Rehabilitation after a stroke

Information for the public
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About this information

NICE clinical guidelines advise the NHS on caring for people with specific conditions or diseases and the treatments they should receive. The information applies to people using the NHS in England and Wales.

This information explains the advice about rehabilitation after a stroke that is set out in NICE clinical guideline 162.

All of the treatment and care that NICE recommends is in line with the NHS Constitution (https://www.gov.uk/government/publications/the-nhs-constitution-for-england). NICE has also produced advice on improving the experience of care for adults using the NHS and their families and carers. For more information see 'About care in the NHS' on our website (www.nice.org.uk/nhscare).

Does this information apply to me?

Yes, if you are an adult or young person aged 16 years or older who has had a stroke that continues to affect you and the activities you can do.

It does not cover:

- preventing a stroke
- infants and children under 16 years who have had a stroke
people who have had a stroke that gets better completely within 24 hours, known as a TIA (transient ischaemic attack) or a 'mini stroke'.

NICE has also produced advice about early treatment after a stroke or TIA. For more information, see Other NICE guidance.

**Stroke rehabilitation**

A stroke occurs when the blood flow to part of the brain is cut off – it is a 'brain attack' (in the same way that a heart attack happens when the blood supply to the heart muscle is cut off). Without blood supply, brain cells can be damaged or destroyed because they may not receive enough oxygen or nutrients. The brain controls almost everything that the body does. This means that a stroke can affect many different body functions.

Some people will make an early recovery after a stroke, whereas others will need more help and time to recover.

After your stroke you may need help to regain your independence, by learning new skills and managing any remaining disabilities. For example, you may need to learn how to dress yourself or walk again. This process is known as rehabilitation. Rehabilitation can take place in hospital, community clinics, in your own home or in a care home.

**Your rehabilitation team**

If you need stroke rehabilitation, you should be cared for by professionals from different health and social care disciplines who are experienced in helping people after a stroke. This team should include physiotherapists, speech and language therapists, occupational therapists, clinical psychologists, social workers, nurses and doctors who specialise in stroke rehabilitation. The role of each member of the team involved in your care should be explained to you and your family or carers at each stage of your recovery.

Some treatments described may not be suitable for you depending on your exact circumstances. If you think that your treatment or care does not match this advice talk to your rehabilitation team.

**Questions to ask**
Screening and assessment after your stroke

As soon as possible after you arrive in hospital after your stroke, you should be checked for any difficulties in areas such as communication, understanding, swallowing, moving around and bladder and bowel control, so that your healthcare team can make sure you are safe and comfortable.

Based on this initial check, you should then have detailed assessments of the areas affected by your stroke. Some people have difficulty moving their arms and legs, trouble with balance and walking, or problems seeing properly, speaking or thinking clearly. You may also experience pain. During your assessment your rehabilitation team should take into account your health and lifestyle before you had your stroke, and should think about how the stroke is likely to affect your ability to cope with day-to-day activities.

Your assessment will help your team work with you to develop a rehabilitation plan (see Planning your rehabilitation).

Planning your rehabilitation

Rehabilitation should begin as soon as you are medically stable after your stroke. Your team should work with you to develop a plan for your rehabilitation that is designed around your needs.

You should be given the information and support you need to take an active part in planning your rehabilitation, and your team should review your plan regularly. Your family or carers should also be given information and support to enable them to take part in planning your rehabilitation if they want to be involved and you agree to this.

NICE has also produced advice about improving people’s experience of care in the NHS and making sure you are fully involved in decisions about your care. For more information, see Other NICE guidance.
Where can I have rehabilitation?

While you are in hospital after your stroke you should have your rehabilitation in a stroke rehabilitation unit. Once you return home, it should be provided by a specialist rehabilitation team in the community where you live.

If you are able to move from a bed to a chair on your own (or you have someone who can help you), you may be able to leave hospital soon after your assessment and have your rehabilitation at home (or in your care home). This is known as 'early supported discharge'. You should receive exactly the same level of rehabilitation and care as you would have received if you had stayed for longer in hospital.

Before you go home, your rehabilitation team should make sure your home is safe for you (see Preparing to leave hospital).

