

# Patient information

## Loss of sensation in limbs

It is estimated that up to 80% (8 out of every 10) of patients have loss of or changes in sensation after a stroke<sup>1</sup>. This is known as 'sensory impairment', which can be a problem as it can lead to:

- **Concerns about the safety of the affected limb.** For example:
  - not being aware of its position, unintentionally risking damage
  - being unable to feel hot or cold, resulting in scalding or cold-burning of the affected limb
  - accidentally bumping into things or bruising the affected limb, etc
- **The inability to use the affected limb normally.** For example:
  - Inability to keep a firm grip
  - Difficulty in manipulating a hand held object such as a toothbrush
  - Difficulty recognising a familiar object in the hand without looking at it (stereognosis)
  - Difficulty standing with the feet in the right position
- **Difficulty in re-learning movement skills:**

Our brains are wired so that sensation and movement are inter-linked, such that if one becomes affected, the other also is likely to become impaired. During rehabilitation, re-gaining movement of a weak arm or leg can be more difficult if a patient is unable to feel the floor beneath their feet, feel an object in their hand or is unsure of the position of a limb.

### Safety and sensation rehabilitation for your affected limb

#### Things you can do to make sure you are safe<sup>2,3</sup>:

- Make sure you regularly check the position of your affected limb. Use your unaffected hand to reposition your affected arm/leg. Your physiotherapist or occupational therapist will advise you on this.
- If your arm is affected, always make sure it is supported e.g. on a pillow/arm of the chair as this reduces the risk of damage.
- Make sure you check the temperature of water/objects with your unaffected hand first to prevent scalding or burning.
- Change positions frequently to prevent pressure areas developing, reduce pain and prevent stiffness in your joints.
- Observe the skin for swelling, redness and warmth.
- Should you notice any worrying changes to your affected limb, contact your GP.

#### Things relatives/carers can do to help<sup>2,3,4</sup>:

- Check the position of their affected limb and remind the patient to check themselves.
- Assist them to thoroughly wash and dry their affected limb, particularly their hand and arm.
- Regularly move and stretch their hand/fingers and elbow if the upper limb is affected or their hip, knee and ankle if their lower limb is affected – the physiotherapist or occupational therapist can advise on this.
- Help them to be aware of situations which may put them at risk for example near hot objects in the kitchen.
- Encourage the person to check the temperature of water using the unaffected hand first.
- Help to complete sensory re-education exercises

## Sensory re-education exercises<sup>4</sup>:

- Try to differentiate between textures (i.e. cotton, sandpaper, satin, velcro, rubber, velvet, wool, etc).
- Hide objects such as marbles, coins, etc. in a bowl of rice/dry beans/sand. Without looking, try to find the objects with your hand. Alternatively, have someone place different objects in your hand and try to identify them without looking.
- Close eyes. Have someone else place a lighter object on your hand then a heavier object. Try to determine which object was heavier or lighter.
- Have another person touch you on one spot with your eyes open, then with your eyes closed. Try to associate where you saw the object touch your skin to how it felt on your skin.
- Have another person keep pressure still on your skin then move it around. Watch and pay attention how it feels. Close eyes and try to identify when the pressure is still versus when it is moving.
- Fill a flexible paper cup half full with water. Attempt to grasp and move the cup without spilling the water or smashing the cup. Use your vision to determine how much pressure you are putting on the cup (i.e. if cup is slipping out of hand, apply more pressure; if cup is squeezed to hard, lessen grip).
- Have another person apply cold and or warmth to your skin and see if you can detect temperature differences.
- Fill 4 flexible cups with water, all different temperatures. Try to order the cups from hot to cold.

## Further information:

If you have any questions related to this information leaflet, please get in touch with a member of the stroke rehabilitation team Tel: 0300 131 4500. If you have been discharged from the stroke rehabilitation teams you should speak to your GP.

## Sources of information

[1] Doyle S, Bennett S, Fasoli SE, McKenna KT (2010) Interventions for sensory impairment in the upper limb after stroke. Cochrane Database of Systematic Reviews (6): CD006331.

[2] <http://www.stroke-rehab.com/sensory-re-education.html>

[3] College of Occupational Therapists Specialist Section - Neurological Practice (2008) Care of the affected arm following stroke in adults. College of Occupational Therapist

[4] Stroke4Carers (2014) Sensation Summary. <http://www.stroke4carers.org/?tag=sensation>

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## Important information

This patient information is for guidance purposes only and is not provided to replace professional clinical advice from a qualified practitioner.

## Your comments

We are always interested to hear your views about our leaflets. If you have any comments, please contact the Patient Experience Team – Tel: 0300 131 4731 or by email at: [esh-tr.patientexperience@nhs.net](mailto:esh-tr.patientexperience@nhs.net)

## Hand hygiene

The trust is committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

## Other formats

If you require any of the Trust leaflets in alternative formats, such as large print or alternative languages, please contact the Equality and Human Rights Department.

**Tel: 0300 131 4500 - Email: [esh-tr.AccessibleInformation@nhs.net](mailto:esh-tr.AccessibleInformation@nhs.net)**

After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

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## Reference

The following clinicians have been consulted and agreed this patient information – Acute Stroke Therapy Leads

Next review date: June 2022  
Responsible Clinicians: Acute Stroke Therapy Leads

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