

Hand trauma

Nerve repair

Information for patients, relatives and carers

What is a nerve?

A nerve is a long and thin structure which looks a bit like a piece of string. You can think of nerves as like electricity cables of the body carrying information to and from the brain. Nerves help us feel things (sensation) and tell our muscles to move (motor function). In the hand, particularly the fingers, nerves mostly allow us to feel things (sensation).

Nerve injury

Usually, nerves are injured through cuts or being crushed. When a nerve is crushed, if it is bruised but not cut, there may be some loss of feeling (numbness) in the area affected, however it will usually recover over several weeks without surgery. When a nerve has been cut, you will lose feeling in that area and you will need an operation to attach the two cut ends back together.

Nerve repair

Nerve repair usually involves opening the wound to find the two ends of the nerve. The nerve endings are then stitched together under a microscope using very small stitches. The wound edges may need to be cut to make the wound longer to allow us to find the nerve ends.

Once the nerve has been stitched together it will need to regrow its connections to the areas it allows us to feel, rather than the nerve being repaired and automatically connected to these areas. After repair your hand will gradually regain feeling, this happens slowly, so getting feeling back in your hand can take several months. However, in some cases the sensation may not return.

How soon will my surgery be?

We aim to do your nerve repair surgery within four days, although it is safe to do your nerve repair surgery up to two weeks after your injury happens.

Nerve repair surgery is an urgent surgery, which means we can book your surgery in quickly. This also means that the time or day of your surgery might be changed at short notice if there is another patient that more urgently needs emergency surgery.

Will I need to be asleep for the surgery?

Whether you need to be asleep or not depends on where in your hand your injury is. If you don't need to be asleep for the procedure, we will use local anaesthetic (numbing injections) to numb the area so you don't feel pain during the surgery.

You might be:

- awake with an injection to numb the area (local anaesthetic)
- awake with an injection in your armpit or around your collar bone to numb your whole arm (regional anaesthetic)
- asleep (general anaesthetic)

As a team we (surgeons and anaesthetic doctors) will discuss with you which type of anaesthetics are suitable. This is based on several factors including the duration of your operation, your general health, whether you have someone to take you home and look after you on the day of surgery, and your preferences. We will make a decision together with you about which type of anaesthetic you will have.

How to prepare for your surgery

Fasting before arriving at St Mary's Hospital

If your procedure is going to be done while you're awake (under local anaesthetic), you don't need to fast before your surgery.

If your procedure is going to be done under general or regional anaesthetic (while you're asleep or your whole arm is numb) you will need to fast before your procedure.

Please make sure you:

- do not eat anything after 2 am on the morning of your surgery (only plain water after this time)
- do not drink anything after 6 am on the morning of your surgery, except for a small sip of water to take any usual tablets
- do not have any chewing gum after 6 am on the morning of your surgery

Fasting before your surgery improves the safety of general anaesthetic, if you do not follow these rules, your procedure is likely to be delayed or moved to another day.

If you take regular medications, our team will tell you if you need to stop any of them your surgery. If you're not sure, please ask us.

On the day

Arriving for your operation

Day surgery:

Adults – We will ring you the day before your surgery. Please follow the instructions we give you in this phone call about where to go. Usually this is either the Surgical Admissions Lounge on level 4 in the QEQM building or Theatres on level 4 in the Paterson building at St Mary's Hospital.

Children – Please go to the children’s ward (usually this will be either Great Western Ward or Westway Ward). Normally we will call to confirm where to go the day before surgery. It will be on level 6 in the QEQM building.



West Way and Great Western Wards – Level 6 QEQM



Paterson Building



Theatres Admissions Lounge on Level 4 of QEQM



Queen Elizabeth the Queen Mother (QEQM) Building

If you are coming for your procedure as a day case (you're not staying the night at the hospital), please make sure you arrive on time. Usually, we will ask you to arrive at 7.30am, but sometimes we might ask you to arrive later, if your surgery is in the afternoon.

Please note if your surgery is planned to be in the afternoon, we will give you different fasting instructions.

The surgical team who will be performing the procedure will come to see you and confirm the procedure and consent you for the procedure. We will explain why the operation is important, the risks of the surgery, alternatives to surgery including no surgery, and answer any questions you have about the operation.

We will also draw an arrow on you to mark the area of injury.

As we mentioned above, surgery to treat a nerve injury is an urgent surgery, which means we can book your surgery in quickly, but this does mean that if there is another urgent procedure we might have to change the time of your procedure. Please be patient with our team while awaiting surgery. It is a good idea to bring something to do (e.g. a book) while waiting.

Before your surgery

On the ward, you will change into a hospital gown, and the nurse will take you to the operating theatre where the procedure will happen when we are ready for you.

Children and adults with cognitive difficulties can take a relative, carer or friend with them to the operating theatre for their anaesthetic, however the accompanying person will not be able to stay for the operation. They will however be able to meet them once the operation is finished in the recovery area.

If you are having a regional or general anaesthetic we will give this to you in the anaesthetic room, and then take you into the operating room. The anaesthetic doctor will give you the medications either as an injection or for you to breath in if you're going to sleep. The anaesthetic doctor will explain more about this. If you are having a general anaesthetic you will wake up after your procedure in the recovery room.

