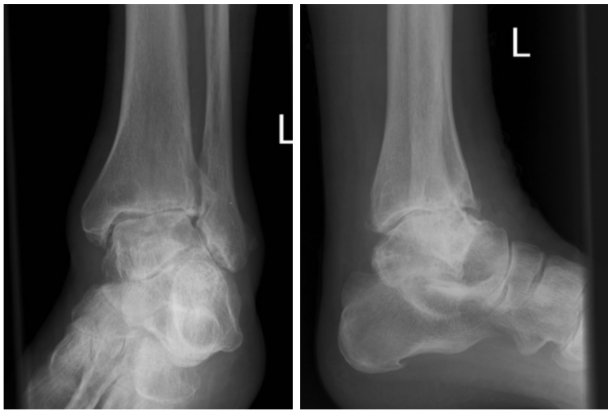
Ankle Joint Arthritis

Ankle arthritis is loss of the ankle joint's cartilage lining and usually occurs over a period of years. The most common cause is previous trauma, 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 (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 (if tolerated). 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 fitted splint. Sometimes injections of cortisone or a lubricant (hyaluronate) may offer temporary relief. However as with all treatments, the degree and extent of relief varies from patient to patient.

Operative Management

When the previous treatment measures fail, there are three 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, age, functional demands, and the presence of arthritis in other joints. The ultimate choice is a combined decision between surgeon and patient.

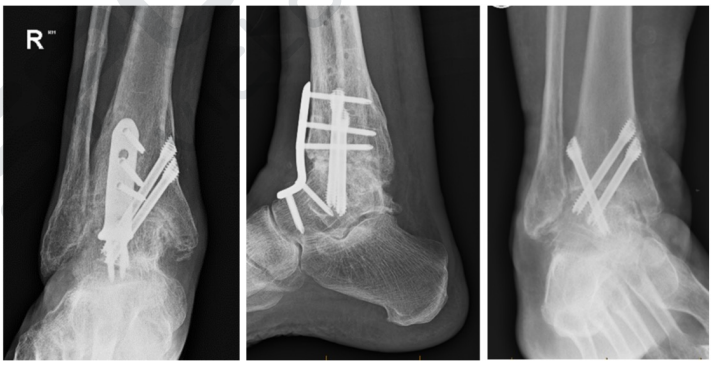
Arthroscopic Debridement

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 the 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 their arthritis. This may mean that further surgery is required sooner than initially expected. The duration of symptomatic improvement can be unpredictable.

Ankle 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 and in some cases an additional plate. Eventually, the ends of the bones grow or 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 a small percentage of patients may require fusion of other joints at some stage in the future.



Traditionally, this procedure was performed through large incisions. In most cases this can now be carried out using an arthroscopic (keyhole) 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.

Potential complications will be discussed with you but in general 90% of patients are satisfied following an arthrodesis procedure. Up to 3% of patients will require further surgery due to failure of the bones to fuse, and as mentioned previously, 10% may require surgery elsewhere in the foot for arthritis.

Total Ankle Replacement

An alternative to ankle arthrodesis is ankle replacement surgery. This is a relatively new procedure compared with hip and knee replacement and was not very successful until the creation of the later generation of techniques and 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 glides between the other two.

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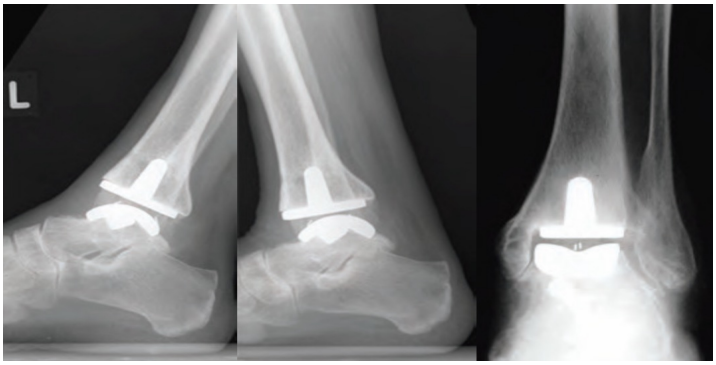

When compared with ankle fusion, it provides a similar level of pain relief, but the main advantage is that it preserves some of the pre-operative ankle motion. As a result, it is thought to reduce the subsequent stresses upon the knee and other joints in the foot. It is best suited for more elderly patients (over 65) with lower physical demands 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, may require 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. Approximately 5% will have a wound problem or fail early requiring fusion, and 10-15% 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 75% are still functioning after 10 years.

Recovery Times

Arthrodesis	
Hospital stay	1-2 nights
Rest & elevation	10-14 days
Half-cast/backslab	2 weeks (non-weight bearing)
Full cast	4 weeks (non-weight bearing)
Walking CAM boot	6 weeks (full weight bearing)
Crutches/frame	6-8 weeks

Replacement	
Hospital stay	2-3 nights
Rest & elevation	10-14 days
Half-cast/backslab	2 weeks (non-weight bearing)
Walking CAM boot	6 weeks (full weight bearing)
Crutches/frame	2-4 weeks

Time off work (both Arthrodesis or Replacement)	
Seated	4-6 weeks
Standing	3 months
Foot swelling	6 months
Walking well	6 months
Final Result	12 months

This brochure is a brief overview of the surgical management of ankle joint arthritis and not designed to be all-inclusive. If you have any further questions, please do not hesitate to contact your surgeon.

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