

Ankle, sub-talar or mid-foot joint fusion

This leaflet answers some of your questions about having an ankle, sub-talar, or mid-foot joint fusion. It explains the benefits, risks and alternatives, as well as what you can expect when you come to hospital. If you have any questions, please speak to a doctor or nurse caring for you.

What is an ankle, sub-talar or mid-foot joint fusion?

These operations join the bones of the affected joint together. You may have several joints fused during the same operation. There are many joints in the ankle and foot. If these are painful or deformed, they are sometimes treated by removing the joint and welding two or more bones together so there is no movement and no pain.

The surgeon sets the foot/ankle in the correct position but it is your body that has to do the healing, similar to a broken bone. That is why it takes at least 10-12 weeks to heal after this surgery.

What happens during an ankle, sub-talar or mid-foot joint fusion?

An ankle, sub-talar or mid-foot joint fusion operation usually involves staying in hospital for at least one night after the surgery. You will have a general anaesthetic (be asleep), or a spinal anaesthetic (numb below the waist). Due to the complexity of the surgery, local anaesthetic alone is not possible.

Ankle fusion

It is often possible to perform an ankle fusion using keyhole surgery. The ankle is gently pulled apart and fluid is injected. Small cuts are made to allow the camera and any instruments to be inserted into the ankle. These are usually at the front of the ankle.

The inside of the ankle is viewed through the camera. The joint surfaces are removed and prepared so that the ankle sits in a good position. The bones are then fixed together with large screws. The wounds are closed with stitches. A plaster cast is then applied from below the knee to the toes. The screws usually stay in for the rest of your life, but if they irritate you we sometimes take them out after 9-12 months.

Not all ankle fusions can be done using keyhole surgery. The healing times and success rates for keyhole and traditional surgery (open fusion) are the same.

Sub-talar and mid-foot joint fusion

For sub-talar or mid-foot joint fusions a keyhole technique is not normally used. Incisions (cuts) are made over the relevant joints on the foot. The joint surfaces are removed and prepared so that the bones sit in a good position. The bones are then fixed together with metalwork (large screws, staples or plates). The wounds are closed with stitches. A plaster cast is then applied from below the knee to the tip of the toes.

Sometimes, extra bone is needed at the fusion site to help it heal and fill any gaps. Sometimes this bone is taken from just below the knee or just above the hip. This is called a bone graft. We sometimes use donor bone from the bone bank (bone donated by people so that it can be used for other people who are in need of it).

Why should you have an ankle, sub-talar or mid-foot joint fusion?

The most common reason to have this surgery is for severe arthritis in the affected joint. This is normally already stiff and painful. In the fusion operation, the joint surfaces are removed so that the two bones will weld together. If there is no movement at the joint there will be much less pain.

Alternatively, if there is a severe deformity at this joint, then this can be corrected by fusion surgery.

What are the risks?

In general, the risks of any operation relate to the anaesthesia and the surgical procedure itself.

In most cases you will have a general anaesthetic. You can discuss this with the anaesthetist before surgery and they will identify the best method for you. For more information about this please see our leaflet, **Having an anaesthetic**. If you do not have a copy, please ask us for one.

The main surgical risks are listed below. The full list of risks will be explained by the surgeon treating you.

Non-union. There is a one in ten (10%) chance that your bones will not heal together (unite). This may need more surgery. This risk can be up to half (50%) if you smoke, and is also higher in patients with diabetes.

Swelling. Your foot will swell after surgery as part of the response to surgery, and the healing process. It may take more than 12 months for the swelling to go down, but may permanently be slightly more swollen or bulky than the other side. It is important to elevate (raise) your foot in the early stages of healing.

Infection. The incisions usually heal within 2 weeks, but may leak a small amount of fluid. In a very small number of cases the wounds may become infected and need antibiotics. It is rare for the bone to become infected but, if it does, this may need further, sometimes major, surgery.

Pain. Patients who have bone taken from just below the knee or just above the hip may have pain at these sites. Also there may be some pain in the ankle and foot due to irritation of local nerves.

