

Nerve repair in the hand and arm

This leaflet offers more information about peripheral nerve repair in your hand and arm. If you have any further questions or concerns, please speak to the staff member in charge of your care.

What is a peripheral nerve?

Peripheral nerves in the hand and arm are like two-way electrical circuits carrying information up and down between our brain and the hand.

Messages travel **from** the hand **to** the brain which allow us to feel touch or other sensations, e.g. heat and cold (sensory function).

Messages travel **from** the brain **to** the hand to make our muscles contract and our hand or fingers move (motor function).

There are three main nerves which go to your hand and arm: the median, ulnar and radial nerves.

You have had the _____ nerve repaired.

How long does a nerve take to recover?

After a damaged nerve is repaired by surgery, it takes time for it to carry signals again.

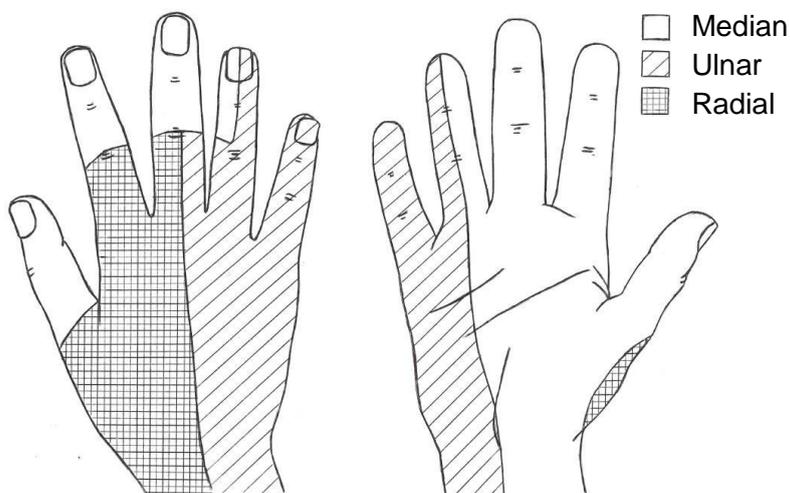
In the first three months after surgery it is normal to feel numb where the nerve was damaged and have less movement in your hand. After three months feeling and movement will slowly start to come back. This can take between two and five years to improve and may never recover completely.

What will happen while the nerve is recovering?

You may have tingling or pins and needles, or a burning feeling in the affected parts of your hand as feeling starts to come back.

You may also have some loss of movement as some of your muscles won't work immediately after surgery and when they do start to work again they may be weak.

You may notice some areas of muscle wasting (atrophy) in your hand and your hand may also rest in a certain position because of changes to your muscles.



The exact muscles where you may have problems will depend on which nerve has been repaired and what part of the forearm the nerve was repaired in.

The following table shows the possible effect on your movements of damage to each nerve:

Nerve repaired	Movements lost	Hand posture/ muscle wasting	Problems caused
Median	Moving the thumb forwards into an 'L' shape. Making an 'O' shape with the fingers.	Flattening of the small hand muscles in the palm, particularly the pad at the bottom of the thumb.	Gripping objects, especially tightly.
Ulnar	Spreading the fingers apart and bringing them back together. Straightening the little and ring fingers.	Clawing of the little and ring fingers. Wasting of the muscles between the bones in the hand.	Decrease in the strength of your grip.
Radial	Lifting up the wrist, fingers and thumb.	Posture known as a dropped wrist. Wasting of the muscles on the back of the forearm.	Releasing objects from grasp, typing.

Is there anything I can do to help myself?

Splint

A thermoplastic splint (supporting device) will be made for you to wear to protect the repaired nerve. It is important that you wear your splint **at all times** for four weeks after your operation. Do not get your splint wet or hot. Do not try and alter the splint in any way or take it off for any reason, including sleeping and bathing. If your splint is uncomfortable or is rubbing on your skin, let your therapist know so it can be adjusted. You may need other splints later on to help with your grip, strength and movement. Your therapist will discuss this with you if needed.

Wound

To aid your recovery, your wound will be covered with minimal or no dressings. It is important to follow the instructions provided by your nurse. Your dressings must not get wet so take care that they avoid water when washing and showering. Some sutures dissolve and some need to be removed; your nurse will inform you on the type you have and where to have them removed if needed. If you have any concerns about your wound contact the Hand Unit.

Exercises

It is important that you **do not take off your splint to move or use your hand and wrist** until your therapist tells you that it is safe to do so. Your therapist will then go through exercises that will help you and which are safe for you to do.

Sensory re-training

While you have no sensation straight after your operation, some simple retraining exercises to help maintain the connection between your hand and your brain can help stop you forgetting what your hand should feel like.

Some examples are:

- Look at different objects and textures and imagine what they should feel like on your skin.
- Ask someone to touch an area of your hand that you cannot feel at the same time as the same area on your other hand. Notice how it feels and how it should feel on your injured hand.

Exercises which you do while you have no feeling in your hand are known as the first phase of your sensory re-training. Phase two re-training will usually commence when you start to get some return of sensation in your hand; your therapist will go through this with you when appropriate.

Contact us

If you have any questions regarding the information provided in this leaflet, please feel free to discuss them with your therapist at your next appointment.

For more urgent queries the team can be contacted on the **treatment enquiries** phone number listed below.

Your therapist's name is _____

Treatment enquiries: 020 8725 1038 (answer phone only)

Appointments: 020 8725 0007

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.stgeorges.nhs.uk

Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).

Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.

Web: www.nhs.uk

NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones.

Tel: 111

AccessAble

You can download accessibility guides for all of our services by searching 'St George's Hospital' on the AccessAble website (www.accessable.co.uk). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.



Reference: THE_PNI_03 **Published:** September 2021 **Review date:** September 2023