Setting goals

Your rehabilitation plan should include goals (things you would like to achieve) as part of your recovery. Your team should encourage you to think about the areas you would like to work on and the goals you would like to aim for. You should think about both short-term goals, for example, learning to dress yourself again, and longer term goals, for example, going shopping, playing a sport or returning to work.

Your team should discuss your goals with you and make sure you have the information and support you need (in a format you can understand) to decide on your goals yourself.

Your goals should be reviewed with you regularly. You should have appointments scheduled to discuss your goals, and your family or carers should also be involved if they want to be and you agree. You should be given a copy of your agreed goals after each meeting.

How much rehabilitation should I be offered?

When you start rehabilitation you should be offered at least 45 minutes of each type of rehabilitation that you need (for example, physiotherapy, speech therapy and so on) on at least 5 days a week. You may be offered more if you are managing well with it.

If you find this amount of therapy too much, you should still be offered some therapy 5 days a week, but at a level that you can manage.
If you need more rehabilitation at a later stage, the timing should be tailored to your needs.

Questions to ask

- How often can I have each kind of rehabilitation therapy that is right for me?
- If I have difficulty swallowing, how much therapy should I be offered?
- When will I be ready to go home?
- How do I decide on realistic goals for my recovery?
- How long will it take for me to achieve my goals?

Information and support

Throughout your rehabilitation you will need information and support, and your needs will change over time depending on your stage of recovery.

Your rehabilitation team should provide the information you and your family or carers need at each stage of your rehabilitation, taking into account any specific difficulties you are having, such as with your speech or understanding things. They should give you information at a pace that you are comfortable with as you adjust emotionally to your stroke.

Your team should check that you have all the information you need whenever you are starting or finishing a course of therapy. If at any time during your therapy you are having difficulties such as increased fatigue, low mood or falls, you should let your therapist know.

Support for families and carers

Your family or carers may also need support after your stroke. They are entitled to have a carer’s needs assessment and should be given advice about where to find further help.

You should have follow-up appointments 6 months and 1 year after your stroke (and once a year after that), and your team should ask you at these appointments whether you have enough information and support.
You should also be given information about local resources (such as leisure activities, voluntary support groups and housing information) near your home that could help you and your family or carers.

The guidance NICE has produced about improving people's experience of care in the NHS gives more advice on how and when information should be provided, and on making sure that you understand the information and are able to use it to make your own decisions. For more information, see Other NICE guidance.

**Questions to ask**

- Are there any support organisations in my local area?
- Can you provide any information for my family or carers?
- What kind of support is available for my family or carers?

**Memory and concentration**

A stroke can affect your memory and ability to concentrate (referred to as 'cognitive functions'). Difficulties with these skills can vary over time after a stroke and you may find they are more obvious in some situations than others. Your rehabilitation team should find out whether cognitive difficulties are affecting your daily activities and should give you and your family or carers support and information about this.

They may suggest using key words, rhymes, lists or a diary and routines to help you remember things, or keeping distractions to a minimum to help you concentrate. You may also be offered exercises to practise to improve your attention and concentration.

**Language and communication**

Your team should check your language and communication abilities within 72 hours of your stroke. After this, if they suspect that you are having any difficulties with speaking, understanding speech, finding the right words to use, or reading and writing (known as ‘aphasia’), you should be referred to a speech and language therapist who specialises in stroke.
Speech and language therapy

Speech and language therapy should focus on improving your language and communication skills and working on specific problems. Your speech and language therapist should help you adapt to the changes in your communication abilities after your stroke and if necessary teach you other ways of communicating – for example, by using gestures, writing or props.

You may be offered the use of communication aids, which can include simple charts, electronic aids and other equipment such as computer programs and smartphone applications. If you are offered a communication aid you should be offered training to help you use it.

Help and support

Your speech and language therapist should offer training to the people around you, including your family, carers, friends and the staff working with you. They should teach them to speak simply and clearly, avoid interrupting you and use gestures or drawing to communicate with you effectively.

