

## **Trauma and Orthopaedics**

## **Unstable ankle fractures**

This leaflet gives you information about your ankle fracture and how it will be managed. It will also give you exercises that you can start after your surgery.

## What is an ankle fracture?

A fracture is the same as a break.

The ankle involves 3 bones.

- The tibia and fibula they make up the lower part of your leg.
- The talus the top bone of your foot.

You may have broken one or more of these bones.



## How will I know I have broken my ankle?

You may not realise right away that you have broken your ankle.

You will be diagnosed by the health professional examining your ankle in the emergency department. An X-ray will be used to confirm if there is a break.

#### Common symptoms include:

- swelling around your ankle and foot
- pain in or around your ankle straight after the injury
- bruising around the painful area but also into the foot
- you are unable put weight through your ankle
- deformity your ankle may look out of place

A fractured ankle can range from a simple break in one bone, to several fractures which force your ankle out of place.

The more bones that are broken, the more unstable your ankle becomes.

## Treatment

A decision has been made that your fracture is unstable.

It is recommended that you have surgery to treat your ankle fracture. This is because the bones healing in an incorrect position can lead to more problems in the future.

Surgery aims to hold the bones in the correct position to allow them to heal.

### Are there any alternatives to surgery?

A decision on having surgery takes into consideration the position of the bones and your general health.

If the bones stay in a good position, some ankle fractures can be treated using a plaster cast. For ankle fractures where the bones will not stay in a good position, surgery to fix the bones is recommended.

## What will happen if I decide not to have surgery?

You will be treated using a plaster cast. You will need to keep the weight off your leg by using crutches or a walking frame to move about.

You will need regular X-rays to check the position of the bones in the plaster.

Usually, it is only possible to perform surgery within 3 weeks of your injury. If your bones stay out of position after this time, the fracture will heal in an incorrect position. In this case, there is a risk of developing arthritis.

## My ankle is very swollen and bruised

If your ankle is very swollen, it is not possible to operate straight away as there is an increased risk of wound infection and wound breakdown. You will have to wait for the swelling to go down. This can take 7 to 10 days.

You may be sent home with advice on elevation and ice application until your swelling goes away. But you should have a scheduled day for surgery. A specialist nurse will contact you by telephone to discuss any concerns.

Before you go home, we will make sure the position of your fracture is suitable and a plaster cast will be put on. We will make sure you can use crutches safely without putting any weight through your fractured ankle.

## What are fracture blisters?

Sometimes fracture blisters will develop if your ankle is very swollen. This normally occurs within 48 hours after injury. You may need to wait for the fracture blisters to settle before the surgery.

Please do not pop them as this may increase the risk of infection.

#### What can I do to help reduce the swelling?

There are some simple things that you can do to help.

- **Rest** you must be resting for around 50 minutes of every hour. Only get up for important activities such as using the toilet and eating or drinking.
- **Raise your foot** raise your foot above the knee and the knee above the hip for most of the day. Wriggle your toes to keep them moving every 30 minutes.
- Use ice use an ice pack or pack of frozen food on the ankle 15 minutes every other hour. Make sure the ice is not in direct contact with the skin. Do not eat frozen food after using.
- **Protection** avoid putting weight on your injured leg.

#### What can I avoid to help reduce the swelling?

There are some things that you can avoid.

- Heat can increase blood flow and swelling.
- Alcohol can increase blood flow, swelling and reduce healing.
- **Smoking** reduces your body's ability to heal itself and can slow down healing. In extreme cases, it can stop the healing altogether.
- **Doing too much** being on your feet can cause the foot and ankle to swell more which will slow healing.

## Painkillers

You will be given painkillers to take home. Please take them regularly as advised by the doctor or nurse.

- Paracetamol 1 gram every 4 hours, with a maximum of 4g a day.
- Codeine can be used alongside paracetamol. 60mg of codeine can be taken every 4 hours, with a maximum amount of 240mg a day.

Codeine can cause drowsiness. It is advisable not to drink alcohol whilst you are taking it.

• Oral non-steroidal anti-inflammatory medicines such as ibuprofen can also help to reduce swelling and inflammation.

Ibuprofen is not recommended if you have a history of asthma, kidney disease, or if you have or have had stomach problems such as a peptic ulcer.

You will also be given a course of injections which thin your blood to take whilst you are at home.

