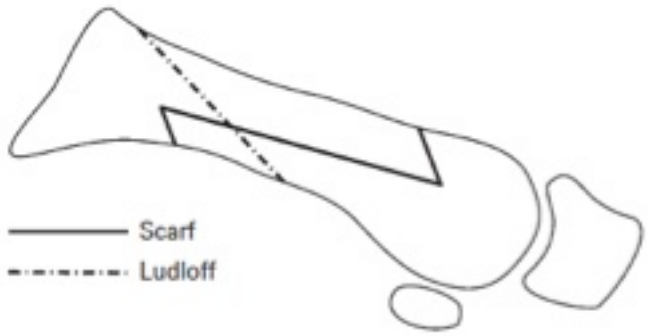
AMIT AMIN
FOOT & ANKLE SURGEON

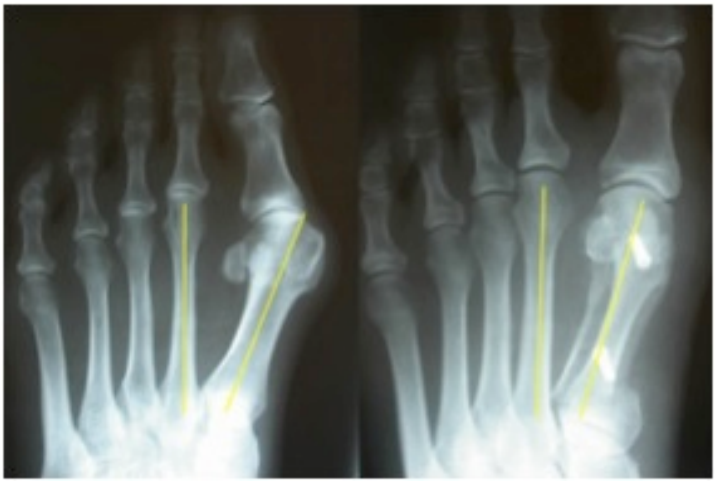
Bunion Surgery

Scarf and Akin osteotomy

This is the most common procedure used to correct bunions in the UK and Europe. It involves removing the prominent bump and realigning the metatarsal bone with an osteotomy (cut in the bone followed by screw fixation), combined with repair of the joint capsule and ligaments. This will produce a narrower foot and a straighter big toe. There may also be simultaneous surgery on the lesser toes, if indicated. The term 'Scarf' describes the 'Z' shaped cut that I use in this operation in order to straighten the big toe, shown below. The broken line, denotes the Ludloff osteotomy, another technique more common in the USA.



Following making a skin incision over the inner aspect of the foot, the first metatarsal bone is cut in a Z fashion, as shown above and half of the metatarsal is shifted into the correct position. This new position is held with small titanium screws. A second cut is often needed in the first bone of the big toe as well, and this is called the 'Akin' osteotomy. It corrects the deformity fully and is fixed with the same screws.



In more severe cases, where it is not physically possible to straighten the toe, a second incision is needed between the first and second toes, to release the tight structures tethering the toe in its deviated position.

95-99% of patients are candidates for the Scarf Osteotomy, with the remaining patients having a deformity too severe to correct with this technique. In these cases, a fusion of the big toe joint or the midfoot is required.

The procedure is performed usually one foot at a time, in situations where both feet are affected. Occasionally both feet can be corrected at the same time, but this will need careful discussion, as it can be very difficult to manage after surgery, and the surgical risks are slightly higher.

You will be able to go home on the same day unless the surgery is in the evening. A general anaesthetic is most commonly administered and a 'block' of the nerves with local anaesthetic as well. The 'block' usually guarantees that pain will be minimal in the post-operative period. The foot can therefore feel numb, which is expected/normal and will disappear over 12-48 hours.

The bandages applied during surgery stay on for 2 weeks, and it is imperative to elevate the foot to heart level as much as possible in this period. The foot should be up more than down as a rule. You will be fitted with a heel weight-bearing shoe in hospital, and a crutch as needed. You will need to help weight bear for 5 weeks.

We occasionally see some bleeding evident on the bandages after a few days, and if visible this indicates that the bandages will need to be changed. Pain is not usually severe, but can vary from patient to patient. Pain killers should be taken regularly for 72 hours and then stopped and taken only as needed.