You should be offered opportunities to talk with people who have experience and skills in communication, such as trained volunteers or speech and language therapy assistants. This should be in addition to any opportunities you already have to talk – for example, with your family, carers or friends.

If you are finding reading difficult, your team should make sure that any written information you need to look at (for example, appointment letters) is adapted for you. The team should make sure that you are able to work on your communication skills in a quiet environment with background noise kept to a minimum.

You should be supported in making your wishes and needs known, and your rehabilitation team should make sure you have all the information you need to make decisions. You should be given information about local support groups that specialise in helping people with communication difficulties after a stroke (see Sources of advice and support) and your team should encourage you to attend these groups.

Your emotions

A stroke can affect your emotions, and your ability to take part in rehabilitation. A member of your rehabilitation team (this may be a clinical psychologist) should explain that emotional problems are
very common after a stroke and that your feelings may change over time. They should assess your mood and should support you and your family or carers. You may be offered some therapy to help.

NICE has produced advice on treating depression in adults with a long-term physical health problem, and about treating people with anxiety (see Other NICE guidance for details).

**Vision (sight)**

Your rehabilitation team should assess your vision after your stroke.

If you are having double vision that doesn't go away, you should be referred for assessment by an eye specialist (called an orthoptist). If you have some loss of vision at either side of your body (called hemianopia) and this does not improve you may be offered eye movement therapy, which involves learning to look to the left or the right.

If your stroke has affected your vision and you hope to start driving again, your team can help you find more information from the Driver and Vehicle Licensing Agency (DVLA); you can find out more at www.dft.gov.uk/dvla/medical/New_process_for_applications.aspx.

**Visual neglect**

Your rehabilitation team should also find out whether you have 'visual neglect’. This means a lack of visual awareness of one side, so you may not be aware of people or objects on the side where you had the stroke. Your team should explore how these changes are affecting you, for example, in moving around, getting dressed, eating or using a wheelchair.

To help with visual neglect, your team may suggest doing tasks, such as getting dressed, in a particular way. Some people may benefit from wearing 'prism glasses’, which help your brain focus on one side of the body, while doing exercises.

**Swallowing and eating**

People often have difficulty swallowing (known as 'dysphagia’) after a stroke. If your assessment shows that you have difficulty swallowing, you should be offered swallowing therapy at least 3 times a week by your speech and language therapist. This could include tips and exercises to improve your swallowing, such as taking small bites of food, alternating food with liquid, and adjusting your posture.
During your swallowing therapy, your rehabilitation team should take care of your mouth, teeth and gums to keep them clean. This reduces the risk of pneumonia.

If you cannot eat or drink normally you may need to be fed through a tube. If so, healthcare professionals with special training in working with people with swallowing difficulties should carry out regular checks to make sure your diet is safe and appropriate. There is more information about this in advice NICE has produced about nutrition support and early treatment for stroke (see Other NICE guidance).

**Strength, balance and movement**

If you have muscle weakness or difficulties with your balance that affect your movement you should be offered physiotherapy, which focuses on restoring movement and strength using exercise and other therapies. You should be treated by a physiotherapist who is specially trained in helping people after a stroke. You should carry on having physiotherapy until you are ready to make progress on your own or with help from a carer, fitness instructor or rehabilitation assistant.

**Weakness**

Difficulty moving your arms and legs is common after a stroke. Some people who have weakness in their hand or arm may be offered a hand splint to support the joint position and maintain the range of movement. This is not suitable for everyone. If your physiotherapist thinks it may help you, you and your family or carers should be taught how to use the splint and look after it. They should tell you about possible problems, such as skin irritation, to look out for. Assessment for and fitting of hand splints should only be carried out by a suitably trained healthcare professional.

If you have problems moving one of your arms, you should also be offered ‘repetitive task training’, which involves repeatedly practising tasks such as reaching for an object or pointing. You may also be offered a therapy called constraint-induced movement therapy, which involves wearing a sling to prevent movement in your unaffected arm, while doing exercises or repetitive tasks to improve movement in your affected arm. If you experience any problems, such as fatigue, low mood or falling, after starting this therapy, you should let your therapist know. Another form of therapy, called electrical stimulation, uses small electrical impulses to stimulate the nerves to improve movement. This is not suitable for everyone. Your physiotherapist can give you more information if you want to find out more.
If your muscles are weak you may be offered exercises to build up your strength. These exercises could include using weights, going on an exercise bike, or gradually building up repetitions of certain movements (such as standing up from a sitting position).