When a bone is broken, clots are formed around the fracture site. One of these clots may travel to your lungs or heart. To minimise the risk of this happening we advise you to complete the course of injections given to you.

#### Care of your plaster

It is very important that you keep your plaster cast dry.

- Do not put any objects down your cast.
- Do not put any lotions or powders down your cast.

Please contact the Orthopaedic Department on 024 7696 4000 (the Hospital main switchboard) and ask for bleep 2801 if:

- your cast becomes too loose or too tight or is digging in or rubbing
- you have pins and needles in your foot, leg or toes
- you have loss of feeling in your foot, leg or toes
- you have loss of movement in your foot, leg or toes
- you have severe pain in your foot, leg or toes

## Day of surgery

Your surgery is scheduled for:

.....

Please arrive at Ward 52 pre-operative clinic at:

.....

You will not be able to eat or drink from 6am. You may have a sip of water to take your painkillers.

You will need to bring an overnight bag with you. Once you arrive, the nurse will admit you.

The surgeon will come and see you in the morning and review your swelling. If the swelling has gone down sufficiently, your surgery will be carried out.

If your ankle is still too swollen, we will postpone your surgery for another couple of days to allow the swelling to go down.

#### What happens during surgery?

Cuts are made to the skin to gain access to the broken bones. These are usually on the inner and outer sides of your ankle. The bones are put into position. Then they are fixed in place using one of the following depending on the type of fracture:

- a plate/screws
- different wiring techniques
- a mixture of both

The cuts are closed using stitches or staples.



X-ray showing plate and screws after surgery.

#### How soon will I recover?

After surgery, you will be transferred from the recovery room back to the ward. You may have a plaster cast on to protect and support your ankle, or a crepe bandage.

Most patients go home the same day or the next day. You will be seen by a nurse or doctor who will go through your discharge plan with you.

If you have difficulty in passing urine, you may need a catheter for a day or two.

The physiotherapists will help you to start walking again. At first, you will not be allowed to place much weight on your ankle, and you will need to use crutches or a walking frame.

## Post-op advice

#### Medication

Medicines play a vital part in your recovery. They help to avoid further problems and control your symptoms. You will be informed whether you need any medicine to take home and you will be provided with enough supplies.

We will explain your medicine to you, identify potential side effects and discuss with you how to obtain further supplies.

#### General points to remember

- Take regular medicine. Do not stop it suddenly. Your body needs time to adjust to managing without it.
- It is important to take your tablets regularly.
- Painkillers are usually better at preventing pain, and not so good at dealing with severe pain. If you experience some troublesome pain, it is better to take painkillers sooner than to wait until the pain is bad.
- Follow the directions given to you by the healthcare professional or in the information leaflet supplied with the medicine.

For your condition, it is common for patients to be discharged on pain relief. It is important to take it as instructed.

- Do not take double doses if you forget to take your medicine. Take your normal dose when this is due.
- If side-effects are a problem, contact your doctor as soon as possible.
- It is a good idea to carry a list of your medicines with you. If your doctor wants to prescribe something for you, they can check your list of current medicines. Show your list of medicines at each consultation or treatment.
- Always let the pharmacist know what prescribed medicines you are taking if you buy anything over the counter.

#### Blood clots in the legs (thrombosis)

These can sometimes move through the bloodstream to the lungs (embolus). They can cause breathing difficulties. The risk of this is less than 1 in 100.

You will be encouraged to get out of bed soon after surgery and drink plenty of fluids. You will be given a daily injection to reduce the risk of blood clots.

## **Complications specific to this surgery**

#### Infection

If this happens, it will be treated with antibiotics. Sometimes further surgery might be required.

#### **Delayed wound healing**

If this happens, it would need regular wound dressing. Occasionally further surgery may be needed to provide cover for the wound.

#### Loosening or breaking of the plate and screws

This can happen if the bone is very soft or if too much weight is placed on the leg before the fracture has healed. Further surgery is usually needed.

#### Malunion

The bones healing in an incorrect position.

#### Non-union

The bones not healing fully or at all.

## Prominent metalwork with sensitivity over the plate and screws

It is possible to have further surgery to remove the plate and screws when the fracture has healed.

They are not usually removed unless they cause problems such as wound healing, malunion, non-union or failure of metalwork.

#### **Developing osteoarthritis**

After this type of injury there is a risk of developing arthritis in the joint, even if the fracture is fixed with surgery. This means some people could develop on-going stiffness and pain compared to their uninjured ankle.

