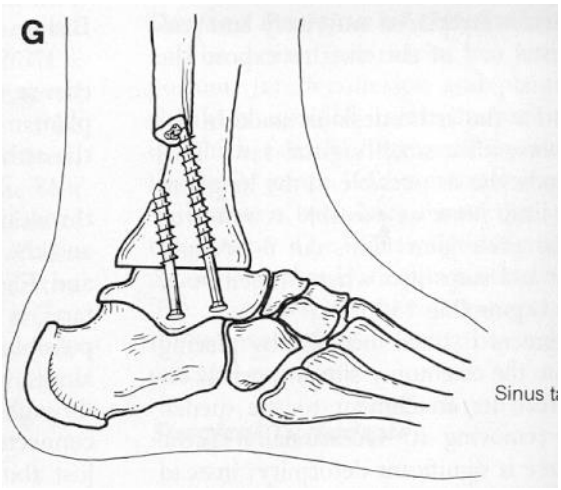
Patient Information

Ankle Fusion



Orthopaedic and Fracture Clinics

What is it?
This is an operation to "fuse" or stiffen the ankle joint.

Why would it be done?
Ankle fusions are done for two main reasons:

- arthritis of the joint, because of a previous injury that has damaged the joint, a generalised condition such as osteoarthritis or rheumatoid arthritis, or because the joint is just wearing out for some other reason (often a previous injury).
- severe deformity of the rear part of the foot, such as a flat foot, high-arched or "cavus" foot, a club foot or other deformity, in which the ankle joint is also deformed, unstable or damaged.

It is now possible to treat some arthritic ankle joints by replacing the joint, in the same way as arthritic hips and knees can be replaced. However, this is only suitable in older patients without major foot deformities, or people with rheumatoid arthritis or similar diseases. It would not be suitable if:

- you are young (usually under 60) or very physically active

- you have a severe foot deformity
- your ankle is very unstable
- you have had infection in the ankle or the bones around it
- the bone under the ankle (the talus) has collapsed

In these situations a fusion would be advised instead. If you have a severe foot deformity you may be advised to have a fusion of the ankle and the joint below the ankle (the "sub-talar" joint). This operation is called a "tibiotalocalcaneal fusion" as it fuses the shin bone to the main bones in the back of the foot (tibia, talus and calcaneum. It is included here because it changes the way the ankle operation is done.
We are sometimes asked if a fusion can be changed to an ankle replacement later. This is rarely possible, as the foot becomes too stiff for an ankle replacement to work.

We often inject local anaesthetic or steroid into damaged joints, before any surgery is considered, to see whether this helps the pain. In some people, this gets rid of the pain and surgery is not necessary. In others, pain relief does not last but the results of the injection helps us to decide which joints to fuse.

What does it involve?
A cut about 10cm long is made on the outer side of the ankle. The outer bone of the ankle is removed to allow the surgeon to get into the joint. The joint is opened up and the joint surfaces removed and, if necessary, reshaped to correct a deformity. Often a further cut of 3-4cm on the inner side of the ankle is needed to remove some of the bone here also.

The joint is then put in the correct place and fixed with screws or plate. If you have a tibiotalocalcaneal fusion the bones are usually fixed together with a large metal pin or "nail" inserted through a cut in the bottom of the heel and sometimes with a screw passed through the back of the heel as well.

It is sometimes necessary to put some extra bone into an ankle fusion to get it to heal and to fill any gaps in the fusion left by correcting alignment. Usually this extra bone can be obtained from the bone that is cut out to prepare the fusion. Very occasionally there is not enough bone from this and bone has to be taken from the pelvis just above the hip, or alternatively artificial bone graft may be used.

Some people with deformities of the foot also have deformed toes. These may be corrected at the same time or at a later operation.

How long would I be in hospital?
Most people who are reasonably fit can come into hospital on the day of surgery, having had a medical check-up two to three weeks beforehand. After surgery your foot will tend to swell up quite a lot. You will therefore have to rest with your foot raised to help the swelling to go down. This may take anything from two days to a week. If you get up too quickly this may cause problems with the healing of your foot.

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A plaster back-slab (half-plaster) is put on your leg at the end of the operation, and this will stay on until you have a wound check two weeks after the operation.
The physiotherapist will teach you how to walk with crutches. We will get you up as soon as possible. Some people are in hospital for two to three days, but most can get home the same day if this has been planned and assessed in advance.

Will I have to go to sleep (general anaesthetic)?
The operation can be done under general anaesthetic (asleep). Alternatively, an injection in the back can be done to make the foot numb while the patient remains awake. Your anaesthetist will advise you about the best choice of anaesthetic for you.

Increasingly surgery is carried out with a regional block – the leg is numb below the knee by injections adjacent to the nerves behind the knee. You can choose to have sedation so that you sleep lightly during the operation. The block can last 24-48 hours, giving good pain relief, but you will also be given pain-killing tablets as required.

