Baseline mean (SD) = -3 \pm 7, Score at 8 months mean (SD) = -3 \pm 7
65 Baseline mean (SD) = -5 \pm 7, Score at 20 months mean (SD) = -4 \pm 6
66 Baseline mean (SD) = -3 \pm 7, Score at 20 months mean (SD) = -2 \pm 6
67 Baseline mean (SD) = -3 \pm 18, Score at 8 months mean (SD) = -7 \pm 15
68 Baseline mean (SD) = -7 \pm 13, Score at 8 months mean (SD) = -8 \pm 12
69 Baseline mean (SD) = -3 \pm 18, Score at 20 months mean (SD) = -9 \pm 15
70 Baseline mean (SD) = -7 \pm 13, Score at 20 months mean (SD) = -5 \pm 11
71 Mean change from baseline = 11.9
72 Mean change from baseline = 2.2
73 Mean change from baseline = 8.8
74 Mean change from baseline = -2.4
75 Mean change from baseline = -1
76 Mean change from baseline = -0.15
77 SDR + therapy group received significantly more physiotherapy in months 7-12 than the therapy only group (42.9hrs versus 26.3 hrs)
78 Mean change from baseline = -0.88
79 Mean change from baseline = -0.13
80 Mean change from baseline = -0.88
81 Mean change from baseline = 0
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Table K.10.2 Evidence profile for selective dorsal rhizotomy and physical therapy compared with physical therapy only in children with diplegia; functioning assessment

Quality acce	oomon t						Summary o	of findings			
Quality asse	ssment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only - function	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	e Gross motor f	function meas	ure (GMFM) -88:	Dimension A (L	ying and rollin	g) score at 6 mon	ths (Better in	dicated by	higher valu	ues)	
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ²	12 ³	-	MD = 3.1 lower*	Moderate
Mean change	e GMFM (version	n not reported	d): Dimension A (Lying and rolling	ng) score at 9 r	nonths (Better ind	licated by hig	her values)		
1 study (Steinbok 1997)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	14 ⁴	14 ⁵	-	MD = 0.2 lower*	Moderate
Mean change	GMFM-88: Dir	nension A (Ly	ing and rolling) s	core at 12 mon	ths (Better ind	cated by higher v	alues)				
2 studies (McLaughlin 1998; Wright 1998)	randomised trials	serious ⁶	no serious inconsistency ⁷	no serious indirectness	serious ⁸	none	21	17	-	MD 0.84 lower (3.14 lower to 1.46 higher)*	Low

Ouglity ages							Summary o	of findings			
Quality asses	ssment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only - function	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	GMFM-88: Dir	nension A (Ly	ing and rolling) s	core at 24 mon	ths (Better indi	cated by higher v	alues)				
1 study (McLaughlin 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ⁸	none	21	17	-	MD 0.1 lower (2.25 lower to 2.05 higher)*	Moderate
Mean change	GMFM-88: Dir	nension B (Sit	ting) score at 6 n	nonths (Better i	ndicated by hi	gher values)					
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ⁹	12 ¹⁰	-	MD = 11.7 higher*	Moderate
Mean change	e GMFM (version	n not reported	d): Dimension B (Sitting) score a	t 9 months (Be	tter indicated by I	nigher values	s)	L		
1 study (Steinbok 1997)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	14 ¹¹	14 ¹²	-	MD = 15 higher*	Moderate
Mean change	e GMFM-88: Dir	mension B (Sit	ting) score at 12	months (Better	indicated by h	igher values)					
2 studies (McLaughlin 1998; Wright 1998)	randomised trials	serious ⁶	no serious inconsistency ¹³	no serious indirectness	serious ⁸	none	21	17	-	MD 1.2 higher (5.58 lower to 7.98 higher)*	Low

Ovality							Summary o	f findings			
Quality asse	ssment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only - function	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	e GMFM-88: Dir	mension B (Sit	ting) score at 24	months (Better	indicated by h	igher values)					
1 study (McLaughlin 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ⁸	none	21	17	-	MD 1.6 lower (8.63 lower to 5.43 higher)*	Moderate
Mean change	GMFM-88 : Di	mension C (Cı	awling and knee	ling) score at 6	months (Bette	r indicated by higl	her values)				
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ¹⁴	12 ¹⁵	-	MD = 0.3 higher*	Moderate
Mean change	e GMFM (version	n not reported	d): Dimension C (Crawling and k	neeling) score	at 9 months (Bett	er indicated	by higher v	alues)		
1 study (Steinbok 1997)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ²	none	14 ¹⁶	14 ¹⁷	-	MD = 7.7 higher*	Moderate
Mean change	e GMFM-88 : Di	mension C (Cı	rawling and knee	ling) score at 1	2 months (Bett	er indicated by hig	gher values)				
2 studies (McLaughlin 1998; Wright 1998)	randomised trials	serious ⁶	no serious inconsistency ¹⁸	no serious indirectness	serious ⁸	none	21	17	-	MD 0.1 lower (6.61 lower to 6.41 higher)*	Low

