

# **Low back pain: the acute management of patients with chronic (longer than 6 weeks) non-specific low back pain**

## **NICE guideline**

**Draft for consultation, September 2008**

If you wish to comment on this version of the guideline, please be aware that all the supporting information and evidence is contained in the full version.

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## 1 **Introduction**

2 Low back pain is a common disorder. Nearly everyone is affected by it at  
3 some time. For most people affected by low back pain, substantial pain or  
4 disability is short lived and they soon return to normal activities; regardless of  
5 any advice or treatment they receive. A small proportion, however, develop  
6 chronic pain and disability. Once back pain has been present for greater than  
7 one year few people with long-term pain and disability return to normal  
8 activities. It is this group who account for the majority of the health and social  
9 costs associated with low back pain.

10 Guidelines and consensus statements internationally are consistent in their  
11 overall approach to the management of acute low back; that is back pain of  
12 less than six weeks duration. What has been less clear is how those  
13 patients whose spinal pain and disability persists for longer than six weeks  
14 should be managed in order to prevent long-term disability. Appropriate  
15 management of people in this group has the potential to reduce the number of  
16 people with disabling long-term back pain; and consequentially to reduce the  
17 cost of back pain to society.

18 Non-specific low back pain is pain muscle tension or stiffness affecting the  
19 lower back for which there is not a recognised patho-anatomic cause. The  
20 lower back is commonly defined as the area bounded by the bottom of the rib  
21 cage and the buttock creases. Some people with non-specific low back pain  
22 may also feel pain in their upper legs; but the low back pain usually  
23 predominates.

24 Estimates for the prevalence of low back pain vary considerably between  
25 studies; estimates range up to 33% for point prevalence, 65% for one year  
26 prevalence, and 84% for lifetime prevalence. Published data do not  
27 distinguish between low back pain persisting for greater than one year and  
28 less than one year. Annually, back pain probably affects a third of the  
29 population; around 20% of those affected (one in fifteen of the population) will  
30 see their general practitioner for advice.

## DRAFT FOR CONSULTATION

- 1 The guideline will assume that prescribers will use a drug's summary of
- 2 product characteristics to inform their decisions for individual patients.

## 1 **Patient-centred care**

2 This guideline offers best practice advice on the care of people with non-  
3 specific low back pain.

4 Treatment and care should take into account patients' needs and preferences.  
5 People with non-specific low back pain should have the opportunity to make  
6 informed decisions about their care and treatment, in partnership with their  
7 healthcare professionals. If patients do not have the capacity to make  
8 decisions, healthcare professionals should follow the Department of Health  
9 guidelines – 'Reference guide to consent for examination or treatment' (2001)  
10 (available from [www.dh.gov.uk](http://www.dh.gov.uk)). Healthcare professionals should also follow  
11 the code of practice that accompanies the Mental Capacity Act (summary  
12 available from [www.publicguardian.gov.uk](http://www.publicguardian.gov.uk)).

13 Good communication between healthcare professionals and patients is  
14 essential. It should be supported by evidence-based written information  
15 tailored to the patient's needs. Treatment and care, and the information  
16 patients are given about it, should be culturally appropriate. It should also be  
17 accessible to people with additional needs such as physical, sensory or  
18 learning disabilities, and to people who do not speak or read English.

19 If the patient agrees, families and carers should have the opportunity to be  
20 involved in decisions about treatment and care.

