

Tibialis Posterior Reconstruction (Adult Flat Foot Correction)

Following your consultation with a member of the Foot and Ankle team you are considering a tibialis posterior reconstruction – adult flat foot correction. This leaflet aims to give you additional information about your condition and the treatment. It is designed to give you some general details about the recovery from surgery if necessary and the common risks and complications. This leaflet is not for self-diagnosis. Please ask your surgeon if you have any further questions. If anything changes before the operation please let your surgeon or their secretary know (e.g. skin problems, infections, injuries)

What is it?

This describes an operation to improve the function and shape of your foot. Some people, as they get older, damage their tibialis posterior tendon on the inside border of the ankle/hindfoot. This can be due to a traumatic injury or due to wear and tear or both. This damage and other changes in the foot can lead to a worsening flat foot type deformity and pain in the hindfoot/ankle.

Why would it be performed?

Tibialis posterior reconstruction/flat foot correction operations are performed for two main reasons:

- Failure of conservation treatment for acquired flat foot – physiotherapy and orthotics can often treat the problem in the early stages. Rest in a boot/cast and injections may be used.
- Severe flat foot deformity with rupture of the tibialis posterior tendon

For some people, the joints of the foot become arthritic. These patients may be better off having a fusion of their hindfoot joints (subtalar fusion or triple fusion). Steroid injections or

special scans can help us to decide which joints to fuse.

What does it involve?

There are two main parts to the operation. Firstly the tibialis posterior tendon is repaired, often using another tendon to strengthen the damaged one (long flexor tendon to the toes, FDL). The second part is to correct the shape of the foot by moving the heel bone (calcaneum) and fixing it with a screw. Usually two cuts are made, one along the outer side of the foot and one on the inner side. These are about 10 cm long. The heel bone (calcaneum) is cut with a saw and then re-positioned. This is then fixed with one or two screws from the heel. The tendon of the calf muscle is often lengthened through one or more cuts in the back of the calf. The tibialis posterior tendon reconstruction is done through a cut on the inside (medial) of the foot, where the tendon is. Any diseased or damaged parts of tendon are removed and then the underlying stretched tissues are strengthened. One tendon to the toes is re-routed along the course of the damaged tendon and then tightened up. Some people with foot deformities have a tight Achilles tendon (“heel cord”) or weak muscles or both. The Achilles tendon may be lengthened during surgery by making small cuts in the calf and stretching the tendon. Most people who are reasonably fit can come into hospital on the day of surgery, having had a medical check-up 2-6 week before. After surgery, your foot will tend to swell up quite a lot. You will therefore have to rest with your foot raised in bed to help the swelling to go down. This may take anything from 2 days to more than a week. If you get up too quickly, this may cause problems with the healing of your foot. Generally you should keep the foot elevated as much as possible. You will not be able to put weight through the foot for 6 weeks.

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Once the swelling goes down and the cuts are healing, your foot will be put in plaster and you can get up with crutches and go home. The physiotherapist will show you how to walk with crutches. We will get you up as soon as possible! Most people are in hospital for 2-4 days.

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

The operation can be done under general anaesthetic (asleep). Alternatively, an injection in the back, leg or around the ankle can be given to make the foot numb while you remain awake. Local anaesthetic injections do not always work and, in that case, you may have to go to sleep if the operation is to be performed. Your anaesthetist will advise you about the best choice of anaesthetic for you. 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 painkilling tablets as required.

Will I have a plaster on afterwards?

You will need to wear a plaster from your knee to your toes until the heel bone has knitted back together. For the first 6 weeks you should not put any weight on your foot as it may disturb the healing bone. (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 without putting weight on your foot. You should go around like this for 2 weeks. 14-17 days after your operation you will be seen again by a nurse in the clinic. Your plaster will be removed and the cuts and swelling on your foot checked and stitches removed. If all is well you will be put back in plaster. You should continue walking with your crutches but only partial weight

bearing. This means resting your foot on the floor for balance at most and to make walking easier but not putting full weight on the foot. 6 weeks after your surgery, your plaster will be removed and an aircast boot is usually fitted. After this, you can put your full weight on your foot with crutches. Increase the weight you put through your foot gradually as pain and swelling allow. If you are in a removable boot, take this off when safe at home and move your foot and ankle about gently. Physiotherapy will begin shortly after coming out of plaster.

How soon can I....

Walk on the foot?

You should not walk on the foot for at least 2 weeks after surgery. Your surgeon or foot and ankle nurse 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 or an aircast boot.

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 4-6 weeks of surgery. 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 6 months off work. How long you are away will depend on where your job fits between these two extremes.

Drive?

Most people prefer not to drive until the plaster is off, and they can wear a shoe and are able to fully weigh bear. Drive short distances before long ones. If you cannot safely make an emergency stop your insurance will not cover you in the event of an accident. If only your left foot is operated on and you have an automatic car, you can drive within a few weeks

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of the operation, when your foot is comfortable enough and you can bear weight through it.

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. The foot will be stiffer after surgery and you may not be able to do all you could before. 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 can be difficult. It is unusual to play vigorous sports such as squash or football after major foot surgery.

Risks

- COVID-19 infection increases the risk of serious complications and we recommend you read the separate leaflet about this. If you are in one of the vulnerable groups you should think very carefully about proceeding with surgery unless it is absolutely necessary
- Chronic regional pain syndrome (CRPS)
- The main problem is the swelling of the foot, which may take many months to go down fully. 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 you may be concerned that something has gone wrong. If you are worried about the swelling of your foot, ask one of the foot and ankle team (your physiotherapist, nurse or surgeon)

whether the amount of swelling you have is reasonable for your stage of recovery.

- The most serious possible problem is infection in the bones of the foot. This only happens in about 1 in 100 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 more surgery to encourage the foot to heal in a satisfactory position. The result is not usually as good after such a major problem as if the foot had healed normally.
- Minor infections in the wounds are slightly more common and normally settle after a short 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.
- Research shows that 5-10 in 100 operations 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 by a simple operation.
- Deep vein thrombosis/Pulmonary Embolus (blood clot in your legs or lungs)

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Further information

The figures for complications given in this leaflet have been taken from information produced by the British Orthopaedic Foot Surgery Society using audits from all areas of the UK.

The British Orthopaedic Foot Surgery Society web site is available at:

www.bofas.org.uk

Mann, Coughlin and Saltzman (2007) Surgery of the Foot and Ankle 8th edition , Elsevier, Philadelphia

Myerson , S (Ed) (2000) Foot and Ankle Disorders, Saunders, Philadelphia

NHS Constitution. Information on your rights and responsibilities. Available at www.nhs.uk/aboutnhs/constitution

www.footcaremd.com - Designed for patients and run and maintained by the American Orthopaedic Foot and Ankle Society. The information about tibialis posterior dysfunction can be found under the heading "progressive flat foot"

Recent BMJ article intended for GPs.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC534847/pdf/bmj32901328.pdf>