Quality assa							Summary o	f findings			
Quality asses	ssment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only - function	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	GMFM-88 : Di	mension C (Cr	awling and kneel	ling) score at 2	4 months (Bett	er indicated by hi	gher values)				
1 study (McLaughlin 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ⁸	none	21	17	-	MD 0.3 lower (6.57 lower to 5.97 higher)*	Moderate
Mean change	GMFM-88: Dir	nension D (Sta	anding) score at 6	months (Bette	er indicated by	higher values)					
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision ¹⁸	none	12 ¹⁹	12 ²⁰	-	MD = 4.2 higher* ²¹	High
Mean change	e GMFM (version	n not reported	l): Dimension D (Standing) score	e at 9 months (Better indicated b	y higher valu	ies)			
1 study (Steinbok 1997)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	14 ²²	14 ²³	-	MD = 2.3 higher*	Moderate
Mean change	GMFM-88: Dir	mension D (Sta	anding) score at 1	12 months (Bet	ter indicated by	/ higher values)					
2 studies (McLaughlin 1998; Wright 1998)	randomised trials	serious ⁶	no serious inconsistency ²⁴	no serious indirectness	serious ⁸	none	21	17	-	MD 2.6 higher (8.02 lower to 13.22 higher)*	Low

Quality assa	noment.						Summary o	of findings			
Quality asses	ssment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only - function	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	GMFM-88: Dir	nension D (Sta	anding) score at 2	24 months (Bet	ter indicated by	y higher values)					
1 study (McLaughlin 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ⁸	none	21	17	-	MD 3.4 lower (15.14 lower to 8.34 higher)*	Moderate
Mean change	GMFM-88: Dir	nension E (Wa	lking, running an	nd jumping) sco	ore at 6 months	(Better indicated	by higher va	alues)			
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ²⁵	12 ²⁶	-	MD = 2.9 higher*	Moderate
Mean change	e GMFM (version	n not reported	l): Dimension E (Walking, runnir	ng and jumping	g) score at 9 mont	hs (Better inc	dicated by h	higher valu	es)	
1 study (Steinbok 1997)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	14 ²⁷	14 ²⁸	-	MD = 6.0 higher*	Moderate
Mean change	GMFM-88: Dir	nension E (Wa	lking, running ar	nd jumping) sco	ore at 12 month	s (Better indicate	d by higher v	/alues)			
2 studies (McLaughlin 1998; Wright 1998)	randomised trials	serious ⁶	no serious inconsistency ²⁹	no serious indirectness	serious ³⁰	none	21	17	-	MD 0.5 higher (5.74 lower to 6.74 higher)*	Low

Quality acces	nomont						Summary o	f findings			
Quality asses	SSIIIeiii						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only - function	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	GMFM-88: Din	nension E (Wa	lking, running ar	nd jumping) sco	ore at 24 month	s (Better indicate	d by higher v	alues)			
1 study (McLaughlin 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ⁸	none	21	17	-	MD 1.6 higher (7.92 lower to 11.12 higher)*	Moderate
Mean change	GMFM-88: Tot	tal score at 6 r	nonths (Better in	dicated by high	ner values)						
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ³¹	12 ³²	-	MD = 4.8 higher*	Moderate
Mean change	e GMFM (versio	n not reported	l): Total score at	9 months (Bett	er indicated by	higher values)					
1 study (Steinbok 1997)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ³³	none	14	14	-	MD 6.2 higher (2.26 to 10.14 higher)*	Moderate

Ouglity assa	noment.						Summary o	f findings			
Quality asses	ssment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only - function	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	GMFM-88: Tot	tal score at 12	months (Better i	ndicated by hig	her values)						
2 studies (McLaughlin 1998; Wright 1998)	randomised trials	serious ⁶	serious ³⁴	no serious indirectness	serious ⁸	none	33	29	-	MD 3.21 higher (0.09 lower to 6.5 higher)*	Very low
Mean change	GMFM-88: Tot	tal score at 24	months (Better i	ndicated by hig	her values)						
1 study (McLaughlin 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ⁸	none	21	17	-	MD 0.2 lower (7.28 lower to 6.88 higher)*	Moderate
Mean change	e in GMFM: Per	cent score at	8 months (Better	indicated by h	igher values)						
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ³⁵	36 ³⁶	-	MD = 0*	Very low
Mean change	e in GMFM: Per	cent score at	20 months (Bette	er indicated by	higher values)						
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ³⁷	36 ³⁸	-	MD = 3 higher*	Very low