21 Families and carers should also be given the information and support they  
22 need.

## 1 **Key priorities for implementation**

- 2 • Consider offering a course of manual therapy including spinal manipulation  
3 of up to 9 sessions over up to 12 weeks<sup>1</sup>. **[1.4.1]**
- 4 • Consider offering a course of acupuncture needling comprising up to  
5 10 sessions over a period of up to 12 weeks<sup>1</sup>. **[1.8.1]**
- 6 • Consider offering a structured exercise programme tailored to the  
7 individual<sup>1</sup>. **[1.3.3]**
- 8 • Offer supervised group exercise programmes in preference to one-to-one  
9 supervised exercise programmes. **[1.3.4]**
- 10 • Consider referral for a combined physical and psychological treatment  
11 programme for patients who have high disability and/or significant  
12 psychological distress after having received less intensive treatments.  
13 **[1.6.1]**
- 14 • Do not offer X-ray of the lumbar spine for the management of non-specific  
15 low back pain. **[1.1.1]**
- 16 • MRI for non-specific low back pain should only be performed within the  
17 context of a referral for an opinion on spinal fusion. **[1.1.3]**
- 18 • Consider referral for an opinion on spinal fusion for people who have  
19 completed a comprehensive package of care including a combined  
20 physical and psychological treatment programme and who have persistent  
21 severe non-specific low back pain for which the patient would consider  
22 surgery. **[1.9.1]**
- 23 • Do not offer injections of therapeutic substances into the back. **[1.8.2]**

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<sup>1</sup> A choice of any of these therapies may be offered, taking into account patient preference.

## 1 **1 Guidance**

2 The following guidance is based on the best available evidence. The full  
3 guideline ([add hyperlink]) gives details of the methods and the evidence used  
4 to develop the guidance.

### 5 **1.1 Assessment**

6 1.1.1 Do not offer X-ray of the lumbar spine for the management of non-  
7 specific low back pain.

8 1.1.2 Consider MRI (magnetic resonance imaging) when a diagnosis of  
9 spinal malignancy, sepsis, fracture, cauda equina syndrome or  
10 inflammatory disease is suspected.

11 1.1.3 MRI for non-specific low back pain should only be performed within  
12 the context of a referral for an opinion on spinal fusion.

### 13 **1.2 Information, education and patient treatment preferences**

14  
15 1.2.1 Use educational materials consistent with this guideline to support  
16 other treatments.

17 1.2.2 Include an educational component consistent with this guideline as  
18 part of other interventions.

19 1.2.3 Do not offer stand-alone formal education programmes.

20 1.2.4 Take into account the patient's expectations and preferences when  
21 considering recommended treatments.

22 1.2.5 The patient's expectations and preferences should not be used to  
23 predict the response to treatments.

### 24 **1.3 Exercise**

25 1.3.1 Advise people with low back pain that maintaining a physically  
26 active lifestyle is likely to be beneficial.

1 1.3.2 Advise all people with low back pain to exercise.

2 1.3.3 Consider offering a structured exercise programme tailored to the  
3 individual<sup>2</sup>.

4 1.3.4 Offer supervised group exercise programmes in preference to one-  
5 to-one supervised exercise programmes.

## 6 **1.4 Manual therapies**

7 1.4.1 Consider offering a course of manual therapy including spinal  
8 manipulation of up to 9 sessions over up to 12 weeks<sup>3</sup>.

## 9 **1.5 Other non-pharmacological therapies**

### 10 **Electrotherapy modalities**

11 1.5.1 Do not offer laser therapy.

12 1.5.2 Do not offer interferential therapy.

13 1.5.3 Do not offer therapeutic ultrasound.

### 14 **Transcutaneous nerve stimulation (TENS)**

15 1.5.4 Do not offer transcutaneous electrical nerve simulation (TENS)  
16 routinely.

### 17 **Lumbar supports**

18 1.5.5 Lumbar supports are not recommended.

### 19 **Traction**

20 1.5.6 Do not offer traction because of the increased risk of aggravating  
21 symptoms.

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<sup>2</sup> A choice of an exercise programme, a course of manual therapy (see section 1.4.1) and a course of acupuncture (see section 1.8.1) may be offered, taking into account patient preference.

<sup>3</sup> A choice of an exercise programme (see section 1.3.3), a course of manual therapy and a course of acupuncture (see section 1.8.1) may be offered, taking into account patient preference.

1    **1.6        *Combined physical and psychological intervention***

2    1.6.1        Consider referral for a combined physical and psychological  
3                treatment programme for patients who have high disability and/or  
4                significant psychological distress after having received less  
5                intensive treatments.

