

Ankle Arthritis

Ankle arthritis is loss of the ankle joint's cartilage lining and usually occurs over a period of years. The most common cause is trauma, but in some patients it may occur as part of a systemic process like rheumatoid arthritis or haemophilia. Regardless of the cause, the effect is similar. There is a narrowing of the ankle joint space between the tibia (shin bone) and the talus (ankle bone) and bony spurs (osteophytes) develop. The ankle becomes painful, stiff, and may grind or lock. Even though ankle arthritis is less prevalent than arthritis affecting the knee and hip, it can be equally debilitating and painful.



NON-OPERATIVE MANAGEMENT

Early or mild ankle arthritis is effectively treated with simple measures such as activity and lifestyle modification. These include losing weight, using walking aids such as a walking stick, and avoiding impact activities such as jumping and running. Low impact activities such as cycling, swimming, and walking are recommended.

When arthritis becomes more severe, the next step is painkillers and anti-inflammatory medications. Some people also find alternatives such as glucosamine and fish oil to be helpful.

Medications may be combined with physiotherapy, orthotics (shoe inserts), shoe modifications (rocker-bottom sole and high cut footwear), ankle bracing or a custom-made splint.

Sometimes injections of steroid or a lubricant (hyaluronate) may offer relief. However, as with all treatments, the degree and extent of relief varies from patient to patient.

OPERATIVE MANAGEMENT

When the previous measures fail, there are 3 main surgical options. These are arthroscopic debridement, joint arthrodesis (fusion), and joint replacement. The best option for an individual patient depends upon many factors including the severity of arthritis, the age and functional demands, and the presence of arthritis in other joints. The ultimate choice is a combined decision between surgeon and patient.

ARTHROSCOPIC DEBRIDEMENT

This is a day case procedure with a relatively rapid recovery (6-12 weeks). A small camera and surgical instruments are inserted through keyhole incisions. It is generally most suitable for early arthritis. Bone spurs and loose bodies can be removed, and irregularities in remaining cartilage may be tidied up.

However, as the underlying arthritic process is still present the response to surgery is variable. Around 70% will experience an improvement in symptoms but in around 2% of patients, the procedure may accelerate the deterioration. This may mean that further surgery is required sooner than initially expected. The duration of symptomatic improvement is unpredictable.

ANKLE FUSION (ARTHRODESIS)

This has been the "gold standard" treatment for severe arthritis. The surgical technique involves removing bone from the tibia and talus and holding them together with screws or plates. Eventually, the ends of the bones fuse together. Even though ankle motion is eliminated, adjacent joints compensate and may allow up to 30% of this motion to return. However the increased load across these other joints can cause arthritis to develop and up to 10% of patients will require fusion of other joints at some stage in the future.

ANKLE ARTHRITIS

In the past, this procedure was performed through large incisions. In many cases this can now be carried out using an arthroscopic technique through 4 or 5 small incisions around the ankle and lower leg. This results in less pain and a more rapid recovery. In more deformed ankles or following previous surgery, an open technique is usually still necessary.

Fusion is the main stay in younger patients with higher physical demands and in whom the ankle is the only affected joint. In these circumstances, a successful fusion is very reliable in providing long-term pain relief that results in a largely normal gait and allows return to more physical work.

Potential complications will be discussed with you but in general 90% of patients are satisfied. 5-10% of patients will require further surgery due to failure of the bones to fuse, and 10% may require surgery elsewhere in the foot for arthritis.



FUSION

REPLACEMENT

TOTAL ANKLE REPLACEMENT

Whilst the first ankle replacement was done more than 40 years ago, this procedure was not very successful until the creation of the latest generation of implants. In a total ankle replacement, metal components are used to replace the damaged ends of the tibia and talus, and a smooth polyethylene (plastic) liner is inserted between them.

When compared with an ankle fusion, it provides a similar level of pain relief but the main advantage is that it preserves some of the pre-operative ankle motion. As a result, it reduces the subsequent stresses upon the knee and other joints in the foot. It is best suited for older patients (over 65) with lower physical demands and a well-aligned ankle.

ARTHRODESIS

Hospital Stay	1-2 nights
Rest & Elevation	2 weeks
Non-weightbearing in Boot	6 weeks
Weightbearing in Boot	Further 4-6 weeks
Crutches/frame/scooter	6-8 weeks

TOTAL ANKLE REPLACEMENT

Hospital Stay	1-2 nights
Rest & Elevation	2 weeks
Non-weightbearing in Boot	4 weeks
Weightbearing in Boot	Further 4 weeks
Crutches/frame/scooter	4-6 weeks

TIME OFF WORK (FUSION/REPLACEMENT)

Seated	4-6 weeks
Standing	3-4 months
Walking Well	3-4 months
Swelling Settles	6-12 months
Final Result	12 months

The main disadvantage is that it contains moving parts that can wear out. This occurs in roughly 2-3% of patients per year and when it occurs, it usually requires conversion to an ankle fusion. Ankle replacements are checked annually with x-rays, and small adjustment or maintenance procedures may need to be performed.

The potential complications will be discussed with you but in general 90% of patients are satisfied. 5% will have a wound problem or early failure requiring fusion, and 10% may require further adjustment surgery in the first 5 years. After 5 years, the failure rate is 2% per year for all causes and so roughly 80% are still functioning after 10 years.

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