Ovelity sees							Summary o	f findings			
Quality asses	ssment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only - function	Relative (95% CI)	Absolute (95% CI)	Quality
Mean change	in timed walk	at 6months (n	netres/60secs) (B	etter indicated	by higher value	es)					
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ³⁹	12 ⁴⁰	-	MD = 3.1 lower*	Moderate
Mean change	e in timed walk	at 12months (metres/60secs) (Better indicated	d by higher value	ues)		l			
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ⁴¹	12 ⁴²	-	MD = 19.4 higher*	Moderate
Mean change	in Gait speed	(centimetres/s	second) at 8 mon	ths (Better indi	cated by highe	r values)		<u> </u>			
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	29 ⁴³	36 ⁴⁴	-	MD = 11 higher*	Very low
Mean change	e velocity (metr	es/second) ga	it analysis at 12 ı	months (Better	indicated by hi	igher values)					
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ⁴⁵	12 ⁴⁶	-	MD = 0.04 lower*	Moderate
Mean change	in Gait speed	(centimetres/s	second) at 20 mo	nths (Better inc	licated by high	er values)				'	
1 study (Engsberg 2006)	observational study	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹⁸	none	29 ⁴⁷	36 ⁴⁸	-	MD = 18 higher*	Very low

Quality asso	Quality assessment								Summary of findings						
Quality asse									Effect						
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Physical therapy only - function	Relative (95% CI)	Absolute (95% CI)	Quality				
Mean change	e in use of assi	stive device g	ait analysis at 12	months (Better	r indicated by I	ower values)									
1 study (Wright 1998)	randomised trials	no serious limitations	no serious inconsistency	no serious indirectness	serious ¹	none	12 ⁴⁹	12 ⁵⁰	-	MD = 0.25 higher*	Moderate				

- * Calculated by the NCC-WCH
- 1 Total population less than 400, 95% confidence interval for mean difference not calculable, no significant differences between groups reported by authors
- 2 Mean change from baseline = 1.6
- 3 Mean change from baseline = 4.7
- 4 Mean change from baseline = 4.1
- 5 Mean change from baseline = 4.3
- 6 McLaughlin 1998: SDR + therapy group received significantly more physiotherapy in months 7-12 than the therapy only group (42.9hrs versus 26.3 hrs)
- 7 Only the results from the McLaughlin 1998 study contributed to the mean difference. Mean change results from the Wright 1998 trial (Mean difference 0.9 higher, n=12 in each group, p=NS reported by authors) did not have associated standard deviation (SD) preventing pooling of data
- 8 Total population less than 400, 95% confidence interval crosses null hypothesis and confidence intervals are wide
- 9 Mean change from baseline = 13.6
- 10 Mean change from baseline = 1.9
- 11 Mean change from baseline = 17.8
- 12 Mean change from baseline = 2.8
- 13 Only the results from the McLaughlin 1998 study contributed to the mean difference. Mean change results from the Wright 1998 trial (Mean difference 9.2 higher, n=12 in each group, p=NS reported by authors) did not have associated standard deviation (SD) preventing pooling of data
- 14 Mean change from baseline = 5.5
- 15 Mean change from baseline =5, 2
- 16 Mean change from baseline =12.1
- 17 Mean change from baseline = 4.4

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- 18 Only the results from the McLaughlin 1998 study contributed to the mean difference. Mean change results from the Wright 1998 trial (Mean difference 8.6 higher, n=12 in each group, p=NS reported by authors) did not have associated SD preventing pooling of data
- 19 Mean change from baseline = 8.3
- 20 Mean change from baseline = 4.1
- 21 Significant difference between groups reported by authors p<0.05
- 22 Mean change from baseline = 12.1
- 23 Mean change from baseline = 9.8
- 24 Only the results from the McLaughlin 1998 study contributed to the mean difference. Mean change results from the Wright 1998 trial (Mean difference 3.8 higher, n=12 in each group, p=NS reported by authors) did not have associated SD preventing pooling of data
- 25Mean change from baseline = 4.2
- 26 Mean change from baseline =1.3
- 27 Mean change from baseline = 10.4
- 28 Mean change from baseline = 4.4
- 29 Only the results from the McLaughlin 1998 study contributed to the mean difference presented. Mean change results from the Wright 1998 trial (Mean difference 10.3 higher, n=12 in each group, p<0.05 reported by authors) did not have associated SD preventing pooling of data
- 30 Only the results from the McLaughlin 1998 study contributed to the mean difference. Mean change results from the Wright 1998 trial did not have SDs associated with them preventing the estimate of a mean difference and pooling of data. In Wright 1998, the authors state that there was a significant difference between the groups (p<0.05) favouring the SDR + therapy group over the therapy only group
- 31 Mean change from baseline = 6.8
- 32 Mean change from baseline = 2
- 33 Total population less than 400, 95% confidence interval does not cross null hypothesis but confidence intervals are wide
- 34 75% heterogeneity for the meta-analysis. The mean total change for the SDR + therapy group in the Wright 1998 study was considerably higher than that in the McLaughlin 1998 trial (7.7 higher versus 0.7 higher)
- 35 Baseline mean (SD) = 87 \pm 10, Score at 8 months mean (SD) = 88 \pm 9
- 36 Baseline mean (SD) = 89 ± 7 , Score at 8 months mean (SD) = 90 ± 7
- 37 Baseline mean (SD) = 87 ± 10, Score at 20 months mean (SD) = 92 ± 8 reported as significantly different from baseline
- 38 Baseline mean (SD) = 89 ± 7, Score at 20 months mean (SD) = 91 ± 7 reported as significantly different from baseline
- 39 Mean change from baseline = 5
- 40 Mean change from baseline = 8.1
- 41 Mean change from baseline = 15.9
- 42 Mean change from baseline = -3.5
- 43 Baseline mean (SD) = 81 \pm 22, Score at 8 months mean (SD) = 91 \pm 25
- 44 Baseline mean (SD) = 91 \pm 26, Score at 8 months mean (SD) = 90 \pm 22
- 45 Mean change from baseline = 0.16
- 46 Mean change from baseline = 0.2
- 47 Baseline mean (SD) = 81 \pm 22, Score at 20 months mean (SD) = 101 \pm 24
- 48 Baseline mean (SD) = 91 \pm 26, Score at 20 months mean (SD) = 93 \pm 22