6    **1.7        *Pharmacological therapies***

7    **NSAIDS/COX-2 inhibitors**

8    1.7.1        Advise the person to take regular paracetamol as the first  
9                medication option.

10   1.7.2        Consider offering non-steroidal anti-inflammatory drugs (NSAIDs)  
11                for short-term use when paracetamol is ineffective.

12   1.7.3        Give due consideration to the risk of side effects from NSAIDs in  
13                older people, and other patients at high risk of experiencing side  
14                effects.

15   1.7.4        When offering treatment with an oral NSAID/COX-2 (cyclo-  
16                oxygenase-2) inhibitor, the first choice should be either a standard  
17                NSAID or a COX-2 inhibitor (other than etoricoxib 60 mg). In either  
18                case, these should be co-prescribed with a proton pump inhibitor  
19                (PPI), choosing the one with the lowest acquisition cost<sup>4</sup>.

20   **Opioids**

21   1.7.5        Consider offering strong opioids for short-term use to people in  
22                severe pain.

23   1.7.6        Consider referral for specialist assessment for people who may  
24                require prolonged use of strong opioids.

25   1.7.7        Give due consideration to the risk of opioid dependence and side  
26                effects.

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<sup>4</sup> This recommendation is from 'Osteoarthritis: the care and management of osteoarthritis in adults' (NICE clinical guideline 59).

1 1.7.8 Offer an NSAID or opioid depending upon the individual risk of side  
2 effects and patient preference.

3 1.7.9 Consider offering mild opioids when regular paracetamol alone is  
4 ineffective.

5 1.7.10 Base decisions on continuation of mild opioids on individual  
6 response.

### 7 **Antidepressants**

8 1.7.11 Do not offer selective serotonin reuptake inhibitors (SSRIs) for  
9 treating pain.

10 1.7.12 Consider offering a trial of tricyclic antidepressants.

11 1.7.13 Start tricyclic antidepressants at a low dosage and increase up to  
12 the maximum antidepressant dose until therapeutic effect is  
13 achieved or unacceptable side effects prevent further increase.  
14 People starting on a tricyclic antidepressant should be reviewed at  
15 least monthly.

## 16 **1.8 Invasive procedures**

17 1.8.1 Consider offering a course of acupuncture needling comprising up  
18 to 10 sessions over a period of up to 12 weeks<sup>5</sup>.

19 1.8.2 Do not offer injections of therapeutic substances into the back.

## 20 **1.9 Referral for surgery**

21 1.9.1 Consider referral for an opinion on spinal fusion for people who  
22 have completed a comprehensive package of care including a  
23 combined physical and psychological treatment programme and  
24 who have persistent severe non-specific low back pain for which  
25 the patient would consider surgery.

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<sup>5</sup> A choice of an exercise programme (see section 1.3.3), a course of manual therapy (see section 1.4.1) and a course of acupuncture may be offered, taking into account patient preference.

1 1.9.2 People who have psychological distress should receive appropriate  
2 treatment for this before referral for spinal fusion.

3 1.9.3 If spinal fusion is being considered, refer the patient to a specialist  
4 surgical service.

5 1.9.4 Due consideration should be given to possible risks of spinal  
6 fusion.

7 1.9.5 Do not refer people for intradiscal electrothermal therapy (IDET),  
8 percutaneous intradiscal radiofrequency thermocoagulation  
9 (PIRFT) or radiofrequency facet joint denervation.

## 10 **2 Notes on the scope of the guidance**

11 NICE guidelines are developed in accordance with a scope that defines what  
12 the guideline will and will not cover. The scope of this guideline is available  
13 from [www.nice.org.uk/guidance/index.jsp?action=download&o=34381](http://www.nice.org.uk/guidance/index.jsp?action=download&o=34381)

### 14 **How this guideline was developed**

15 NICE commissioned the National Collaborating Centre for Primary Care to  
16 develop this guideline. The Centre established a Guideline Development  
17 Group (see appendix A), which reviewed the evidence and developed the  
18 recommendations. An independent Guideline Review Panel oversaw the  
19 development of the guideline (see appendix B).

