

Hand trauma

Hand fractures

Information for patients, relatives and carers

What is a fracture?

A fracture is another term for a broken bone. Fractures in the hand can be caused by a crushing, high force impact, such as falling on the hand, or by over-twisting or over-straightening movements in the fingers or hand.

Open fracture

An open fracture is a broken bone with a wound in the skin on top, which connects to the broken bone.

These injuries are at risk of developing an infection, so they need to be carefully washed during an operation in the operating theatre. Sometimes your broken bone will need to be secured in place using metalwork such as pins or screws (fixation).

If you have an injury where the bone is not broken but has moved from its usual place (dislocation) and there is a wound in the overlying skin, we will treat this injury in the same way because the joint would be at risk of infection.

Treatment

Fracture repair

We will discuss the treatment options with you, considering your fracture pattern, your general health, your usual day-to-day activities and what you want. The treatment we offer you could be surgical (fixation) or non-surgical (using a cast or splint only).

Whether surgical or non-surgical management, you will generally need a splint (a hard device like a large glove that protects your bone and holds it in place to allow the fracture to heal) or another kind of support for two to six weeks depending on your fracture.

Some types of fractures need to be secured in place in surgery, which can be done with a metal plate and screws, screws alone, or using a temporary long thin wire (called a K wire). The surgical team will use X-ray imaging (a device that allows us to see images of the bones inside your body) to make sure the bones are fixed in a good position.

How soon will my surgery be?

You will usually have your fracture repair surgery within a week after you first come to hospital.

Fracture repair surgery is an urgent surgery, which means we can book your surgery in quickly, on a trauma operating list. However, this does mean that the time or day of your surgery might

be changed at short notice if there is another more urgent emergency surgery that needs to go first.

It is safe to do your surgery up to two weeks after your injury happens. If there is a delay of three weeks or more between your injury and the surgery date, how we treat the fracture injury becomes more complex, although surgery may still be possible. We will assess your fracture and make a plan for how best to treat you.

Will I need to be asleep for the surgery?

Whether you need to be asleep or not depends on where your fracture is and what kind of fracture it is. If you are not asleep, we will use numbing injections (local anaesthetic) to numb the area so you do not feel pain during the surgery.

You might be:

- awake with an injection to numb the fracture area (local anaesthetic)
- awake with an injection in your armpit or around the 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 length 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 your operation

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 sip of water to take any usual medications
- 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 stop taking any them before your surgery. If you're not sure, please ask us.

On the day

Arriving for your surgery

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 before the operation and confirm the procedure and your consent for the procedure.

As we mentioned above, fracture repair surgery 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 appointment. Please be patient with our team while awaiting surgery. It is a good idea to bring something to do (e.g. a book to read) while you're 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 breathe in if you're going to sleep. 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.

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 the 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 in case there are any problems requiring you 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 how the procedure went while you are in the operating theatre, and you will not need someone to collect you or stay with you for the first night after the operation, however you cannot drive yourself home we advise not to take public transport home.

We will give you instructions for your follow-up appointment before you leave. Usually, this will be one week after your procedure in the plastics dressings clinic (PDC) and hand therapy clinic. You will need to complete one week of antibiotic tablets if your injury was an open fracture or open dislocation.

Recovery

Will I need a splint after my surgery?

After your surgery, you will have a Plaster of Paris splint. The week after your operation the hand therapy team will give you a thermoplastic splint, which you will wear for four to six weeks. The thermoplastic splint will be a bit lighter and therefore more comfortable to wear, and can be removed for short periods of time to allow you to wash the area.

When will my hand function return to normal?

Most hand fractures are sufficiently healed after approximately two to four weeks that you can use your hand for light day-to-day activities. Hand therapy is vital for restoring function after surgery. You should be able to start doing strengthening exercises, like squeezing a ball, from eight weeks after your injury. It usually takes around 12 weeks for the bone to be fully healed, you should wait until then to do heavier activities or sports.

Most people will regain excellent movement after their hand fracture injury, but the hand rarely returns to being exactly the same as before the injury. Very rarely some patients feel that the fracture continues to impact their day-to-day activities after three months. Your strength will gradually improve, however it can take up to three to six months to reach maximum grip strength.

How long will I be in pain for?

It is possible to have ongoing pain despite your fracture healing. Patients often underestimate how much hand fractures impact their day-to-day life. It takes time for the signs and symptoms to resolve completely.

Pain should improve on a weekly basis but you may have pain during some activities for up to three months or more. Rarely some patients experience occasional pain in the hand for up to one year, but this is uncommon and often happens during heavier activities or colder temperatures. Sensitivity to cold temperatures may last much longer.

How long will I need to see the hand therapy team for after my surgery?

You will have an appointment with the hand therapy team within one week after your operation and you will need to see them again for more follow up appointments. The number of follow up appointments you will need will depend on your recovery as an individual.

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 have adjustments while you are recovering.

School: you can go back to school as early the next day if you feel well enough. You should avoid writing with the injured area for the first 2-4 weeks, and activities such as sports, playing musical instruments or other practical activities for six to eight weeks.

Manual work: you can go back to work the following day with adjustments of no activities involving lifting or heavy manual labour until the fracture has healed, after about six to eight weeks.

Desk and office work: you can go back to work as early as the following day. You will need adjustments including no writing for the first two to four weeks, and no manual tasks until the fracture is healed, at approximately six to eight 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?

You can start moderate activities, such as writing or typing, at around eight weeks but you need to wait three months before doing contact sports involving impact to the hand.

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?

- do not use your hand for heavy activities for the first eight weeks after surgery
- keep your hand elevated (raised up) using a sling for the first week, giving stretches to your shoulder and elbow a few times a day.
- 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!

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-Friday 9am-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