49 Mean change from baseline = 0.25 Four children in the SDR + therapy group changed to a less supportive device during 12 m follow up. Two children using walkers at baseline used two canes at 12m, one child who did not walk at baseline used a walker at 12m and one child using a walker at baseline walked independently at 12m
50 Mean change from baseline = 0

Table K.10.3 Evidence profile for selective dorsal rhizotomy and physical therapy compared with orthopaedic surgery in children with diplegia; functioning assessment (PEDI)

Quality as	coccmont						Summary o	f findings			
Quality as:	36331116111						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Orthopaedic surgery	Relative (95% CI)	Absolute (95% CI)	Quality
Mean char	nge paediatric e	valuation of d	isability inventor	y (PEDI): Func	tional Skills sc	ale, Self care dom	ain score at	6 months (Bett	er indicate	d by higher va	alues)
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ³	74	-	MD 2.17 higher (1.93 lower to 6.27 higher)*	Very low
Mean char	nge PEDI: Func	tional Skills so	cale, Self care do	main score at 1	12 months (Bet	ter indicated by h	igher values				
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ⁵	7 ⁶	-	MD 0.68 higher (4.36 lower to 5.72 higher)*	Very low

Ovelity as							Summary of	of findings			
Quality as	sessment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Orthopaedic surgery	Relative (95% CI)	Absolute (95% CI)	Quality
Mean char	nge PEDI: Func	tional Skills so	ale, Self care do	main score at 2	4 months (Bet	ter indicated by h	igher values				
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ⁷	78	-	MD 3.72 higher (1.90 lower to 9.34 higher)*	Very low
Mean char	nge PEDI : Fund	tional skills s	cale, Mobility dor	main score at 6	months (Bett	ter indicated by hi	gher values)				
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ⁹	7 ¹⁰	-	MD 2.91 higher (2.05 lower to 7.87 higher)*	Very low
Mean char	nge PEDI : Fund	tional skills s	cale, Mobility dor	main score at 1	2 months (Bet	ter indicated by h	igher values)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ¹¹	7 ¹²	-	MD 1.89 higher (3.75 lower to 7.53 higher)*	Very low

Ovelity							Summary o	f findings			
Quality as:	sessment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Orthopaedic surgery	Relative (95% CI)	Absolute (95% CI)	Quality
Mean char	nge PEDI : Fund	tional skills s	cale, Mobility dor	main score at 2	24 months (Bet	ter indicated by h	igher values				
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ¹³	7 ¹⁴	-	MD 0.17 higher (6.30 lower to 6.64 higher)*	Very low
Mean char	nge PEDI : Fund	tional skills s	cale, Social funct	tion domain sco	ore at 6 months	s (Better indicated	by higher v	alues)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ¹⁵	7 ¹⁶	-	MD 0.10 higher (10.31 lower to 10.51 higher)*	Very low
Mean char	nge PEDI : Fund	tional skills s	cale, Social funct	tion domain sco	ore at 12 montl	hs (Better indicate	ed by higher	values)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ¹⁷	7 ¹⁸	-	MD 0.12 higher (8.16 lower to 8.40 higher)*	Very low

Ovelity on							Summary of	of findings			
Quality as	sessment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Orthopaedic surgery	Relative (95% CI)	Absolute (95% CI)	Quality
Mean chai	nge PEDI : Fund	tional skills s	cale, Social func	tion domain sc	ore at 24 mont	hs (Better indicat	ed by higher	values)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ¹⁹	7 ²⁰	-	MD 0.82 higher (7.41 lower to 9.05 higher)*	Very low
Mean chai	nge PEDI: Careo	giver assistan	ce scale, Self ca	re domain scor	e at 6 months	(Better indicated I	y higher val	ues)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ²¹	7 ²²	-	MD 1.72 higher (4.04 lower to 7.48 higher)*	Very low
Mean chai	nge PEDI: Careo	giver assistan	ce scale, Self ca	re domain scor	e at 12 months	(Better indicated	by higher va	lues)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ²³	7 ²⁴	-	MD 2.44 lower (8.75 lower to 3.87 higher)*	Very low

