

## PATIENT INFORMATION: FIRST METATARSOPHALANGEAL JOINT FUSION

### What is metatarsophalangeal joint arthritis?

Arthritis of the big toe can be very painful. The joint surfaces of the first metatarsal and the proximal phalanx, the two bones that make up the main big toe joint, have worn away leaving exposed bone underneath. This can be the result of trauma, inflammatory conditions like gout, infection, a long-standing bunion or genetic causes. In some patients, no cause is identified.

### What non-operative treatment options are there?

Arthritis of the big toe can be treated successfully without an operation. Lifestyle changes like avoidance of high impact activity, weight loss, change in footwear to a stiff-soled shoe, smoking cessation and avoidance of stairs and relieve the pain. Physiotherapy to address a tight calf or other muscle imbalances can reduce the pressure on the big toe during push-off. Orthotics like a stiff-soled insole can distribute the pressure on the big toe during walking and minimise the stress, and therefore the pain, from the big toe. Simple analgesics like paracetamol and ibuprofen can be helpful. Finally, an injection of local anaesthetic and steroid into the big toe can be painful but also help relieve pain in the short to medium term. In some patients, an injection can relieve pain permanently.

### What does the operation for big toe arthritis involve?

If patients have tried all non-operative measures, and still have ongoing pain, surgical options can be discussed. The most common procedure for big toe arthritis is a fusion of the first metatarsophalangeal joint. A 3-4cm incision is made on the inside of the great toe and the joint surfaces are removed, leaving two edges of bone. These are fused together and compressed with either screws, a plate or a combination of both. It is normally performed as a day case operation. The operation is normally done under a general anaesthetic but can be done under a spinal anaesthetic or local anaesthetic as well. Your anaesthetist will discuss the most appropriate anaesthetic and pain relief options for you.

### What happens after the operation?

You can go home when comfortable and safe, normally on the same day. You will be able to weight bear on your heel following the surgery. It is recommended you rest as much as possible for two weeks following the procedure and keep your feet elevated to relieve pain and swelling. You will be seen two weeks following surgery to remove your sutures and check the wound and have a silicone toe splint applied to hold the toe in position. Six weeks following surgery you will have an x-ray of your foot, followed by a review with your surgeon. If the bones have fused, you can commence weight bearing and get on with normal activities like driving and walking. High impact activity like running can be attempted once the bones have fused and the pain has resolved.

### What are the limitations of a first metatarsophalangeal joint fusion?

The aim of the procedure is to stiffen the big toe to remove pain from arthritis. This makes it difficult to wear heels and generally patients are unable to wear heels greater than one inch in height. Stiffness of the toe may limit activities where a push-off is required, such as sprinting and jumping. You may notice a limp or a change in gait after the operation. A trial of a stiff-soled shoe before the operation can help mimic what your gait would be like following the procedure.

### What are the risks of a first metatarsophalangeal joint fusion?

In approximately 5% of people the big toe does not fuse ('non-union'). The risk of a non-union occurring is higher in smokers and diabetics. Approximately half of people with a non-union actually don't have problems but some will require a revision procedure.

Occasionally the metalware used can be prominent and needs removal as the swelling resolves.

Infections of the wound can occur. Normally these are superficial and settle with dressings and/or antibiotics. Sometimes wound problems can be quite serious and require formal surgical debridement under a general anaesthetic.

The foot can swell considerably following the operation. Swelling can persist for up to six months following surgery.

Rarely, a blood clot can occur in your legs or your lungs. The risk of this is quite low as we encourage you to mobilise on your heel following surgery.

Sometimes the small nerves around the incision can be damaged during the operation. This can result in numbness of the scar or the big toe. In some patients, this is permanent.

If you have any further questions, please contact the surgery below:

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