**Walking training**

If you are able to do some walking (either with help or by yourself), you should be offered walking training to help you build up your stamina and speed. This may involve walking on a treadmill.

If you are having trouble lifting your feet and toes properly (known as 'drop foot') or your ankle is unstable, your physiotherapist may suggest you wear a splint to support your foot and ankle (called an 'orthosis'). Your physiotherapist should check that you are able to put on the orthosis yourself or have someone to help you, and that the orthosis is comfortable and makes walking easier and faster.

You should only have assessment and treatment with an ankle–foot orthosis as part of a stroke rehabilitation programme and it should be carried out by a trained healthcare professional.

NICE has also produced guidance on a treatment called 'functional electrical stimulation' for people who have drop foot caused by damage or disease in the brain or spinal cord (see Other NICE guidance).

### Questions to ask

- How much physiotherapy will I be able to have?
- Can you explain whether I might benefit from electrical stimulation therapy?
- How can you help me to walk again as quickly as possible?
- If I practise exercises regularly will it help me to regain my strength and independence more quickly?
- What happens if I get very tired or have other problems during my therapy?
Shoulder pain

Shoulder pain is fairly common after a stroke, and some people are more at risk of developing it than others. Your rehabilitation team should give you advice on how to prevent it. If you do develop shoulder pain, your team should be able to offer advice on treatments to help you.

NICE has also produced advice about using drug treatments to manage neuropathic pain (a type of pain caused by damage or changes to nerves), which is common after a stroke (see Other NICE guidance).

Physical activity after a stroke

Physical activity can help your recovery and is also good for your overall health. Your rehabilitation team should encourage you to become physically active as soon as you can after your stroke. You should be assessed to see whether you are ready to start an exercise programme, and if so your physiotherapist should work with you to design a programme that helps towards meeting your rehabilitation goals.

After you have finished physiotherapy you should still be able to carry on with an exercise programme independently, and your therapist should help you to arrange this safely. The therapist should also tell you about possible problems to watch out for, such as shoulder pain (see Shoulder pain), and advise you to seek medical advice if these occur.

Questions to ask

- Is it safe for me to exercise on my own?
- What happens if I have pain or problems when I exercise?
- When can I take up the sports that I used to do before my stroke?

Self-care

Occupational therapy helps you to do the activities you want or need to do in everyday life, as independently as possible. You should be offered assessment and treatment by an occupational therapist after your stroke. Occupational therapy should be provided for you regularly until you are able to make progress on your own.
Occupational therapy may include:

- strategies to help you get yourself dressed
- encouraging you to use both arms if you have weakness in one arm
- teaching you how to use bathing and dressing aids.

Your occupational therapist should find out whether you need any equipment, such as a wheelchair, chair raisers or smaller items such as a long-handled sponge. You and your family or carers should be trained to use any equipment you need. This equipment should be available for you to use whether you are returning to your own home or to a care home.

Preparing to leave hospital

You should be involved in planning the care and support you will need when you return home after your stroke. Your family or carers should also be involved if they want to be and you agree. You should receive the same level of rehabilitation and care whether you are returning to your own home or to a care home.

The health and social care professionals involved in your care should work closely together to make sure you have all the support you need. They should agree with you and your family or carers (as appropriate) a plan for your continuing care and rehabilitation needs. This is called a 'health and social care plan' and it should outline all your needs and the needs of your carers. It should include social care needs, such as claiming benefits, housing issues and care arrangements. A copy of this plan should be given to you and all the professionals involved in your care.

Training and support for families and carers

If family members or carers will be supporting you at home, they should be offered training, for example, in helping you to get dressed and move around. Your rehabilitation team should check regularly (including at your 6-month and annual stroke reviews) whether they need any further training or support as you continue to recover.