Ouglity as	aaamant						Summary o	f findings			
Quality as	sessmem						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Orthopaedic surgery	Relative (95% CI)	Absolute (95% CI)	Quality
Mean char	nge PEDI: Care	giver assistan	ce scale, Self ca	re domain scor	e at 24 months	(Better indicated	by higher v	alues)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ²⁵	7 ²⁶	-	MD 2.36 higher (3.68 lower to 8.40 higher)*	Very low
Mean char	nge PEDI: Care	giver assistan	ce scale, Mobility	y domain score	at 6 months (Better indicated b	y higher valu	ies)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ²⁷	7 ²⁸	-	MD 2.28 higher (2.93 lower to 7.49 higher)*	Very low
Mean char	nge PEDI: Care	giver assistan	ce scale, Mobility	y domain score	at 12 months	(Better indicated	by higher val	ues)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ²⁹	7 ³⁰	-	MD 6.17 higher (0.83 lower to 13.17 higher)*	Very low

Ovelity on							Summary o	f findings			
Quality as	sessment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Orthopaedic surgery	Relative (95% CI)	Absolute (95% CI)	Quality
Mean char	nge PEDI: Careo	giver assistan	ce scale, Mobility	y domain score	at 24 months	(Better indicated	by higher va	ues)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ³¹	7 ³²	-	MD 7.75 higher (1.81 lower to 17.31 higher)*	Very low
Mean char	nge PEDI: Careç	giver assistan	ce scale, Social i	function domai	n score at 6 m	onths (Better indi	cated by high	ner values)	L		
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ³³	7 ³⁴	-	MD 0.32 lower (12.86 lower to 12.22 higher)*	Very low
Mean char	nge PEDI: Careo	giver assistan	ce scale, Social	function domai	n score at 12 n	nonths (Better ind	licated by hig				
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ³⁵	7 ³⁶	-	MD 6.21 higher (1.94 lower to 14.36 higher)*	Very low

Ovelity							Summary o	f findings			
Quality as	sessment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Orthopaedic surgery	Relative (95% CI)	Absolute (95% CI)	Quality
Mean chai	nge PEDI: Careo	giver assistan	ce scale, Social f	function domai	n score at 24 n	nonths (Better ind	icated by hig	her values)	L		L
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ³⁷	7 ³⁸	-	MD 4.47 higher (7.34 lower to 16.28 higher)*	Very low

CI confidence interval, MD mean difference

- * Calculated by the NCC-WCH
- 1 Unequal size of treatment groups
- 2 Total population less than 400, 95% confidence interval crosses null hypothesis and confidence intervals are wide Comparison across groups not reported by authors
- 3 Mean change (standard deviation; SD) from baseline = 3.27 (4.37)
- 4 Mean change (SD) from baseline = 1.1 (4.82)
- 5 Mean change (SD) from baseline = 6.18 (6.91)
- 6 Mean change (SD) from baseline = 5.5 (5.27)
- 7 Mean change (SD) from baseline = 11.89 (6.81)
- 8 Mean change (SD) from baseline = 8.17 (6.29)
- 9 Mean change (SD) from baseline = 1.41 (3.8)
- 10 Mean change (SD) from baseline = -1.5 (6.26)
- 11 Mean change (SD) from baseline = 3.73 (7.94)
- 12 Mean change (SD) from baseline = 1.84 (5.79)
- 13 Mean change (SD) from baseline = 7.51 (7.11)
- 14 Mean change (SD) from baseline = 7.34 (7.52)
- 15 Mean change (SD) from baseline = 1.22 (5.95)
- To Micari orlange (OD) from Bascillic = 1:22 (0:30)
- 16 Mean change (SD) from baseline = 1.12 (13.56)
- 17 Mean change (SD) from baseline = 3.19 (6.56)

- 18 Mean change (SD) from baseline = 3.07 (10.4)
- 19 Mean change (SD) from baseline = 7.82 (6.63)
- 20 Mean change (SD) from baseline = 7.0 (10.31)
- 21 Mean change (SD) from baseline = 2.82 (9.77)
- 22 Mean change (SD) from baseline = 1.1 (4.82)
- 23 Mean change (SD) from baseline = 3.06 (10.73)
- 24 Mean change (SD) from baseline = 5.5 (5.27)
- 25 Mean change (SD) from baseline = 10.53 (8.33)
- 26 Mean change (SD) from baseline = 8.17 (6.29)
- 27 Mean change (SD) from baseline = 0.78 (5.15)
- 28 Mean change (SD) from baseline = -1.5 (6.26)
- 29 Mean change (SD) from baseline = 8.01 (11.97)
- 30 Mean change (SD) from baseline = 1.84 (5.79)
- 31 Mean change (SD) from baseline = 13.58 (13.76)
- 32 Mean change (SD) from baseline = 5.83 (9.64)
- 33 Mean change (SD) from baseline = 1.12 (13.56)
- 34 Mean change (SD) from baseline = 1.44 (14.67)
- 35 Mean change (SD) from baseline = 3.07 (10.4)
- 36 Mean change (SD) from baseline = -3.14 (8.89)
- 37 Mean change (SD) from baseline = 7.0 (10.31)
- 38 Mean change (SD) from baseline = 2.53 (14.59)

