

Ankle Arthritis



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Introduction



Ankle arthritis is the loss of cartilage lining the ankle joint and usually occurs slowly over a period of years. The most common cause is a previous injury, but in some patients it may occur as part of a more widespread process such as rheumatoid arthritis, haemophilia or gout.

Regardless of the cause, the effect is similar. There is a narrowing of the ankle joint space between the tibia (lower leg bone) and the talus (ankle bone) due to the cartilage loss and bony outgrowths or spurs known as osteophytes develop around the joint space. In addition to pain, patients may notice that the ankle swells and feels warm. They may feel grinding or popping, and the ankle may be stiff particularly in the morning or at the beginning of activity.



Even though ankle arthritis is far less prevalent than arthritis affecting joints such as the knee and hip, it can be equally debilitating and painful.

Non-Operative Treatment

In its mildest form, arthritis may not need any treatment aside from simple lifestyle and activity modification. These include losing weight, using walking aids such as a walking stick, and avoiding impact activities such as jumping and running. In addition we recommend lower impact exercise such as swimming, cycling and walking.

When arthritis becomes more severe, the next appropriate step may be medication such as anti-inflammatories, analgesics (e.g. panadol and codeine) or 'anti-arthritis' medications such as glucosamine. These may be used in combination with physiotherapy, orthotics (shoe inserts), shoe modifications and various ankle braces.

Finally, a corticosteroid injection may offer relief of inflammation but as with all treatments, the degree and extent of relief varies from patient to patient.

Operative Treatment

When all these above measures fail, we offer three main surgical options aimed at improving quality of life. These include arthroscopic (via a telescope) debridement, joint fusion or arthrodesis and joint replacement. The best option for an individual patient depends upon many factors including the severity of arthritis, the age and functional demands of the patient and the presence of arthritis in other joints. The ultimate choice is a joint decision between surgeon and patient.

1. Arthroscopic Debridement

This is a day case procedure with a relatively rapid recovery (4-6 weeks) as it only requires the surgeon to make two or three small incisions around the joint for insertion of a camera and necessary surgical instruments. It is generally most suitable for early arthritis. Any arthritic spurs and loose bodies can be removed and irregularities in remaining cartilage may be shaved and smoothed.

However, as the underlying arthritic process is still present, both the rate of improvement (around 70% of patients benefit) and the time for which the benefit lasts is less than that of the more major surgeries.

Finally, in more advanced cases, by removing spurs and increasing movement, a small number (2%) may experience more rapid degeneration of the joint and require more major surgery at an earlier stage.

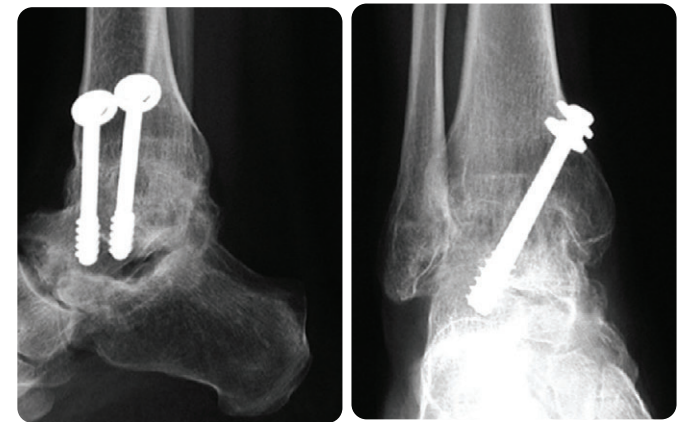
2. Ankle Fusion (Arthrodesis)

This has been the "gold standard" treatment for severe arthritis. The surgical technique involves removing bone from the tibia and talus and binding them together with screws. Eventually, the ends of the bones grow or fuse together. Even though ankle motion is eliminated, adjacent joints compensate and may allow up to 50% of this motion to return. However, one potential result is that long term degenerative arthritis may occur in these joints and 5-10% of patients will require fusion of other joints at some stage in the future.

In the past, this procedure was performed through large incisions that resulted in long recovery times. In most cases, we are able to perform the bony preparation and screw insertion using an arthroscopic technique through 4 or 5 small (1-2cm) incisions around the ankle and lower leg. This results in less pain and a more rapid recovery. Occasionally however, in more crooked ankles or following previous surgery, we are forced to use open techniques.

The main role of fusion is in younger patients with higher physical demands and in whom the ankle is the only affected joint. It is also the best option in those with a poorly aligned ankle. In these circumstances a successful fusion is very reliable in providing long-term pain relief that results in a limp-free gait and allows return to more physical work.

Your surgeon will go through the potential complications with you but as a guide, out of 100 patients having an ankle fusion, roughly 90 will be happy with the outcome, 2 will require further surgery as fusion is delayed and 8-10 will have ongoing pain usually due to arthritis elsewhere in the foot.



Ankle Fusion

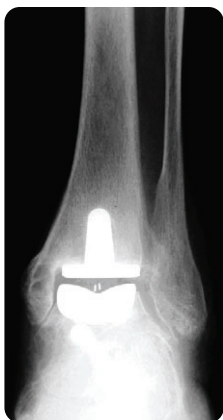
Recovery (Arthroscopic technique)

Hospital stay	2 nights
Time in cast – plaster back slab (Non weight bearing)	2 weeks
Time in cast – full plaster (Non weight bearing)	4 weeks
Time in walking boot (Fully weight bearing)	6 weeks
Walking well	3 months
Walking well and swelling settled	6 months
Final result	12 months

3. Ankle Joint Replacement

This is a relatively new procedure compared to hip and knee replacement and was not very successful until the creation of the latest generation of implants. One metal component is fixed to the tibia and the other to the talus. The third component is a polyethylene (dense plastic) bearing which floats between the other two. When compared with an ankle fusion, it provides a similar level of pain relief but the main advantage is that it preserves the pre-operative motion of the ankle. As a result, it reduces the subsequent stresses upon the knee and upon other joints in the foot. It is best suited for more elderly patients (over 65) with lower demands (not heavy physical work) and a well aligned ankle.

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, usually requires conversion to an ankle fusion.



Joint Replacement

Your surgeon will go through the potential complications with you but as a guide, out of 100 patients having an ankle replacement, roughly 90 will be happy with the outcome, 2 will have early wound problems requiring readmission to hospital, 2 will fail within 2 years and require fusion and around 5 will require adjustment surgery within 5 years due to mechanical factors. After 5 years, the failure rate is 2% per year for all causes and so roughly 80% are still functioning after 10 years.

Recovery

Hospital stay	2-3 nights
Time in cast (Non weight bearing)	2 weeks
Time in walking boot (Weight bearing)	6 weeks
Walking well	3 months
Walking well and swelling settled	6 months
Final result	12 months

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