Talonavicular Fusion

What is it?

This is an operation to "fuse" or stiffen a joint in the middle part of the foot. It fuses together two bones, the **talus** and the **navicular** bone – hence "talonavicular fusion".

Why would it be done?

Talonavicular fusions are done for two main reasons:

1. Arthritis of the joints, because of a previous injury that has damaged the joints, a generalised condition such as osteoarthritis or rheumatoid arthritis, or because the joint is just wearing out for some other reason.

2. Severe deformity of the foot, such as a flat foot, a club foot or other deformity. Sometimes these can be corrected by breaking and re-shaping the bones, but in other cases it is best to stiffen the joints in the corrected position, particularly if the joints are already stiff or the foot is weak.

What does it involve?

A cut is made on the inner side of the foot, about 4 to 5 cm long. The joint is opened up and the joint surfaces removed and, if necessary, reshaped to correct a deformity. The joint is then put in the correct place and fixed together with screws, pins or staples passed through the main cut.

It is often necessary to put some extra bone into a fusion to get it to heal and to fill any gaps in the fusion left by correcting the deformity. Often this extra bone can be obtained from the bone that is cut out to prepare the fusion. Sometimes there is not enough bone from this and bone has to be taken from the pelvis just above the hip.

Some people who have foot deformities have a tight Achilles tendon ("heel cord") or weak muscles, or both. The Achilles tendon may be lengthened during surgery by making three small cuts in the calf and stretching the tendon.

Weak muscles may be compensated by moving the tendons of normal muscles to do the work of the weak ones. This might be done at the same time as a fusion, or it may be best to do it at another operation. These "tendon transfer" operations are planned individually and your surgeon and physiotherapist will discuss this with you.

Some people with deformities of the foot also have deformed toes. Again, 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. After surgery your foot will tend to swell up quite a lot, especially if you have had extra surgery such as a tendon transfer or toe straightening procedure. 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.

Once the swelling goes down and the cut on your foot is healing, your foot will be put in plaster and you can get up with crutches and go home. The physiotherapist will teach you how to walk with crutches. We will get you up as soon as possible! Most people are in hospital for three to four days.

Will I have to go to sleep (general anaesthetic)?

The operation is usually done under general anaesthetic (asleep). In addition, local anaesthetic may be injected into your leg or foot while you are asleep to reduce the pain after the operation even if you go to sleep for the surgery. You will also be given pain-killing tablets as required.

Discussion with your anaesthetist on the morning of your surgery will confirm this.

Will I have a plaster on afterwards?

You will need to wear a plaster from your knee to your toes until the joints have fused – usually 10 to 14 weeks.

For the first month you should not put any weight on your foot as it may disturb the healing joints. (Occasionally touching your foot to the ground for balance is OK, but no more.)

What will happen afterwards?

By the time you go home you will have mastered walking on crutches without putting weight on your foot. You should go around like this for a month.

You will be seen in the clinic 10 to 14 days after your operation. Your plaster will be removed and the cuts and swelling on your foot checked. If all is well you will be put back in plaster. You should continue walking with your crutches.

About a month after your operation you will come back to the clinic for an X-ray. If this shows the joints are healing in a good position you can start putting about half your weight through the plaster. The physiotherapist will teach you how to do this. Later you will probably be allowed to put your full weight through the plaster. Your surgeon will advise you when this is possible.

You will have further X-rays over the next few weeks: exactly when and how often will be determined by how well your foot is healing. When the X-rays show that the joints are fused enough to take your weight, the plaster will be removed and you can start walking without it. We usually give people a brace 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.

How soon can I?…

Walk on the foot?

As explained above, you should not walk on the foot for at least a month 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 plaster, you can go back to work within two to three 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. Walking on rough ground is difficult after a fusion because the foot is stiffer. It is unusual to play vigorous sports such as squash or football after a talonavicular fusion.

What can go wrong?

1. **Swelling**
   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 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. If you are worried about the swelling of your foot, ask one of the foot and ankle team (your physiotherapist, chiropodist, nurse or surgeon) whether the amount of swelling you have is reasonable for your stage of recovery.

2. **Pain**
   If you need to have a bone graft taken from your pelvis, this is often quite painful for a couple of weeks, and some people have a little numb area beneath the scar. Again, this is normal, but can be irritating.

3. **Infection**
   The most serious thing that can go wrong is infection in the bones of the foot. 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 foot to fuse in a satisfactory position. The result is not usually as good after such a major problem as if the foot had healed normally.

4. **Not healing**
   About 5% of talonavicular fusions do not heal properly and need a further operation to get the bones to fuse – basically another fusion.

5. **Minor Infections**
   Minor infections in the wounds are slightly more common and normally settle after a short course of antibiotics.

   Sometimes the cuts are rather slow to heal. This usually just requires extra dressing changes and careful watching to make sure the wound does not become infected.

Research shows that 5 to 10% of talonavicular 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 screws or pins, especially the screw through the heel, 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 is often possible to do under local anaesthetic. We find that about 20% of our patients need a screw taken out.

Important information

The information in this leaflet is for guidance purposes only and is not provided to replace professional clinical advice from a qualified practitioner.

Your comments

We are always interested to hear your views about our leaflets. If you have any comments, please contact the Patient Experience Team – Tel: (01323) 417400 Ext: 5860 or by email at: esh-tr.patientexperience@nhs.net

Hand hygiene

The Trust is committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

Other formats

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Tel: 01424 755255 Ext: 2620

After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

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Reference

The directorate group that have agreed this patient information leaflet: Orthopaedics

Next review date: March 2019
Responsible clinician: Mr A Skyrme, Consultant Orthopaedic Surgeon