Table K.10.4 Evidence profile for selective dorsal rhizotomy and physical therapy compared with orthopaedic surgery in children with diplegia; functioning assessment (GMFM)

Ovality							Summary o	f findings			
Quality as	sessment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Orthopaedic surgery	Relative (95% CI)	Absolute (95% CI)	Quality
Mean char	nge Gross moto	r function me	asure (GMFM)-88	3: Dimension A	(Lying and rol	ling) score at 6 m	onths (Better	indicated by h	igher value	es)	1
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ³	7 ³	-	MD = 0	Very low
Mean char	nge GMFM-88: [Dimension A (Lying and rolling) score at 12 m	onths (Better i	ndicated by highe	r values)				
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ³	7 ³	-	MD = 0	Very low
Mean char	nge GMFM-88: [Dimension A (Lying and rolling) score at 24 m	onths (Better i	ndicated by highe	r values)	<u> </u>	L		
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ³	7 ³	-	MD = 0	Very low
Mean char	nge GMFM-88: [Dimension B (Sitting) score at 6	6 months (Bette	er indicated by	higher values)					
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	184	7 ⁵	-	MD 0.57 higher (1.86 lower to 3.00 higher)*	Very low

Ovelity as							Summary of	of findings			
Quality as	sessment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Orthopaedic surgery	Relative (95% CI)	Absolute (95% CI)	Quality
Mean char	nge GMFM 88 so	core sitting at	12 months (Bette	er indicated by	higher values)						
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ⁶	7 ⁷	-	MD 1.10 higher (1.55 lower to 3.75 higher)*	Very low
Mean char	nge GMFM-88: [Dimension B (Sitting) score sitt	ing at 24 montl	ns (Better indic	cated by higher va	lues)				
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ⁸	79	-	MD 0.72 higher (2.21 lower to 3.65 higher)*	Very low
Mean char	nge GMFM-88 :	Dimension C (Crawling and kn	eeling) score a	6 months (Be	tter indicated by h	nigher values	s)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ¹⁰	7 ¹¹	-	MD 4.29 higher (0.15 lower to 8.73 higher)*	Very low

Ovelity on							Summary o	f findings			
Quality as	sessment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Orthopaedic surgery	Relative (95% CI)	Absolute (95% CI)	Quality
Mean char	nge GMFM-88 :	Dimension C (Crawling and kn	eeling) score at	12 months (B	etter indicated by	higher value	es)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ¹²	7 ¹³	-	MD 2.68 higher (1.99 lower to 7.35 higher)*	Very low
Mean char	nge GMFM-88 :	Dimension C (Crawling and kn	eeling) score at	24 months (B	etter indicated by	higher value	es)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ¹⁴	7 ¹⁵	-	MD 2.99 higher (0.52 lower to 6.50 higher)*	Very low
Mean char	nge GMFM-88: [Dimension D (Standing) score a	at 6 months (Be	tter indicated	by higher values)					
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ¹⁶	7 ¹⁷	-	MD 4.87 lower (15.15 lower to 5.41 higher)*	Very low

Ouglity ear							Summary o	f findings			
Quality as:	sessment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Orthopaedic surgery	Relative (95% CI)	Absolute (95% CI)	Quality
Mean char	nge GMFM-88: [Dimension D (Standing) score a	at 12 months (B	etter indicated	by higher values)				
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ¹⁸	7 ¹⁹	-	MD 14.38 lower (29.07 lower to 0.31 higher)*	Very low
Mean char	nge GMFM-88: [Dimension D (Standing) score a	at 24 months (B	etter indicated	l by higher values)				
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ²⁰	7 ²¹	-	MD 12.40 lower (30.68 lower to 5.88 higher)*	Very low
Mean char	nge GMFM-88: [Dimension E (Walking, running	and jumping) s	score at 6 mon	ths (Better indicate	ted by higher	values)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ²²	7 ²³	-	MD 5.10 higher (4.33 lower to 14.53 higher)*	Very low

Ouglitus							Summary o	f findings			
Quality as:	sessment						No. of patie	ents	Effect		
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Orthopaedic surgery	Relative (95% CI)	Absolute (95% CI)	Quality
Mean char	nge GMFM-88: [Dimension E (Walking, running	and jumping)	score at 12 mo	nths (Better indicate	ated by highe	er values)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ²⁴	7 ²⁵	-	MD 1.69 lower (10.50 lower to 7.12 higher)*	Very low
Mean char	nge GMFM-88: [Dimension E (Walking, running	and jumping)	score at 24 mo	nths (Better indicate	ated by highe	er values)			
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ²⁶	7 ²⁷	-	MD 2.73 higher (13.30 lower to 18.76 higher)*	Very low
Mean char	nge total GMFM	-88 score at 6	months (Better i	ndicated by hig	her values)						
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ²⁸	7 ²⁹	-	MD 1.02 higher (3.06 lower to 5.10 higher)*	Very low