20 There is more information in the booklet: 'The guideline development process:  
21 an overview for stakeholders, the public and the NHS' (third edition, published  
22 April 2007), which is available from [www.nice.org.uk/guidelinesprocess](http://www.nice.org.uk/guidelinesprocess) or  
23 from NICE publications (phone 0845 003 7783 or email  
24 [publications@nice.org.uk](mailto:publications@nice.org.uk) and quote reference N1233).

## 25 **3 Implementation**

26 The Healthcare Commission assesses how well NHS organisations meet core  
27 and developmental standards set by the Department of Health in 'Standards

1 for better health' (available from [www.dh.gov.uk](http://www.dh.gov.uk)). Implementation of clinical  
2 guidelines forms part of the developmental standard D2. Core standard C5  
3 says that NHS organisations should take into account national agreed  
4 guidance when planning and delivering care.

5 NICE has developed tools to help organisations implement this guidance  
6 (listed below). These are available on our website ([www.nice.org.uk/CGXXX](http://www.nice.org.uk/CGXXX)).

7 *[NICE to amend list as needed at time of publication]*

- 8 • Slides highlighting key messages for local discussion.
- 9 • Costing tools:
  - 10 – costing report to estimate the national savings and costs associated with
  - 11 implementation
  - 12 – costing template to estimate the local costs and savings involved.
- 13 • Implementation advice on how to put the guidance into practice and
- 14 national initiatives that support this locally.
- 15 • Audit support for monitoring local practice.

## 16 **4 Research recommendations**

17 The Guideline Development Group has made the following recommendations  
18 for research, based on its review of evidence, to improve NICE guidance and  
19 patient care in the future.

### 20 **4.1 Screening protocols**

21 What is the clinical and cost effectiveness of using screening protocols to  
22 target treatments for patients with non-specific low back pain?

#### 23 **Why this is important**

24 There is much evidence from cross sectional and longitudinal studies that  
25 people with poorer physical function and in particular psychological factors  
26 such as elevated fear of activity, psychological distress and distorted  
27 cognitions about back pain are more disabled by their pain and are more likely  
28 to have a poor outcome from treatment. It is suggested by some researchers  
29 that screening to identify those who have a profile suggestive of poor outcome

1 and referring them to combined physical and psychological therapies at an  
2 early stage will improve outcome.

3 There is one randomised controlled trial (RCT) which demonstrated the value  
4 of screening in improving outcome with respect to return to work. There is no  
5 UK study to date which has demonstrated that targeting treatments based on  
6 a risk factor profile leads to improved outcome or cost effectiveness.

#### 7 **4.2 Delivery of patient education**

8 How can education be effectively delivered for people with non-specific low  
9 back pain?

##### 10 **Why is this important?**

11 Improved understanding of low back pain and its management are identified  
12 as key components of care both by patients and by healthcare professionals.  
13 These guidelines emphasise the importance of patient choice, and people can  
14 only effectively exercise choice if they have an adequate understanding of the  
15 available options. Extensive research literature addresses the education of  
16 adults using a wide variety of techniques, but studies of patient education in  
17 low back pain have focused almost exclusively on written information. Little  
18 evidence is available as to whether such materials are the most effective way  
19 to deliver educational goals. Interdisciplinary projects combining educational  
20 and healthcare research methodologies should:

- 21 • identify appropriate goals and techniques for the education of people with  
22 low back pain
- 23 • determine efficacy in achieving educational goals
- 24 • determine effects on clinical outcomes including pain.

#### 25 **4.3 Sequencing of therapies**

26 What is the effectiveness and cost effectiveness of sequential interventions  
27 (manual therapy, exercise and acupuncture) compared with single  
28 interventions on pain, functional disability and psychological distress, in  
29 people with chronic non-specific back pain of between six weeks and one  
30 year?