Your support and safety at home

Before you leave hospital, your rehabilitation team should make sure that your home is a safe and suitable place for you, taking into account any disabilities you have at the time you are going home.
They may need to visit your home with you before you leave hospital to identify any support you might need. They should also make sure that any special equipment you need (such as special seats or a wheelchair) is delivered to your home in time for your arrival.

If you have been prescribed medicines while in hospital your team should make sure you know how to take them once you get home. NICE has produced advice about supporting and involving people in taking prescribed medicines (see Other NICE guidance).

Questions to ask

- I live on my own – can you help me arrange some support?
- How can I manage to get round the house on my own?
- What should I do if I don't understand or forget how to take my medicines?
- What help do my family or carers need to support me at home?

Going home

When you leave hospital, you and your GP and community team should receive a discharge summary from the hospital that will provide all the information your local team needs to continue supporting you. This should include:

- the progress you have made in your rehabilitation and your current goals
- medical information about your stroke and general health
- any difficulties you have had after your stroke, for example with memory or communication skills, or your emotions
- your care needs, for example, if you need help with eating or going to the toilet
- whether you have family or carers at home and the support that they will need to help you
- all the medicines you are taking (and any allergies you have) and whether you need support to take them correctly
- plans for your continued rehabilitation and care and your follow-up appointments.
Once you have returned home or to your care home, your local community stroke team should visit you within 72 hours to assess you and help you to plan your continuing rehabilitation.

You should be given the phone number of a named contact to call if you have any difficulties.

**Life after a stroke**

Your rehabilitation team should encourage you to think about getting back to normal life and about achieving your goals. This can include planning things you would like to do, such as returning to sports or activities you enjoy, shopping, exercising or attending stroke support groups, as well as returning to work and driving. If you want to drive again, you should be given more information about telling the DVLA about your condition; visit [https://www.gov.uk/browse/driving/disability-health-condition](https://www.gov.uk/browse/driving/disability-health-condition).

Your team should also support you in thinking about how your personal relationships might have been affected by your stroke, including your friendships, family relationships and sexual relationships.

You should also be given some information about problems that can affect people after stroke, for example, shoulder pain, frequent falls or difficulty with bladder or bowel control. Your team should tell you what to do if any of these develop.

NICE has produced advice about helping to prevent falls and also about treating and managing continence problems (see [Other NICE guidance](#)).

**Returning to work**

If you plan to return to work after your stroke, your rehabilitation team can help. Any issues to do with helping you return to work should be identified as soon as possible after your stroke and reviewed regularly.

Your team can talk to your employer about equipment you might need, or help arrange a phased return to work. They can also help you prepare yourself for working again, for example, by teaching you strategies for remembering things, helping you to deal with any anxiety you may feel, and identifying the aspects of your job that you might find difficult after your stroke.

NICE has also produced advice about long-term sickness absence and returning to work (see [Other NICE guidance](#)).
Questions to ask

- I am keen to get back to work – how will I know when I am ready?
- Will I be able to drive again after my stroke?
- Will I be able to have sex again?
- How can I help to prevent another stroke?

Support and follow-up

After your rehabilitation is complete you can still get more support if you need it. You should be given details of a professional to contact, or you can contact your GP. They can refer you back to the rehabilitation team for advice and treatment if necessary.

You should have follow-up appointments 6 months and 1 year after your stroke, and then once a year. At these appointments, your healthcare professional should ask how you are managing and whether you are still making progress towards your goals.

If you are still having difficulties with language or communicating you should be referred back to a speech and language therapist for an assessment of whether more treatment could help you. You should also be offered assessment and treatment if you are struggling with your emotions and feeling low.

NICE has also produced advice about preventing further strokes in people who have had a stroke (see Other NICE guidance).

Sources of advice and support

- Connect, 020 7367 0840
  www.ukconnect.org
- Different Strokes, 01908 317 618; 0845 130 7172
  www.differentstrokes.co.uk
- Fighting strokes, 0114 236 9222
  www.fightingstrokes.org
You can also go to NHS Choices (www.nhs.uk) for more information.

NICE is not responsible for the quality or accuracy of any information or advice provided by these organisations.

Other NICE guidance


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