Deep vein thrombosis (DVT). A clot in the leg, which can travel to the lungs, is a very rare but serious risk of ankle surgery. We take care to reduce the chance of this happening.

Nerve damage. There may be some localised numbness due to the leg being straightened, or small nerves being damaged when gaining access to the joint.

Further procedures. Sometimes you may need to have the metalwork taken out at a later date, if it becomes loose and rubs when you are wearing shoes. Increased weight in adjacent joints can lead to other adjacent joints needing to be fused in the future.

Are there any alternatives?

Simple non-surgical measures including wide, soft shoes, insoles and painkillers should be tried before going ahead with a fusion operation. An ankle brace can help.

This is an operation done to relieve pain or improve function, and having the operation is your decision.

How can you prepare for an ankle, subtalar or mid-foot joint fusion?

Please refer to one of the following leaflets which will provide all of the necessary information you will need before your operation:

- **Having surgery at Guy's and St Thomas' Hospitals**
- **Having an anaesthetic.**

If you do not have a copy, please ask us for one.

If you smoke, we do advise to try and stop a few months before the procedure to maximise the chances of surgery being successful. If you would like to give up smoking, please speak to your nurse or call the Trust stop smoking service, **t:** 020 7188 0995, or call the NHS Smoking Helpline, **t:** 0300 123 1044.

You will not be able to bear weight on the operated leg after surgery, so you should arrange to move your bed to the same level as your bathroom if possible. You may wish to consider hiring a knee scooter (an alternative to crutches to help with mobilising) from a wheelchair hire company.

You should make arrangements to be collected from the hospital. You will need at least 6 weeks off work after the surgery. Please speak to your surgeon about this. We advise you to speak to your employer before surgery to make plans.

You will have a plaster cast which means you must not drive. Public transport will also be more challenging.

Consent – asking for your consent

We want to involve you in decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves.

If you would like more information about our consent process, please speak to a member of staff caring for you.

Will you feel any pain?

There will be some pain after the surgery. During your operation, local anaesthetic may be injected into your foot/ankle to reduce the pain after the operation. You will be given painkillers to take home. The nurse will go through the medicines with you, including how often and when to take them. There will be a combination of strong and weak painkillers.

It is important that you continue to take painkillers as advised after your surgery. If you have little or no pain you may not need to take the tablets.

If your pain does not settle, you can be reviewed in your scheduled outpatient appointment, or you can seek advice and management from your GP. You can also contact the clinical nurse specialist (details at the end of this leaflet).

What happens after an ankle, sub-talar or major joint fusion?

The day of your surgery

When you have recovered from the anaesthetic, the physiotherapist will give you some crutches and teach you how to walk without putting any weight on the operated foot/ankle (non-weight-bearing). This will protect the area that has been operated on. Most patients stay in hospital at least one night after the surgery. You will probably be non-weight bearing for at least 6-8 weeks.

Your foot and ankle will be in a plaster cast to protect it and to reduce the swelling. The plaster, which is applied in the operating theatre, will stay on for 2 weeks and will be changed when you come to the outpatient clinic. You must keep your foot elevated when not moving.

What you need to do after you go home

This is a general guide only. Patients will progress and recover from their surgery at different rates. If your surgeon gives you different advice, please follow that.

Days 1-14 after surgery

The next day the local anaesthetic will start to wear off so you will feel more painful. You can prevent this before it happens by taking the painkillers provided.

You should keep the foot elevated when not walking for the 2 weeks after the operation. If your foot is hanging down, it will swell and become sore. The toes discolour when you hang the foot down (can go a slightly purple colour). It is normal to see mild bruising and some dry blood on the foot. By the end of the first 2 weeks the post-operative pain will have significantly reduced. You must not get your foot or the plaster cast wet.

You must not drive until your consultant or surgeon advises you.

If the plaster feels tight, then you must contact us for advice.