1 **Why is this important?**

2 There is evidence that individually manual therapy, exercise and acupuncture  
3 are cost effective management options compared to usual care for chronic  
4 non-specific low back pain. There are substantial cost implications for those  
5 who do not respond to initial therapy and receive multiple back care  
6 interventions. It is unclear whether there is added health gain for this  
7 subgroup from either multiple or sequential use of therapies. There is also a  
8 need for further research to determine the characteristics of people with back  
9 pain who respond differentially to manual therapy, exercise or acupuncture.

10 Research should:

- 11 • Test the effect of sequencing manual therapy, exercise and acupuncture in  
12 the management of chronic non-specific low back pain.
- 13 • Determine the cost effectiveness of providing more than one of these  
14 interventions to people with chronic non-specific low back pain.
- 15 • Investigate whether subgroups of people with chronic non-specific low back  
16 pain respond differently to acupuncture, exercise or manual therapy.

17 **4.4 Psychological treatments**

18 What is the effectiveness and cost effectiveness of psychological treatments  
19 for non-specific low back pain greater than six weeks?

20 **Why this is important**

21 The effectiveness and cost effectiveness of psychological treatments for non-  
22 specific low back pain is not known. Data from RCTs of people with a mixture  
23 of painful disorders, and other research, suggest that they help non-specific  
24 low back pain; but there are few robust back pain specific data.

25 Research should:

- 26 • Use RCTs to test the effect of adding psychological treatment to other  
27 treatments for non-specific low back pain.
- 28 • Test individual and/or group treatments.
- 29 • Clearly describe, and justify the psychological treatments tested; these  
30 should have a robust theoretical justification.

1 If possible the comparative effectiveness and cost effectiveness of different  
2 psychological treatments should be tested, e.g. group versus individual  
3 treatment, or treatment approaches grounded in different theoretical  
4 paradigms.

5 Outcomes of interest include: pain, disability, psychological distress, self-  
6 efficacy, coping strategies and social engagement.

## 7 **5 Other versions of this guideline**

### 8 **5.1 Full guideline**

9 The full guideline, 'Low back pain: the acute management of patients with  
10 chronic (longer than 6 weeks) non-specific low back pain' contains details of  
11 the methods and evidence used to develop the guideline. It is published by  
12 the National Collaborating Centre for Primary Care and is available from the  
13 NICE website ([www.nice.org.uk/CGXXXfullguideline](http://www.nice.org.uk/CGXXXfullguideline)) and the National Library  
14 for Health ([www.nlh.nhs.uk](http://www.nlh.nhs.uk)). **[Note: these details will apply to the  
15 published full guideline.]**

### 16 **5.2 Quick reference guide**

17 A quick reference guide for healthcare professionals is available from  
18 [www.nice.org.uk/CGXXXquickrefguide](http://www.nice.org.uk/CGXXXquickrefguide)

19 For printed copies, phone NICE publications on 0845 003 7783 or email  
20 [publications@nice.org.uk](mailto:publications@nice.org.uk) (quote reference number N1XXX). **[Note: these  
21 details will apply when the guideline is published.]**

### 22 **5.3 'Understanding NICE guidance'**

23 Information for patients and carers ('Understanding NICE guidance') is  
24 available from [www.nice.org.uk/CGXXXpublicinfo](http://www.nice.org.uk/CGXXXpublicinfo)

25 For printed copies, phone NICE publications on 0845 003 7783 or email  
26 [publications@nice.org.uk](mailto:publications@nice.org.uk) (quote reference number N1XXX). **[Note: these  
27 details will apply when the guideline is published.]**

1 We encourage NHS and voluntary sector organisations to use text from this  
2 booklet in their own information about low back pain.