Will I have a plaster on afterwards?
You will need to wear a plaster or boot from your knee to your toes until the ankle has fused - usually three to four months. For the first six weeks you should not put any weight on your foot as it may disturb the healing joint. (Occasionally touching your foot to the ground for balance is ok but no more.)

What will happen after I go home?
By the time you go home you will have mastered walking on crutches (or a walking frame) without putting weight on your foot. You should continue to do this for six weeks. Two weeks after your operation you will be seen again in the clinic. Your plaster will be removed and the cut and swelling on your foot checked. If all is well you will be put back into a lightweight plaster. You should continue non-weight-bearing with your crutches.

About six weeks after your operation you will come back to the clinic for an X-ray. If this shows the joint is healing in a good position you can start putting about half your weight through the plaster. Gradually you can build up to taking your full weight through the plaster.

You will have further X-rays after 12 weeks. When the X-rays show that the joint is fused enough, the plaster will be removed and you can start walking without it. We usually give people an elastic support to wear at this point to give them some support as they get used to walking without the plaster. This is usually worn for about a month. The foot and ankle often swell and are quite achy for a couple months after the plaster is removed.

How soon can I ....

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Walk on the foot?
As explained above, you should not walk on the foot for at least six weeks after surgery. Your surgeon will advise you when you can start taking some weight on the foot.
When you start putting weight on your foot we will give you a special shoe that you can wear over your plaster.

Go back to work?
If your foot is comfortable, and you can keep your foot up and work with your foot in a special shoe, you can go back to work within three to four weeks of surgery. On the other hand, in a manual job with a lot of dirt or dust around and a lot of pressure on your foot, you may need to take anything up to six months off work. How long you are off will depend on where your job fits between these two extremes.

Drive?
If you have only your left foot operated on and have an automatic car you can drive within a few weeks of the operation, when your foot is comfortable enough and you can bear weight through it. Most people prefer to wait till the plaster is removed and they can wear a shoe.

Play sport?
After your plaster is removed you can start taking increasing exercise. Start with walking or cycling, building up to more vigorous exercise as comfort and flexibility permit. Obviously, the foot will be stiffer after surgery and you may not be able to do all you could before. However, many people find that because the foot is more comfortable than before surgery they can do more than they could before the operation. Most people can walk a reasonable distance on the flat, slopes and stairs, drive and cycle.

The foot is not completely stiff as the other joints of the foot will tend to compensate for the fused ankle, especially if those joints are not affected by arthritis. Walking on rough ground is more difficult after an ankle fusion because the foot is stiffer. It is rare to be able to play vigorous sports such as squash or football after an ankle fusion.

What can go wrong?
The main problem is the swelling of the foot, which may take many months to go down fully, and some people’s feet always remain slightly puffy. You may find that only trainers are comfortable for several months. Keeping your foot up, applying ice, wrapped in a towel, or wearing elastic stockings may help to keep the swelling down. Swelling is part of your body’s response to surgery rather than the operation "going wrong" but it is a nuisance to many people who may be concerned that something has indeed gone wrong.

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The most serious thing that can go wrong is infection in the bones of the ankle. This only happens in about 1% of people, but if it does it is serious, as further surgery to drain and remove the infected bone and any infected screws or pins will be necessary. You may then need yet more surgery to get the ankle to fuse in a satisfactory position. The result is not usually as good after such a major problem as if the ankle had healed normally.

About 10-15% of ankle fusions do not heal properly and need a further operation to get the bones to fuse - basically another ankle fusion. Failure to fuse is much more common in smokers and we would strongly urge patients to stop smoking during the recovery period from the operation.

Minor infections in the wounds are slightly more common and normally settle after a course of antibiotics.
Sometimes the cuts, especially the one on the outer surface of the foot where the blood supply is not so good, are rather slow to heal. This usually just requires extra dressing changes and careful watching to make sure the wound does not become infected.

There is a small risk of developing a deep venous thrombosis (clots in the veins of the leg) after this type of surgery. We will assess if your individual risk is high enough for you to need blood-thinning (heparin) injections while you are in plaster.

Research shows that 10% of ankle fusions do not heal in exactly the position intended, either because the position achieved at surgery was not exactly right or because the bones have shifted slightly in plaster. Usually this does not cause any problem, although the foot may not look "quite right". Occasionally the position is a problem and further surgery is required to correct it.

Sometimes the screws become loose as the bone heals and cause pain or rub on your shoe. If this happens they can be removed - usually a simple operation which it is often possible to do under local anaesthetic. We find that about 10% of our patients need the screw taken out. It is unusual for a nail to need to be taken out, but if it does this is a bigger operation requiring a full anaesthetic and sometimes an overnight stay in hospital.

Smoking will not be permitted on any NHS site in England. Smoking will not be permitted within any of our buildings or anywhere outside on our sites. Smoking facilities will not be provided. Please be considerate of others when vaping in hospital grounds

This information sheet is available to order in other languages and formats. If you would like a copy, please contact us on 01793 604031 or email gwh.pals@nhs.net

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