NICE National Institute for Health and Care Excellence

NICE Pathways

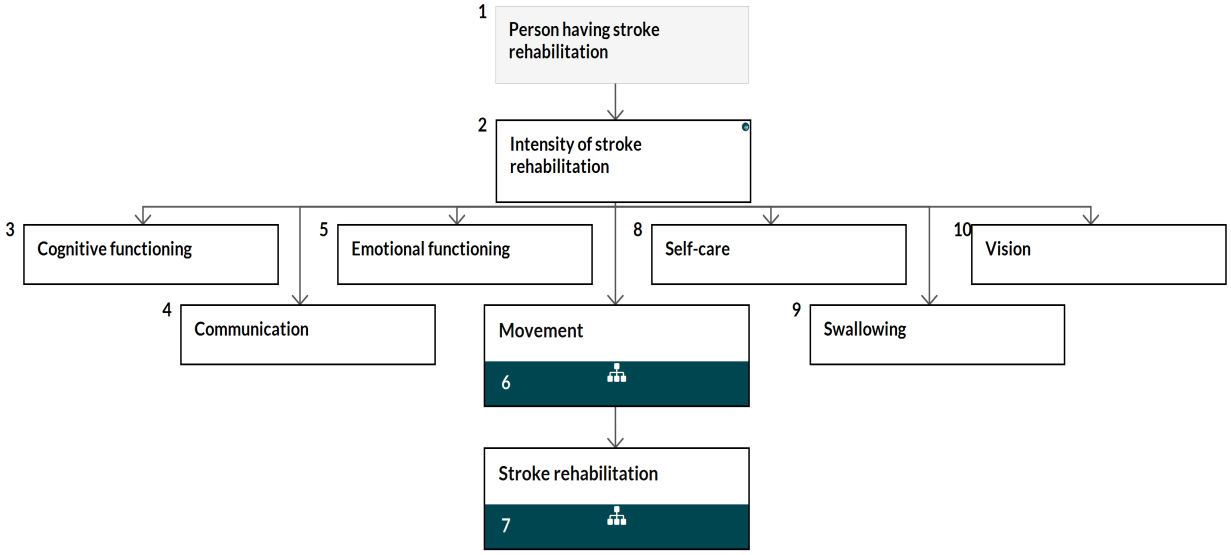
# Stroke rehabilitation: therapy

NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

http://pathways.nice.org.uk/pathways/stroke
NICE Pathway last updated: 29 November 2021

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



## 1 Person having stroke rehabilitation

No additional information

## 2 Intensity of stroke rehabilitation

Offer initially at least 45 minutes of each relevant stroke rehabilitation therapy for a minimum of 5 days per week to people who have the ability to participate, and where functional goals can be achieved. If more rehabilitation is needed at a later stage, tailor the intensity to the person's needs at that time. For intensity of therapy for dysphagia, see swallowing [See page 8].

Consider more than 45 minutes of each relevant stroke rehabilitation therapy 5 days per week for people who have the ability to participate and continue to make functional gains, and where functional goals can be achieved.

If people with stroke are unable to participate in 45 minutes of therapy, ensure that therapy is still offered 5 days per week for a shorter time at an intensity that allows them to actively participate.

### Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

2. Intensity of stroke rehabilitation

## 3 Cognitive functioning

Screen people after stroke for cognitive deficits. Where a cognitive deficit is identified, carry out a detailed assessment using valid, reliable and responsive tools before designing a treatment programme.

Provide education and support for people with stroke and their families and carers to help them understand the extent and impact of cognitive deficits after stroke, recognising that these may vary over time and in different settings.

### Memory

Assess memory and other relevant domains of cognitive functioning (such as executive functions) in people after stroke, particularly where impairments in memory affect everyday activity.

Use interventions for memory and cognitive functions after stroke that focus on the relevant functional tasks, taking into account the underlying impairment. Interventions could include:

- increasing awareness of the memory deficit
- enhancing learning using errorless learning and elaborative techniques (making associations, use of mnemonics, internal strategies related to encoding information such as 'preview, question, read, state, test')
- external aids (for example, diaries, lists, calendars and alarms)
- environmental strategies (routines and environmental prompts).

