REEF Orthopaedic CLINIC

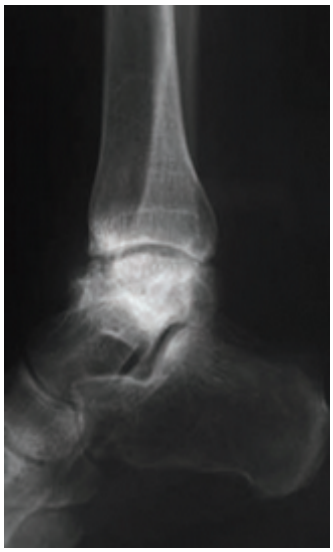
# Ankle Arthritis

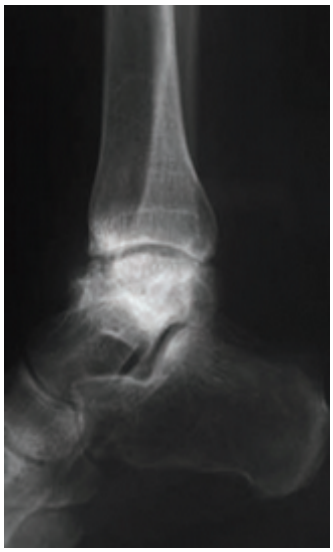
**Introduction**

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) and bony spurs (osteophytes) develop. The ankle becomes painful, often stiff and may 'grind' or lock up due to loose fragments of bone.

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

Early or mild ankle arthritis is 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 tablets (if tolerated). These may be used in combination with physiotherapy, orthotics (shoe inserts), shoe modifications (rocker-bottom sole) and an ankle brace. It is worth trying a lace up ankle brace or high top boots. Sometimes injections of cortisone or a lubricant may offer relief but as with all treatments, the degree and extent of relief varies from patient to patient.

## Operative treatment

When all these above measures fail, there are three main surgical options. These are 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). A camera and surgical instruments are inserted through small ('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 and 2-5% may actually deteriorate and require further surgery sooner rather initially expected. The duration of symptomatic improvement is unpredictable.

### 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 joining them 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 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.

In the past, this procedure was performed through large incisions that resulted in long recovery times. In most cases now this can be done 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 crooked ankles or following previous surgery, an open technique is necessary.
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.

Potential risks and complications will be discussed with you but in general 90% of patients are satisfied. 2 to 5 % 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.

**Recovery (Arthroscopic technique)**

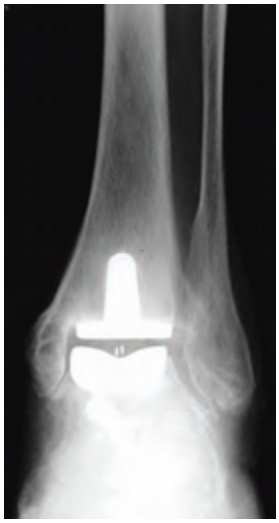
| | |
|---|---|
| Hospital stay | 1-to 2 nights |
| Cast/ crutches | 6 weeks |
| Walking boot | 6 weeks |
| Walking well | 3 months |
| Swelling settles | 6 months |
| Final result | 12 months |

**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 some of 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, which can take a long time to knit together successfully. Ankle replacements are checked annually with X rays and occasionally small maintenance procedures need to be carried out.

The potential complications will be discussed with you but in general 90% of patients are satisfied. 5% will have a wound problem or fail early requiring fusion and 2-10% require maintenance 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.

**Recovery**

| | |
|---|---|
| Hospital stay | 2-3 nights |
| Cast/crutches | 6 weeks |
| Walking well | 3 months |
| Swelling settles | 6 months |
| Final result | 12 months |

This brochure is a brief overview of ankle arthritis and is not designed to be all-inclusive. If you have any further questions please discuss them with your surgeon.