This is nothing to do with the surgery and is related to the original injury.

#### **Certain health conditions**

Certain health conditions, such as diabetes, can increase the risk of some of these complications. Your doctor will discuss this with you.

#### If you smoke

If you smoke, the risks of complications are significantly higher. It is advised that you stop smoking until your bones have fully healed.

## **Going home**

#### Swelling

You will have swelling and pain again in the ankle. Go back to the "What can I do to help reduce the swelling?" and "What can I avoid to help reduce the swelling?" advice given earlier.

#### Wound

Keep your wound and plaster cast dry. Your stitches or clips will be removed between 10 to 14 days, or when you attend the outpatient fracture clinic.

You should not bathe whilst you have a plaster cast on.

#### Walking aids

As you begin to move about more, remember to use your walking aids as instructed.

#### Follow-up

You will be asked to go to the fracture clinic to check your wound and that your fracture is healing properly. An appointment will be sent to you.

Your ankle may be kept in a plaster cast for 2 to 8 weeks. This can sometimes be longer for several reasons.

Your surgeon and physiotherapists will advise you when you can place weight on your ankle. You will be given exercises to help your ankle start moving again.

If you have any problems or concerns, please contact your surgeon's secretary.

## What if I have any problems at home?

Please contact the Orthopaedic Department on 024 7696 4000 bleep 2801 if you experience any of the following problems whilst at home:

- your cast becomes too loose or too tight or is digging in or rubbing
- you have pins and needles, loss of feeling loss of movement or severe pain in your foot, leg or toes
- you have a fever

Please return all walking aids (frames and crutches) to the Physiotherapy Department in the WISDEM Centre when you no longer need them. Crutches can also be returned to the Fracture Clinic in the main hospital.

## What about the future?

It takes at least 6 weeks for broken bones to heal. But it can take several months before you are able to return to normal activities. Research has shown that people can still be recovering up to 2 years after their ankle fracture.

Most patients make a good recovery after surgery and have good mobility in their ankle.

It may take several months for you to stop limping while you walk, and for swelling and stiffness to reduce completely, even if the fracture has healed.

## Work

How soon you can return to work will depend on the type of job you do. You will need to discuss this with your doctor.

## Driving

Most people return to driving within 9 to 12 weeks. It is not advised to drive whilst wearing a cast or splint. Always check with your insurance company before driving again once the splint or cast is removed.

# What exercises can I do to help my ankle heal quicker?

Below are exercises that you can do to help you improve all the above problems.

#### Ankle movements



Sitting or lying down, point your toes towards the floor and then towards your face.

Rotate the sole of your foot towards your body.

Repeat 10 to 20 times in each direction. Do this 3 to 5 times a day.

#### **Assisted movements**



Sit with your legs straight and with a belt or towel wrapped around your affected foot.

Pull on one end of the belt, move your foot towards the outside and then to the inside as far as you can.

#### Foot slides



Sit on a chair with the affected foot flat on the floor.

Slide your foot forward and backwards as far as possible keeping your foot flat on the floor as you are able.

3 to 5 times a day. 10 to 20 each time.

#### Weight transfer



Hold on to a solid and safe surface facing forwards.

Shift your body weight onto the affected leg supported by your hands, then return to midline and repeat.

**Note**: When you shift your weight, keep looking straight ahead of you and maintain your shoulders level.

#### Calf stretch



Stand in a stride stance with the affected leg at the back.

Keeping back knee straight and heel touching the floor, slowly bend the front knee until you feel a stretch in the calf muscle of the back leg.

Do not push into pain, only discomfort. Hold for 20 to 30 seconds and repeat 3 to 5 times. Do this 2 to 3 times a day.

#### Soleus stretch



Stand at a step and put your injured foot on the step.

Bend the front knee forward without lifting the heel off the step until a stretch is felt at the back of the leg or the knee will not move any further.

Hold for 20 to 30 seconds, repeat 3 to 5 times. Do this 2 to 3 times a day.

#### Calf raise



Stand with both feet on the floor. Hold on to something safe.

Rise up onto tip toes (raise heels) on both feet. Keep knees straight.

Hold at the top for 2 seconds and then return to the floor.

Aim to build up to 3 x 10 as a baseline.

Further information on broken ankle can be found at www.nhs.uk

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