### Attention

Assess attention and cognitive functions in people after stroke using standardised assessments. Use behavioural observation to evaluate the impact of the impairment on functional tasks.

Consider attention training for people with attention deficits after stroke.

Use interventions for attention and cognitive functions after stroke that focus on the relevant functional tasks. For example, use generic techniques such as managing the environment and providing prompts relevant to the functional task.

### Visual neglect

Assess the effect of visual neglect after stroke on functional tasks such as mobility, dressing, eating and using a wheelchair, using standardised assessments and behavioural observation.

Use interventions for visual neglect after stroke that focus on the relevant functional tasks, taking into account the underlying impairment. For example:

- interventions to help people scan to the neglected side, such as brightly coloured lines or highlighter on the edge of the page
- alerting techniques such as auditory cues
- repetitive task performance such as dressing
- altering the perceptual input using prism glasses.

## 4 Communication

### Screening and referral

Screen people after stroke for communication difficulties within 72 hours of onset of stroke symptoms.

Each stroke rehabilitation service should devise a standardised protocol for screening for communication difficulties in people after stroke.

Refer people with suspected communication difficulties after stroke to a speech and language therapist for detailed analysis of speech and language impairments and assessment of their impact.

### Speech and language therapy

Speech and language therapy for people with stroke should be led and supervised by a specialist speech and language therapist working collaboratively with other appropriately trained people – for example, speech and language therapy assistants, carers and friends, and members of the voluntary sector.

Speech and language therapists should:

- provide direct impairment-based therapy for communication impairments (for example, aphasia or dysarthria)
- help the person with stroke to use and enhance their remaining language and communication abilities
- teach other methods of communicating, such as gestures, writing and using communication props
- coach people around the person with stroke (including family members, carers and health and social care staff) to develop supportive communication skills to maximise the person's communication potential
- help the person with aphasia or dysarthria and their family or carer to adjust to a communication impairment
- support the person with communication difficulties to rebuild their identity
- support the person to access information that enables decision-making.

When persisting communication difficulties are identified at the person's 6-month or annual stroke reviews, refer them back to a speech and language therapist for detailed assessment,

and offer treatment if there is potential for functional improvement.

### Communication aids

Speech and language therapists should assess people with limited functional communication after stroke for their potential to benefit from using a communication aid or other technologies (for example, home-based computer therapies or smartphone applications).

Provide communication aids for those people after stroke who have the potential to benefit, and offer training in how to use them.

### Support for people with communication difficulties

Provide opportunities for people with communication difficulties after stroke to have conversation and social enrichment with people who have the training, knowledge, skills and behaviours to support communication. This should be in addition to the opportunities provided by families, carers and friends.

Tell the person with communication difficulties after stroke about community-based communication and support groups (such as those provided by the voluntary sector) and encourage them to participate.

Help and enable people with communication difficulties after stroke to communicate their everyday needs and wishes, and support them to understand and participate in both everyday and major life decisions.

Ensure that environmental barriers to communication are minimised for people after stroke. For example, make sure signage is clear and background noise is minimised.

Make sure that all written information (including that relating to medical conditions and treatment) is adapted for people with aphasia after stroke. This should include, for example, appointment letters, rehabilitation timetables and menus.

Offer training in communication skills (such as slowing down, not interrupting, using communication props, gestures, drawing) to the conversation partners of people with aphasia after stroke.

## 5 Emotional functioning

Assess emotional functioning in the context of cognitive difficulties in people after stroke. Any intervention chosen should take into consideration the type or complexity of the person's neuropsychological presentation and relevant personal history.

Support and educate people after stroke and their families and carers, in relation to emotional adjustment to stroke, recognising that psychological needs may change over time and in different settings.

When new or persisting emotional difficulties are identified at the person's 6-month or annual stroke reviews, refer them to appropriate services for detailed assessment and treatment.

Manage depression or anxiety in people after stroke who have no cognitive impairment in line with the NICE Pathways on care for adults with depression (which includes recommendations for people with a chronic physical health problem) and generalised anxiety disorder.