About 12-14 days after surgery

You will be seen about 2 weeks after your operation in the nurse dressings clinic in orthopaedic outpatients. This appointment will be made and posted to you. At this time the wounds will be checked and any stitches removed. A lighter, fibreglass cast will be applied. You will continue to be non-weight bearing after this appointment.

3–6 weeks after surgery

You may walk short distances non-weight bearing within your home to the car. Keep your leg elevated as much as possible. It is important to rest and give your foot and ankle time to heal

6-8 weeks after surgery

You will have an appointment with one of the foot and ankle doctors at about 6 weeks. The cast will be removed, and you will have an X-ray. You may also be given a special boot to wear instead of a new cast. Both options have their benefits and drawbacks, and these will be discussed at this appointment.

If you have a sedentary (desk) job and can elevate your leg, you may be able to return to work 6 weeks after your surgery. If you have a heavy manual job it will be at least 3 months before you can return to work.

12 weeks after surgery

You will attend the clinic for another X-ray and to see a doctor. If you are recovering well, you may start to weight-bear after this appointment. You will be referred for physiotherapy.

If you are able to weight-bear then you can start wearing a pair of wider, looser-fitting shoes after your 12-week clinic appointment. A good option includes trainers with loosened laces or soft suede boots. Bring a pair with you to your clinic appointment.

Your mobility will continue to improve, although you should avoid walking long distances. You can start gentle, low-impact exercises and activities after 12 weeks, for example using an exercise bike, cycling or cross training. Gradually increase your activity level with time. Your physiotherapist will guide you.

You must expect increased swelling after week 12. The cast has been acting like a compression stocking, which you no longer have. The muscles in your foot and leg which return the blood to your heart have not worked for 3 months, so swelling will persist for a further 6 months.

If your doctors are happy with your progress you will be discharged at this point. Patients are advised to not fly within 12 weeks of foot and ankle surgery because of the increased risk of blood clots.

13 weeks after surgery

If you are out of the cast or boot and can weight-bear you can start driving again. Check with your insurance company. Motor insurance companies vary in their policies, so check with them first. You can also discuss this with the doctor during your appointment.

6 months - 1 year after surgery

Your foot and ankle may continue to be swollen for up to 12 months after surgery. You will hopefully start to enjoy the benefits of having undergone the fusion.

What should you do if you have a problem?

If you experience any of the following symptoms, please contact your GP or go to your nearest Emergency Department (A&E):

- increasing pain in your foot/ankle
- fever (temperature higher than 38C)
- 'pins and needles' or numbness in the limb with the cast
- blister-like pain or rubbing under the cast
- discharge, wetness or a smell under your cast
- if you drop any objects inside your cast
- if you suspect you have DVT (symptoms include pain and/or burning in the back of your lower leg if your cast is on your lower limb. You may also feel unwell and have a temperature)
- if your toes become blue or swollen or you are unable to move your limb.

If you have an infection at any time during your recovery, either suspected by you or diagnosed by your GP or an Emergency Department doctor, please contact your consultant's secretary, **t:** 020 7188 4443.

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Contact details

If you have any questions or concerns about ankle, sub-talar or mid-foot joint fusion surgery; please contact the following, Monday to Friday, 9am-5pm.

- The clinical nurse specialist. Call the hospital switchboard, **t:** 020 7188 7188 and ask for the bleep desk. Ask for bleep 2567 and wait for a response. This will connect you to the clinical nurse specialist directly.
- Your consultant's secretary, **t:** 020 7188 4443.

Please contact your GP or go to your nearest Emergency Department if you have any urgent medical concerns outside these hours.

For more information leaflets on conditions, treatments and services offered at our hospitals, please visit **w:** www.guysandstthomas.nhs.uk/leaflets

Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline. **t:** 020 7188 8748, Monday to Friday, 9am-5pm

Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

t: 020 7188 8801 (PALS) **e:** pals@gstt.nhs.uk

t: 020 7188 3514 (complaints)

e: complaints2@gstt.nhs.uk

Leaflet number: 3774/VER3

Date published: October 2020

Review date: October 2023

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A list of sources is available on request