Quality assessment					Summary of findings						
wanty assessment						No. of patients		Effect			
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Selective dorsal rhizotomy (SDR) and physical therapy	Orthopaedic surgery	Relative (95% CI)	Absolute (95% CI)	Quality
Mean char	nge total GMFM	-88 score at 12	2 months (Better	indicated by hi	gher values)						
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ³⁰	7 ³¹	-	MD 2.51 lower (7.63 lower to 2.61 higher)*	Very low
Mean char	nge total GMFM	-88 score at 24	4 months (Better	indicated by hi	gher values)						
1 study (Buckon 2004b)	observational study	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	18 ³²	7 ³³	-	MD 1.19 lower (8.29 lower to 5.91 higher)*	Very low

CI confidence interval, MD mean difference

^{*} Calculated by the NCC-WCH

¹ Unequal size of treatment groups

² Total population less than 400, 95% confidence interval crosses null hypothesis and confidence intervals are wide Comparison across groups not reported by authors

³ Mean change from baseline = 0 All children could perform lying and rolling task

⁴ Mean change from baseline = 1.76 (4.06)

⁵ Mean change from baseline = 1.19 (2.09)

⁶ Mean change from baseline = 2.24 (4.97)

⁷ Mean change from baseline = 1.14 (1.78)

⁸ Mean change from baseline = 1.67 (4.63)

⁹ Mean change from baseline = 0.95 (2.7)

¹⁰ Mean change from baseline = 2.25 (5.63)

- 11 Mean change from baseline = -2.04 (4.85)
- 12 Mean change from baseline = 3.7 (9.39)
- 13 Mean change from baseline = 1.02 (2.32)
- 14 Mean change from baseline = 3.33 (6.41)
- 15 Mean change from baseline = 0.34 (2.55)
- 16 Mean change from baseline = 3.56 (13.88)
- 17 Mean change from baseline = 8.43 (10.85)
- 18 Mean change from baseline = 6.13 (17.68)
- 19 Mean change from baseline = 20.51 (16.49)
- 20 Mean change from baseline = 12.14 (18.38)
- 21 Mean change from baseline = 24.54 (21.85)
- 22 Mean change from baseline = 2.32 (7.91)
- 23 Mean change from baseline = 2.78 (11.73)
- 24 Mean change from baseline = 4.86 (12.8)
- 25 Mean change from baseline = 6.55 (8.81)
- 26 Mean change from baseline = 14.44 (16.38)
- 27 Mean change from baseline = 11.71 (19.08)
- 28 Mean change from baseline = 1.98 (5.22)
- 29 Mean change from baseline = 0.96 (4.45)
- 30 Mean change from baseline = 3.39 (7.82)
- 31 Mean change from baseline = 5.9 (4.89)
- 32 Mean change from baseline = 6.32 (8.38)
- 33 Mean change from baseline = 7.51 (8.04)

Appendix L Benefits and harms of intrathecal baclofen

Table L.1 summarises the clinical pathway for the participants in each included study relating to intrathecal baclofen testing to determine the benefits and harms associated with testing. The table presents the total number of participants tested, and the breakdown according to outcomes, including beneficial response and adverse effects.

Table L.1

Table E.1					
Outcome	Total	Hoving 2007 Hoving 2009a Hoving 2009b (three publications)	Gilmartin 2000 Krach 2004 (two publications)	Awaad 2003 (one publication)	
Number of participants who underwent the test	117	17 children and young people (all younger than 18 years)	51 patients ^a (aged 4-31.3 years; mean 10 years 3 months, median 11 years 2months)	49 patients ^a (aged 4-32 years; mean 13.09 years; standard deviation 7.49 years)	
Number of single doses given	135	23	63 ^b	49 ^b	
Number of positive test results at any given dosage (however 'positive' was defined by the study authors)	114	17	48	49	
Number of negative test results at any given dosage	21	6 ^c	15 ^d	0	
Number of adverse effects and participants	umber of adverse Adverse ffects and participants effects: 38	Adverse effects: 9	Adverse effects: 29 (7 during placebo)	None reported	
involved	Patients: 26	Children affected: 8 ^e	Patients affected: 18 (4 during placebo) ^f		
Number of	Complicati ons: 21	Complications: 19	Complications: 2	None reported	
complications and participants involved		Children affected:	Children affected: 2h		
participante inverteu	Patients: 18	16 ⁹			
Number of participants with a positive test who went on to have	100	17	44 ⁱ	39 ⁱ	

