

Hand fracture

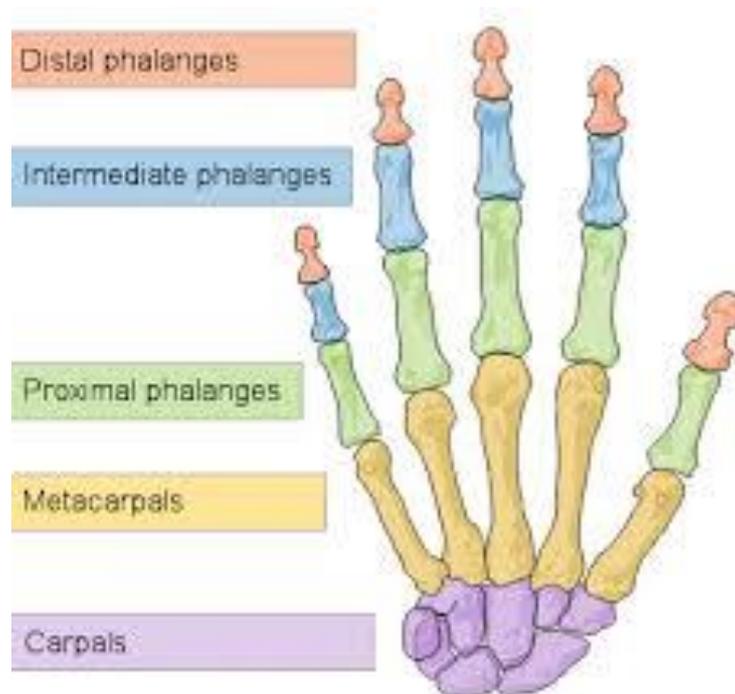
This sheet answers common questions about a hand fracture. If you would like further information, or have any particular worries, please do not hesitate to ask your nurse or doctor.

In all cases, a doctor will explain the operation to you and answer any questions you may have.

In most cases it will be possible for a friend or relative to accompany you for all or part of the operation. Please ask your nurse or doctor.

What is a hand fracture?

There are many small bones in the hand and each of these can fracture (break) following an injury to the hand.



A diagram showing the bones of the hand.

The first thing to establish is the bone(s) that is/are broken (see diagram above). The surgeon will then look at an x-ray taken of your hand to see how far the ends of the broken bone have moved from their normal position. This helps the surgeon decide on the best form of treatment.

How do I know I've fractured a bone in my hand?

When you have a hand fracture, the area around the fracture becomes painful, swollen and difficult to move. Your surgeon will ensure that you have had x-rays to look at the bones of the hand and confirm whether a fracture exists. This also allows them to plan the best treatment.

What treatment options are available?

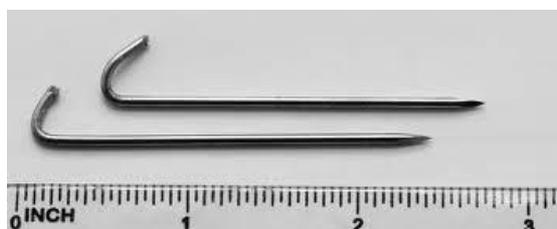
Some broken bones in the hand simply need a period of time where the fingers/hand is held still in a splint. This means that you will not need an operation.

However, many hand bone fractures need to be operated on to ensure you get the best possible outcome. There are many operations that can be performed to fix a hand bone fracture. The most common operations are an MUA (manipulation under anaesthetic), K-wire fixation of the fracture and an ORIF (open reduction internal fixation) using special metal bone plates and/or screws.

An MUA means that the surgeon will move the broken bone into a better position whilst your hand is numb or under general anaesthetic (when you are put to sleep). Following this, your hand and forearm will be placed into a plaster of Paris splint and a large bandage around the hand and forearm.

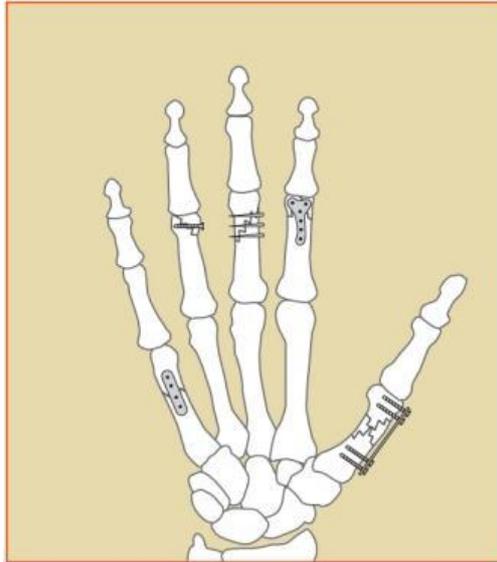
Sometimes fractures are liable to slipping back out of position after an MUA. In these situations, the surgeon is likely to advise you that you may need K-wires, or a metal plate and/or screws placed into the fracture. These help to support the fracture and allow you to exercise your hand early to prevent stiffness.

K-wires are thin metal wires that pass through the skin and into the underlying bone. These wires hold the broken bone in the correct position. The end of the wire is often left poking through the skin so you will be able to see it once the dressings are taken off. These are usually removed four weeks after your operation.