## 3 **6 Related NICE guidance**

### 4 **Published**

5 Osteoarthritis: the care and management of osteoarthritis in adults. NICE  
6 clinical guideline 59 (2008). Available from [www.nice.org.uk/CG059](http://www.nice.org.uk/CG059)

7 Four commonly used methods to increase physical activity: brief interventions  
8 in primary care, exercise referral schemes, pedometers and community-based  
9 exercise programmes for walking and cycling. NICE public health guidance 2  
10 (2006). Available from [www.nice.org.uk/PH002](http://www.nice.org.uk/PH002)

### 11 **Under development**

12 NICE is developing the following guidance (details available from  
13 [www.nice.org.uk](http://www.nice.org.uk)):

- 14 • Management of long-term sickness and incapacity for work. NICE public  
15 health guidance (publication expected March 2009).

## 16 **7 Updating the guideline**

17 NICE clinical guidelines are updated as needed so that recommendations  
18 take into account important new information. We check for new evidence 2  
19 and 4 years after publication, to decide whether all or part of the guideline  
20 should be updated. If important new evidence is published at other times, we  
21 may decide to do a more rapid update of some recommendations.

1

## 2 **Appendix A: The Guideline Development Group**

### 3 **Professor Martin Underwood (Chair)**

4 Professor of Primary Care Research, Warwick Medical School, University of  
5 Warwick

### 6 **Professor Paul Watson (Clinical Advisor)**

7 Professor of Pain Management and Rehabilitation, Department of Health  
8 Sciences, University of Leicester

### 9 **Mrs Elaine Buchanan**

10 Consultant Physiotherapist, Nuffield Orthopaedic Centre, Oxford

### 11 **Dr Paul Coffey**

12 General Practitioner, Eynsham Medical Group, Witney, Oxon

### 13 **Mr Peter Dixon**

14 Chiropractor Chairman General Chiropractic Council, London

### 15 **Mrs Christine Drummond**

16 Patient representative

### 17 **Mrs Margaret Flanagan**

18 Nurse Clinician, Western Avenue Medical Centre, Chester

### 19 **Professor Charles Greenhough**

20 Consultant Spinal Surgeon, James Cook University, Middlesbrough

### 21 **Dr Mark Griffiths,**

22 Consultant Clinical Psychologist, Halton & St Helens PCT, Cheshire

### 23 **Dr Jacqueline Halliday Bell**

24 Medical Inspector, Health and Safety Executive, Birmingham

### 25 **Dr Dries Hettinga**

26 Patient representative

1 **Mr Steven Vogel**

2 Vice Principal (Research and Quality), British School of Osteopathy, London

3 **Dr David Walsh**

4 Associate Professor, Kings Mill Hospital, Sutton in Ashfield

5 ***Co-opted GDG members***

6 The following people attended meetings at which their expertise was required.

7 **Dr Michael Cummings**

8 Medical Director, British Medical Acupuncture Society

9 **Mr Ray Langford**

10 Clinical Specialist Occupational Therapist, St Helens, Knowsley Hospitals

11 NHS Teaching Trust

12 ***National Collaborating Centre for Primary Care***

13 **Gill Ritchie**

14 Guideline Lead, National Collaborating Centre for Primary Care

15 **Pauline Savigny**

16 Health Services Research Fellow, National Collaborating Centre for Primary

17 Care

18 **Nicola Brown**

19 Health Services Research Fellow, National Collaborating Centre for Primary

20 Care (from May 2007 to October 2007)

21 **Stefanie Kuntze**

22 Health Economist, National Collaborating Centre for Primary Care

23 **David Hill**

24 Project Manager, National Collaborating Centre for Primary Care

25 **Chris Rule**

26 Project Manager, National Collaborating Centre for Primary Care (from August

27 2006 to September 2007)

- 1 **Marian Cotterell**
- 2 Information Scientist, National Collaborating Centre for Primary Care

1

2 **Appendix B: The Guideline Review Panel**

3 The Guideline Review Panel is an independent panel that oversees the  
4 development of the guideline and takes responsibility for monitoring  
5 adherence to NICE guideline development processes. In particular, the panel  
6 ensures that stakeholder comments have been adequately considered and  
7 responded to. The panel includes members from the following perspectives:  
8 primary care, secondary care, lay, public health and industry.

9 [NICE to add]

10

## Appendix C: The algorithm