Post-operative course

Day 1 onwards

- Foot wrapped in bulky bandage. To be kept dry for 2 weeks, until wounds healed
- Start walking on the heel in surgical shoe. Can move ankle joint when not walking. Heel weight bearing for 5 weeks
- Elevate and take pain medication regularly
- Keep foot above heart 80% of the time for first 14 days
- Expect numbness in foot 12-24 hours, as an ankle block for pain relief will have been administered.

2 weeks

- Follow-up in the outpatients for wound review & removal stitches if needed
- Start to move big toe regularly to prevent stiffness – I will instruct on this
- Physiotherapy to start any point from 2 weeks once wounds fully healed
- Shower when incision dry, usually at 2-3 weeks post-surgery

5-6 weeks

- Out-Patient follow-up - If X-ray satisfactory, can start to use regular shoe
- It is often difficult to use narrow shoes upto 3 months post-surgery due to swelling

It usually takes 9-12 months to fully recover, with stiffness and swelling persistent, but improving over this time period.

Main risks of surgery

Stiffness – this is common to begin and entirely expected. Early movement is key from 2 weeks post surgery, and I will instruct you in clinic. Sometimes patients lose a little motion in the toe, but this typically is not too troublesome. There is no simple treatment to resolve stiffness if still persistent at 9 months – 1 year post surgery, and one may have to modify life around it.

Swelling – Initially the foot will be swollen and needs elevating. Often shoes will remain tight for 8-12 weeks. The swelling will disperse over a period of 6-9 months.

Infection – There is always a risk of infection with surgery. You will be given 1 dose of intravenous antibiotics during surgery. The best way to reduce the chance of acquiring an infection is to keep the foot elevated (80% of the time) for 14 days. Smoking increases the risk 16 times. If there is an infection it normally resolves with a course of oral antibiotics.

Wound problems – Sometimes the wounds can be slow to heal and this needs to be closely observed. This may mean frequent visits to the clinic, and repeat dressings.

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

Nerve damage – A nerve supplying the side of the toe lies beneath the incision, and this is at risk of damage. Usually it is only bruised and will recover. If the damage is permanent, there will be a small patch of numbness. This does not normally cause any disability.

Chronic Regional Pain Syndrome – This is where the nerves around the big toe 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.

Under-correction – Occasionally, the deformity of the toe is not fully corrected. This is more common in severe cases. This is rarely problematic but occasionally does require further surgery.

Overcorrection – Very rarely the toe can be over-straightened so that it angles away from the foot (hallux varus). If troublesome, this may need corrective surgery.

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

Malunion – This is where the bones heal but not in the correct position. Minor malunion is well tolerated, but more significant deformity might require further surgery.

Tendon injury – The tendon that bends the tip of the toe downwards is at risk when we perform the Akin osteotomy. Whilst every effort will be made to protect it, damage to the tendon can result in some weakness and loss of balance. This may require more surgery, or modification of life around the problem.

Transfer pain – This describes pain in the fore part of the foot, after bunion correction surgery. There is risk of shortening the metatarsal during the surgery, and on occasions this can be desirable (for example in cases where the big toe joint is also mildly arthritic). The toe can visibly look shorter in addition. Stiffness may also be present in the big toe. Such factors may make big toe function less than satisfactory, and more pressure is placed under the ball of the foot – resulting in transfer pain. This can result in inflammation and rarely stress fractures. Further investigations are required if you start to experience transfer pain.

Avascular Necrosis – This is where the blood supply to the bone is disrupted, leading to the bone tissue dying and collapsing, and the joint surfaces being damaged. This can lead to arthritis (pain and stiffness), which may require further surgery. This complication is exceptionally rare occurring in <1% of cases.

Deep Vein Thrombosis (Clot in the leg) – This is a clot in the deep veins of the leg and the risk of this occurring following foot and ankle surgery is low (generally< 1%). The fact that you are mobile after surgery and able to take weight through foot helps to minimise this small risk. However, it is sensible to try and move the toes and the ankle regularly following the surgery and probably also sensible to avoid a long-haul flight in the first 4 weeks following surgery. If a deep vein thrombosis (DVT) occurs then you will require treatment to thin your blood as this helps prevent any of the clot travelling to the lungs (pulmonary embolus / PE) which can be much more serious. If you develop severe pain and swelling in your calf, you should attend A+E, and inform my team.

Sick leave

4 weeks off work for sedentary jobs
6 weeks off work for standing/walking jobs
8 weeks off work for manual / labour jobs

Driving

You will be able to return to driving from week 6 post surgery.

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