K-wires

If metal plate/screws are used to fix your fracture, the surgeon will have to cut the skin over the broken bones leaving you with a scar. This cut is made to allow the surgeon to place the metalwork in the correct position around the fracture. This metalwork does not have to be removed unless it causes problems in the future.



An image of a hand with various metal plates and screws fixed to the bones.

Which treatment do I need?

Your surgeon will advise you on the treatment they recommend for your particular broken bone when they first see you in clinic.

Occasionally, the initial plan made on how best to manage your broken bone gets changed. This can happen during the operation itself or during the first few weeks after you injured your hand. This is usually because the broken bone is more/less severe than first thought or that the bones move out of place again.

Before your procedure

When you are seen in our trauma clinic, you will be given written information on when and where to come for your operation. The surgeon will advise you on whether you will need to avoid food and drink for six hours before the surgery. This depends on whether your operation will be performed under local anaesthetic (with you awake) or general anaesthetic (with you asleep).

After your procedure

You are able to go home on the same day of your operation. After a general anaesthetic, you will need someone to take you home. After a regional anaesthetic (arm asleep), you must not drive yourself home, as your hand cannot grip the steering wheel and your insurance company will not cover you, but you can use public transport to travel home.

When at home

You will be provided with some painkillers to take home and, if given to you after your operation, it is important that you finish the course of antibiotics. When at home, keep the arm elevated above the level of your heart for the next two weeks to reduce swelling and pain. When washing or showering, keep the dressing and plaster of Paris splint dry by covering the affected hand and arm with a plastic bag taped around the elbow.

Follow-up

After three to five days, you will have an appointment to see the hand therapists who will check that any skin wounds are healing ok and change your plaster of Paris splint to a lightweight, moulded plastic splint. They will then arrange to see you to guide you through the exercises you can and can't do with the hand to ensure you get the best possible outcome. When applicable, if the stitches in the skin are the non-dissolving type, these will be removed two weeks after the operation.

Using the hand

Straight after your operation your hand and wrist will be held still in a plaster of Paris splint. When you see us in clinic to have your splint changed to a plastic splint, the hand therapists will give you a list of exercises to perform to ensure that not only can the broken bone(s) heal, but the rest of the hand does not get too stiff. It will take approximately six weeks for the bone(s) to heal, so you will need to avoid all heavy activities for this length of time.



An example of the plastic splint you will be given

Caring for your K-wire

If your broken bone was fixed using K-wires it is important to keep your hand clean and dry. Your hand therapist will advise you when you can wash your hand. You must take care not to bump or knock the wire, as this can move the wire or cause the broken bones to shift out of position again.

It is important to be vigilant for signs of infection around the K-wire. These are: increasing redness of the surrounding skin; yellow or green pus around the wire; increasing swelling/pain; or a temperature. If any of these signs develop, please contact the hand therapy or plastic surgery team to be seen as soon as possible.

Main risks and side effects

Pain

Injuries and operations on the hand can be painful. The local anaesthetic injected at the time of the operation should keep you pain free for four to six hours after the operation. After this make sure you keep your arm elevated and take the painkillers provided.

Bleeding

A small amount of bleeding into the dressing after the operation is normal. In these circumstances, elevate the hand above heart level. Although uncommon, if bleeding persists and the dressing becomes soaked with blood, please return to the Royal Free Hospital's A&E department and inform the staff that you are a patient of the plastic surgery team and we will come to help you.

Infection

Whenever a K-wire or metal plate/screws are placed into and around broken bones there is a risk of an infection developing. This risk is around 2%. The risk of an infection developing is reduced by taking the complete course of antibiotics given to you and by keeping your dressings clean and dry. If, however, you notice increasing pain, an unpleasant odour or yellow/green fluid coming through the dressing you may have developed an infection. Please contact your hand therapist to be seen if this happens.

Wound breakdown

If a cut was made in the hand, the wound can open again after the operation and we may treat this with dressings or, very occasionally, we may need to operate again.

Stiffness in the hand

This is a common problem after hand fractures. The hand therapists will work with you to minimise this problem by giving you hand exercises to perform. If your fracture is more displaced or involves a joint, you may never get full movement back in your hand and there is a risk of arthritis developing in the joints around the broken bone. Your surgeon can advise you on the risks of this.

Fracture not healing

There is a risk with all fractures that the bones may not stick together. This risk is low in fractures of the hand. The key things you can do to minimise this risk is to follow the exercise plan given to you by the hand therapists and avoid any smoking or nicotine replacement therapies during the six week healing period.

Cold intolerance

The affected finger/hand may become painfully cold in the winter months. This may settle with time and is best avoided by wearing appropriate clothing to keep the hands warm.

Complex regional pain syndrome

Around 5% of patients may experience complex regional pain syndrome of the affected finger or the whole hand after the injury. This is an unusual reaction to trauma and results in pain, swelling, stiffness and increased sensitivity in the hand and must be treated with special medication and intense therapy.

Do you have any further questions?

If you have any further questions or concerns regarding your injury or operation, you can contact our hand trauma clinic on 0207 794 0500 x 31312.

Other useful contacts:

Day surgery – 0207 794 0500 x 38586

Hand therapy – 0207 317 7703

Plastic surgery dressing clinic – 0207 794 0500 x 31312

If you would like a large print or audio version of this information, please ask a member of staff.

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