If you are having a local anaesthetic, we will take you directly into the operating room, where you will lie down on the operating bed with your arm placed on a table, then the surgeon will give you the numbing injections (local anaesthetic).

For both approaches, we will ask you to confirm your name, date of birth, and the procedure you are having before giving you the anaesthetic.

After your surgery

If you have had a general anaesthetic, the surgical team will come to see you on the ward to explain how the procedure went. You will need someone to collect you from the hospital after the procedure. This can be a family member, partner, or friend. You will need someone to stay with you for the first night after the operation. This is in case there are any problems that mean you need to come back to the hospital, such as bleeding or pain that is not controlled with painkillers. If you do not have someone to collect you or stay with you, you will need to stay in hospital overnight.

If you are having a local anaesthetic, the team will explain this while you are in the operating theatre, and you don't need someone to collect you or stay with you for the first night after the operation, however you cannot drive yourself home and we advise you not to take public transport home.

We will give you instructions for your follow-up appointment before you leave. Usually, this will be in the plastics dressings clinic (PDC) and hand therapy (also known as hand physiotherapy) clinic one week after your procedure. We will give you instructions about how to look after the area until your follow up appointment. You will also need to complete one week of antibiotic tablets.

Recovery

Will I need a splint after my surgery?

If you have only a nerve injury in your hand you generally won't need a splint after surgery. If you have other injuries such as a tendon injury, you will need a splint for at least four weeks.

When will my hand function return to normal?

Physical healing of the nerve takes about two to four weeks, but the return of feeling in your hand can take up to 18 to 24 months. The sensation won't completely go back to the way it was before but could return to up to approximately 80% of what it was. There is a chance the feeling in the area of your injury might not return.

During healing and recovery, it is important to rest the hand appropriately to facilitate nerve healing. You should still move your hand otherwise it may become stiff. The Hand Therapy team will give you instructions on how to safely move your hand and what activities and tasks you can and can't do.

How much time will I need to rest from work/school after my surgery?

This depends on what your job is and if you can make adjustments what you do while you're recovering.

School: you can go back to school the next day with a protective dressing. You will need to talk to your school because you will need to stop sports, musical instruments and other practical activities for at least four weeks.

Desk-based work: you can return to work the following day. You will need adjustments for at least four weeks, including not using the injured hand for manual tasks, however you may be able to do light tasks such as typing.

Manual work: you can return to work with light duties the following day, but you can't do any heavy manual work using the injured hand for at least four weeks.

We can give you statement of fitness for work (fit note) for your employer if you need one.

When can I return to normal activities/hobbies?

At around four weeks. Please note this also applies to driving.

We advise that you don't drive while your injury is healing. This is because you might not be able to safely control your vehicle without making your injury worse, for example during an emergency stop. However, you should speak to the DVLA and your insurance company for more advice about this.

Is there anything I can do to improve the healing and recovery process?

- no heavy use of your injured hand for the first four weeks after surgery, light function is fine (e.g. typing, writing)
- until your sensation returns take extra care not to touch anything too hot or cold or sharp with the affected area as you may injure yourself, or re-injure the nerve, and not be aware of this
- keep your hand elevated (raised up) – we will give you a sling for this
- follow your hand therapist's instructions for how to move your hand to prevent stiffness, and use painkillers if you need them
- do not smoke or vape – nicotine makes it harder for your body to heal!
- no hyperextension (over straightening) of the finger, weight-bearing, or heavy lifting for 6 weeks
- once your wound has healed, you should regularly massage the scar – this will help prevent sensitivity and stop a painful swelling called a neuroma forming

Useful contact details

Plastics dressings clinic team: imperial.smhplasticscns@nhs.net

Contact phone number: 07833725706

Hand therapy team: imperial.handtherapyimperial@nhs.net

These email inboxes and this phone number are monitored Monday to Friday 9am to 5pm, and one of our team will reply to you as soon as possible.

For any emergency concerns (for example infection or unmanageable pain): please go to St Mary's A&E, where you will be assessed by the on-call plastic surgery team. Or call 111, speak to your GP or local A&E.

How do I make a comment about my visit?

We aim to provide the best possible service and staff will be happy to answer any of the questions you may have. If you have any **suggestions** or **comments** about your visit, please either speak to a member of staff or contact the patient advice and liaison service (**PALS**) on **020 3312 7777** (10.00 – 16.00, Monday to Friday). You can also email PALS at

imperial.pals@nhs.net The PALS team will listen to your concerns, suggestions or queries and is often able to help solve problems on your behalf.

Alternatively, you may wish to complain by contacting our complaints department:

Complaints department, fourth floor, Salton House, St Mary's Hospital, Praed Street
London W2 1NY

Email: ICHC-tr.Complaints@nhs.net

Telephone: **020 3312 1337 / 1349**

Alternative formats

This leaflet can be provided on request in large print or easy read, as a sound recording, in Braille or in alternative languages. Please email the communications team:
imperial.communications@nhs.net

Wi-fi

Wi-fi is available at our Trust. For more information visit our website: www.imperial.nhs.uk

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