Outcome	Total	Hoving 2007 Hoving 2009a Hoving 2009b (three publications)	Gilmartin 2000 Krach 2004 (two publications)	Awaad 2003 (one publication)
continuous pump- administered intrathecal baclofen				
Number of participants with a negative test result who went on to have continuous pumpadministered intrathecal baclofen	0	0	0	0
Number of participants with a positive test result who did not go on to have continuous pump- administered intrathecal baclofen and reasons given	10	0	2 ^h	10
Number of participants in whom the beneficial effects observed during testing were also observed during continuous pumpadministered intrathecal baclofen treatment at 12 months (beneficial effects are based on Ashworth scores measured at both assessment times)	75	17	40 ^k	18 ¹
Number of participants in whom continuous pump- administered intrathecal baclofen treatment was not effective due to baclofen not having an effect	1	0	0	1 ^m
Number of participants	7 ⁿ	0	3 ⁿ	4 ⁿ
with adverse effects or complications requiring			Reasons:	Reasons:
explantation of pump			All developed	Meningitis=1
and reason given			infections of the pump pocket: 1 had a second pump re- implanted to complete study and the other 2 withdrew from study	Infection = 2 (1 was a 'pocket infection', unclear about the other one)
			,	Lack of effect, no clinical improvement: 1 ^m

- a. Including adults
- b. Related to lack of response to a single-specific dose
- c. The five children who required a higher of dose of intrathecal baclofen (ITB) were significantly older (p=0.037) and weighed more (p=0.007) than the 12 children who responded to a low dose. No significant differences were reported for sex, GMFCS, cerebral palsy type, or the use of oral baclofen. One child had a second hospital admission to receive a second dose because the first one caused apathy and, in an upright position, nausea and vomiting. This condition "impeded the observation of effects and side effects"
- d. 3 patients had a positive response to placebo. 10 did not have a positive response to the initial 50-µg baclofen dose, and 2 did not have a positive response to the second 75-µg baclofen dose (but responded to 100 µg later on)
- e. 7 children became slightly lethargic, including one who also experienced transient excessive hypotonia. One child experienced excessive perspiration of hands and feet
- f. Nausea, vomiting and drowsiness were common effects reported during baclofen, but unclear how many children involved were affected by each symptom
- g. 14 children experienced symptoms of lowered cerebrospinal fluid (CSF) pressure (including lethargy, decreased appetite, dry mouth, dizziness, perspiration, pallor, nausea, vomiting, and headache the last 4 symptoms appeared or increased only in an upright position); 3 children CSF leaked from the catheter connection (In one of these, the catheter connection was defective, so a new catheter had to be inserted; in the other two reconnection of the cap solved the problem); 1 child had radicular pain in his right leg postoperatively. The pain was completely resolved by retracting the catheter by 5cm; 1 child developed gastroenteritis (other children on the ward had gastroenteritis)
- h. One patient developed meningitis and withdrew from study and 1 patient had intercurrent gastroenteritis and also withdrew from study
- i. Age unclear
- j. Reasons for this: 3 patients elected to use oral medications, 2 had 'family issues', 1 child's body size was 'too small', 1 child died 'unrelated to baclofen trial', 1 child had 'medical issues', 1 child underwent spinal fusion and 1 family decided not to undergo implant at the time of the study, reason not given
- k. This was the total number of patients at the time. Unclear how many of them were children.
- I. From the study it is clear that at least 18 of the patients who had the pump were children. We have data on effectiveness reported by age groups (<18 and >18) but it appears as if all the 39 patients had been followed up. However, previously the authors reported that 10/39 patients did not have all follow-up outcomes available. It is unclear how many of these were children
- m. Unclear if this patient was a child and also unclear if this was the same patient in which the pump had to be stopped after 5 months because of a change of behaviour owing to an increase in seizure activity
- n. Unclear whether any of these patients were children

Table L.2 summarises other adverse effects and complications identified in the included studies relating to intrathecal baclofen testing.

Table L.2

Study details	Total number of pumps implanted	Total number of compli- cations	Surgical complications (number of complications)	Mechanical complications (number of complications)	Infusion pump or perator failure (number of failures)	Additional complications identified for other medical or surgical treatments (for example, magnetic resonance imaging scan, scoliosis and hip surgery, ventriculoperitoneal shunting)
Hoving	17	26	Swelling at pump site: 7 Lumbar swelling: 3	Moving pump: 3	0	0
2009b Hoving				Beeping pump: 2		
2009b			Pruritus at pump site: 3	Abrupt lack of intrathecal		
			Possible cerebrospinal fluid leakage: 2	baclofen effect 4 hours postoperatively:		
			Wound leakage: 1	1 (solved by		
			Pruritus at lumbar scar site: 1	catheter replacement)		
			Cystitis: 1			
			Incomplete operation:1			
			Postoperative pain at pump site: 1			
Gilmartin	45	58	Pocket seroma: 7	Catheter break:	0	0
2000			Pocket infection: 5	Catheter dislodged: 2 Back pain at catheter site: 2 Other: 14		
			Catheter dislodged: 3			
			Cerebrospinal fluid leak: 3			
			Other: 20			
Awaad	39	3	Meningitis:1	0	0	0
2003			Infection: 2 (1 was a 'pocket infection', the other was not clearly reported)			
Total	101	87	61	26	0	0