AMIT AMIN
FOOT & ANKLE SURGEON

Flat Foot Surgery

What problems will flat foot surgery resolve?

There are a number of conditions that predispose to a flat foot, and if conservative measures have failed, we then consider surgical correction.

Typical symptoms include arch pain on the inside of the foot, as well as pain on the outside of the foot under the fibula bone, caused by pinching – so called 'subfibular impingement'.

Surgery is primarily aimed at resolving pain, by realigning the foot and hence taking the pressure of the arch, and to allow more space for the soft tissues on the outside of the foot.

The shape of the foot will be improved, but this is not the primary aim of surgery, and most patients still need arch supports post surgery.

What does surgery entail?

The surgery will depend on the following factors:

- The exact cause of your flat foot.
- Whether you have a fixed or flexible deformity.
- Whether you have any arthritis.

Surgery for - Accessory navicular bone

Your tibialis posterior tendon will have been assessed with an MRI scan. In most cases the tendon with this problem is normal. Surgery involves removal of the extra bone and reattachment of the tendon. The shape of your foot will not change but your pain should be improved. In some cases the extra bone can be fused with your main navicular bone using screws. The advantage here is that the tendon does not need reattaching. If your flat foot is very severe, then occasionally we recommend a calcaneal osteotomy (heel shift surgery), or similar interventions – the exact details will be discussed and communicated in clinic, and in writing.

Surgery for - Dysfunctional tibialis posterior tendon

If you have a flexible foot, with no wear and tear, we try to perform an operation that preserves movement. Typically this involves cutting the heel bone and shifting it inwards. This can be done through minimally invasive surgery, utilising specialised instruments. Screws are used to hold the heel in its new position.

The diseased tibialis posterior tendon is removed as it is usually thickened and scarred. We then transfer the tendon that moves your little toes into the navicular bone, which then acts as your new tibialis posterior tendon and supports your arch.

Additional procedures are added as necessary to put your foot flat to the ground and will vary from person to person. The most common of these will be a release of the calf muscle, which is often found to be tight.

If you have arthritis or a stiff foot, a fusion will be performed. The joints at the back of your foot are repositioned to allow your arch to be restored, and are permanently fused (joined) together. Screws and plates are used to hold the bones stable during the healing phase. Following surgery the same protocol is used for rehabilitation.

What happens after surgery?

A plaster cast is applied and no weight-bearing is allowed for 4-6 weeks.

Thereafter an aircast boot is used to allow gradual weight-bearing, and physiotherapy started.

It can take 4-6 months for swelling to turn the corner.

The overall recovery period following this major surgery is 9-12 months.

Orthotics may still be required after surgery once the swelling has settled. The surgery improves pain, but the shape of your foot may not change dramatically.

What are the complications?

Swelling – Initially the foot and ankle will be swollen and needs elevating. The swelling will disperse over the following weeks and months but will remain evident for up to 3-6 months.

Wound healing problems – The risk of serious wound healing problems is approximately 1%. It is important to keep the foot elevated over the first 10 days to reduce the swelling and risk of wound healing problems. In rare circumstances when the wound is problematic, further surgery can sometimes be required.

Scar sensitivity – The scars can be quite sensitive following surgery but this usually improves over 3-6 months. Regular massage can help make the scar less sensitive.

Infection – The risk of deep infection occurring is approximately 1%. You will be given intravenous antibiotics to help prevent this. It is important to keep the foot elevated over the first 10 days to reduce the swelling and risk of infection. Smoking increases the risk 16 times. If there is an infection, it may resolve with a course of antibiotics but may require a period of hospitalisation or rarely, further surgery.

Stiffness – this is common to begin as you will be immobilised for 2-6 weeks in a cast, and then in a boot for about 4 more weeks. Long-term stiffness is rare, but does occur as we are keeping you immobilized for a period of time. Sometimes permanent stiffness requires you to modify life around the problem.

Non-union – This describes the bone not healing after being re-set and fixed in its new position. This might require further surgery.

Nerve damage – Damage to nerves close to the skin is common, and areas of numbness common. Most commonly this does not cause any functional issues.

Chronic Regional Pain Syndrome – this is where the nerves around the foot and ankle become overly sensitive. The area swells, changes colour and becomes stiffer than expected. It is exceptionally uncommon, but can be very debilitating. If this is diagnosed, then I will refer you to a specialist pain doctor. The outcome of surgery can be suboptimal in this situation.

Deep Vein Thrombosis (DVT) – This is a clot of blood in the deep veins of the leg. The risk of a clot occurring is reported as less than 1% after foot and ankle surgery which is generally substantially lower than after hip or knee surgery. Suspicion of DVT is raised if the leg becomes very swollen and painful. There are tests that can be performed to confirm / exclude the presence of a DVT. If confirmed, you will probably require treatment with a blood thinning agent (heparin preparation and / or warfarin). The main concern with regards a DVT is

that rarely (<1:1000 chance with foot and ankle surgery) a piece of clot can break away in the leg and travel to the lungs which is much more serious and can be life-threatening. This is called a pulmonary embolus and signs of this include chest pain and shortness of breath. For the first 2 weeks following surgery, you will be treated with a blood thinning agent (LMWH – low molecular weight heparin injections) to minimise the risk of DVT / PE but this does not afford total protection and exercises to keep the toes and knee moving are advised, as well as remaining generally mobile. If you are concerned that the leg has become more swollen and painful (some swelling always occurs after surgery), or if you experience chest pain / shortness of breath, then you should contact the hospital, general practitioner, or accident and emergency department immediately.

On-going pain - Some patients continue to experience pain, and this can be due to recurrence of the deformity or from progression of wear and tear in the joints at the back of the foot. **The success rate of surgery is in the order of 75-85%.**

Sick Leave

In general 4 weeks off work is required for sedentary employment, 6-12 weeks for standing or work that requires a lot of walking and 12-16 weeks for manual / labour intensive work.

Driving

You will be able to return to driving following the 6 weeks review, based on satisfactory progress.

These notes are intended as a guide and some of the details may vary according to your individual surgery.