

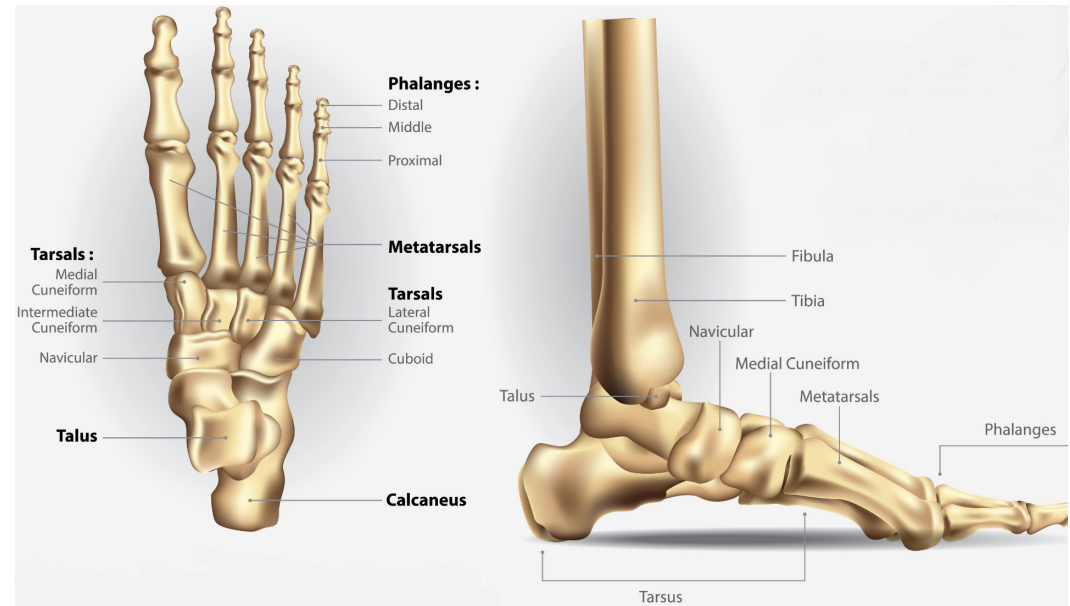
Foot Fusion Surgery

Arthritis of the foot

There are many bones in the foot. These bones articulate at joints. The articulating surfaces in the joints are lined by cartilage. Arthritis is the process where the cartilage deteriorates and becomes deficient. Pain and swelling of the affected joints are the hallmarks of arthritis. Osteophytes (bone spurs) may form and lead to stiffness of the joint and cause painful bumps. There is often a family history or a history of trauma which may be repetitive. The pain is initially activity related but as the disease progresses, the pain becomes present at rest. When the disease becomes severe, bare areas of bone are exposed within the joint and the pain starts to interfere with quality of life and sleep.

The initial management of arthritis in the foot is non-operative. This mainly consists of activity and footwear modification. High impact activities such as running or carrying heavy loads are avoided. Shoes with a wide toe box, a stiff sole, soft uppers and laces provide the best support for the arthritic foot. Weight loss via regular low impact exercises such as swimming, walking on a treadmill and a stationary bicycle set on low resistance is helpful. Simple analgesia such as paracetamol and anti-inflammatories can also be taken as required. Cortisone (steroid) injections into the affected joints can also help provide relief from arthritic pain. All of these measures do not 'cure' the arthritis as the lost cartilage does not regenerate. Rather, they delay the progression of the disease and provide symptomatic relief. Stem cells in their present form are considered experimental and the scientific data does not support routine use.

When all non-operative measures have been attempted and have failed or are simply not practical, surgery can be considered.



Bones of the human foot



X-ray of midfoot and 1st metatarsophalangeal joint fusion



Subtalar fusion

Surgery | Rehabilitation and recovery

Generally speaking, surgery for arthritis in the midfoot (tarsometatarsal, naviculocuneiform joints) and the hindfoot (subtalar, talonavicular, calcaneocuboid joints) involves fusing the affected joints. This involves removing all the osteophytes and the remaining cartilage. The affected joint is then compressed using plates, screws or a combination. Bone graft is usually harvested from the heel bone in the affected foot and inserted into the joint prior to compression, to increase the chances of a successful fusion. The procedure is done under a general anaesthetic and supplemented with a local anaesthetic block. A hospital stay of 1-2 nights is usually required. Ambulation with crutches begins straight away but the affected leg is kept non-weight bearing for 6 weeks usually. A half cast is applied at the end of surgery and changed to a full cast at 2 weeks. This is changed to a boot at 6 weeks, when weight bearing and physiotherapy can commence. The boot is usually then worn for another 6 weeks. To reduce the risk of blood clots, clexane which is a self-administered injection is used daily for the first 6 weeks when non-weight bearing. The recovery time is between 3-6 months, depending on the joints that need to be fused, with the larger joints taking longer. Driving is usually not permitted while in a cast.

For the forefoot (1st metatarsophalangeal joint and lesser metatarsophalangeal joints), arthritis is usually treated with either a fusion or a replacement of the first metatarsophalangeal joint and shortening and elevation of the lesser metatarsals. These operations are done under general anaesthesia and involve 1-2 nights hospital stay, depending on the number of joints that are operated on. A special sandal, rather than a cast or boot are used for the joints of the forefoot. This is worn for 6 weeks usually.

These operations are generally safe and are performed with the utmost care. However, complications may occur and these include infection, blood clots, wound problems, nerve injury and non-union (joint not fusing). These are all rare. Dr Lau will monitor the operated foot closely for weeks after the surgery to identify early and treat any potential complications.