## 6 Movement

See Stroke / Managing movement difficulties after a stroke

## 7 Stroke rehabilitation

See Stroke / Stroke rehabilitation

## 8 Self-care

Provide occupational therapy for people after stroke who are likely to benefit, to address difficulties with personal activities of daily living. Therapy may consist of restorative or compensatory strategies.

- Restorative strategies may include:
  - encouraging people with neglect to attend to the neglected side
  - encouraging people with arm weakness to incorporate both arms
  - establishing a dressing routine for people with difficulties such as poor concentration, neglect or dyspraxia which make dressing problematic.

- Compensatory strategies may include:
  - teaching people to dress one-handed
  - teaching people to use devices such as bathing and dressing aids.

People who have difficulties in activities of daily living after stroke should have regular monitoring and treatment by occupational therapists with core skills and training in the analysis and management of activities of daily living. Treatment should continue until the person is stable or able to progress independently.

Assess people after stroke for their equipment needs and whether their family or carers need training to use the equipment. This assessment should be carried out by an appropriately qualified professional. Equipment may include hoists, chair raisers and small aids such as long-handled sponges.

Ensure that appropriate equipment is provided and available for use by people after stroke when they are transferred from hospital, whatever the setting (including care homes).

## 9 Swallowing

Assess swallowing in people after stroke in line with recommendations on assessing swallowing function and oral nutrition.

Offer swallowing therapy at least 3 times a week to people with dysphagia after stroke who are able to participate, for as long as they continue to make functional gains. Swallowing therapy could include compensatory strategies, exercises and postural advice.

Ensure that effective mouth care is given to people with difficulty swallowing after stroke, in order to decrease the risk of aspiration pneumonia.

Healthcare professionals with relevant skills and training in the diagnosis, assessment and management of swallowing disorders should regularly monitor and reassess people with dysphagia after stroke who are having modified food and liquid until they are stable.

Provide nutrition support to people with dysphagia in line with the recommendations on assessing swallowing function and oral nutrition, and the NICE Pathway on nutrition support in adults.

### Interventional procedures

NICE has published guidance on the following procedures with **special arrangements** for clinical governance, consent and audit or research:

- endoscopic carbon dioxide laser cricopharyngeal myotomy for relief of oropharyngeal dysphagia
- transcutaneous neuromuscular electrical stimulation for oropharyngeal dysphagia in adults (see guidance for details).

### Medtech innovation briefings

NICE has published a medtech innovation briefing on IQoro for stroke-related dysphagia.

## 10 Vision

Screen people after stroke for visual difficulties.

Refer people with persisting double vision after stroke for formal orthoptic assessment.

Offer eye movement therapy to people who have persisting hemianopia after stroke and who are aware of the condition.

When advising people with visual problems after stroke about driving, consult the Driver and Vehicle Licensing Agency (DVLA) regulations.

For visual neglect, see cognitive functioning [See page 3].

## Glossary

**aphasia**

(loss or impairment of the ability to use and comprehend language, usually resulting from brain damage)

**dysarthria**

(difficulty in articulating words)

**dysphagia**

(difficulty in swallowing)

**dyspraxia**

(difficulty in planning and executing movement)

**Hemianopia**

(blindness in one half of the visual field of one or both eyes)

**neglect**

(an inability to orient towards and attend to stimuli, including body parts, on the side of the body affected by the stroke)

**screening**

(a process of identifying people with particular impairments; people can then be offered information, further assessment and appropriate treatment, screening may be performed as a precursor to more detailed assessment)

**Stroke rehabilitation service**

(a stroke service designed to deliver stroke rehabilitation either in hospital or in the community)

## Sources

Stroke rehabilitation in adults (2013) NICE guideline CG162

Nutrition support for adults: oral nutrition support, enteral tube feeding and parenteral nutrition (2006 updated 2017) NICE guideline CG32

## Your responsibility

### Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

### Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the

individual needs, preferences and values of their patients. The application of the recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

**Medical technologies guidance, diagnostics guidance and interventional procedures guidance**

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.