

# End Stage Ankle Arthritis

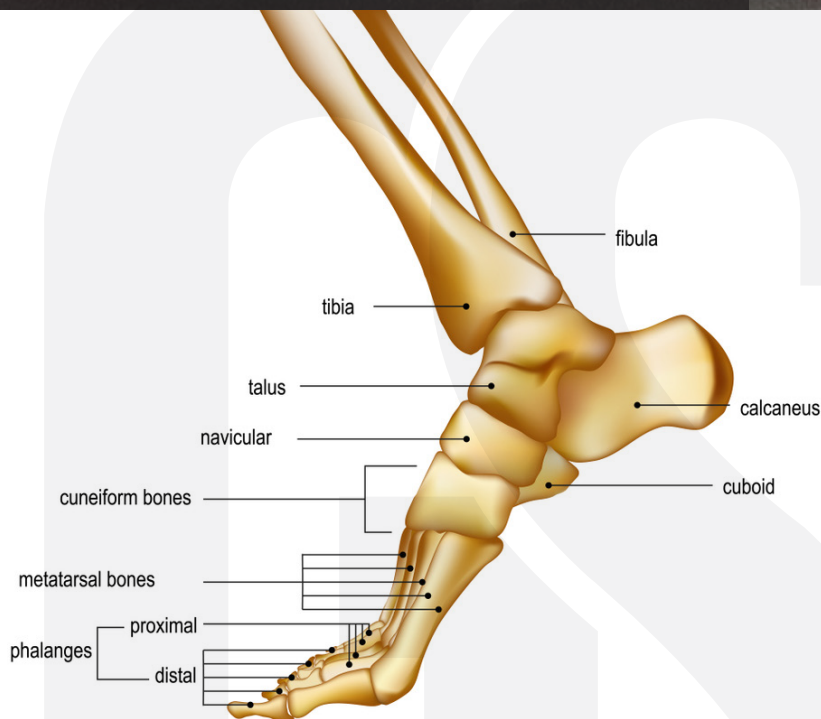
## Surgical Solutions

Ankle joint arthritis is a progressive cartilage degenerative disease resulting in pain and limited motion. It is an increasingly important issue affecting over **1%** of the adult population worldwide.

**78% of ankle arthritis results from articular injury from trauma, diagnosed as post-traumatic arthritis (PTA). This includes previous fractures, repeated ankle sprains, and ankle instability due to malalignment.**



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## Anatomy Of The Ankle Joint

The ankle joint is highly complex and is comprised of two main joints: the true (talocrural) ankle joint and the subtalar ankle joint.

The true ankle joint is comprised of the tibia, fibula, and talus. This joint enables up and down motion. The subtalar joint consists of the calcaneus and the talus. This joint enables side-to-side movement.

# Ankle Distraction

Ankle distraction (distraction arthroplasty) is a minimally invasive surgical procedure that is aimed at joint preservation and regeneration. It uses an external fixator that mechanically unloads the joint, taking the force away from the joint.

**This enables the cartilage to repair over a period of 8-12 weeks.**

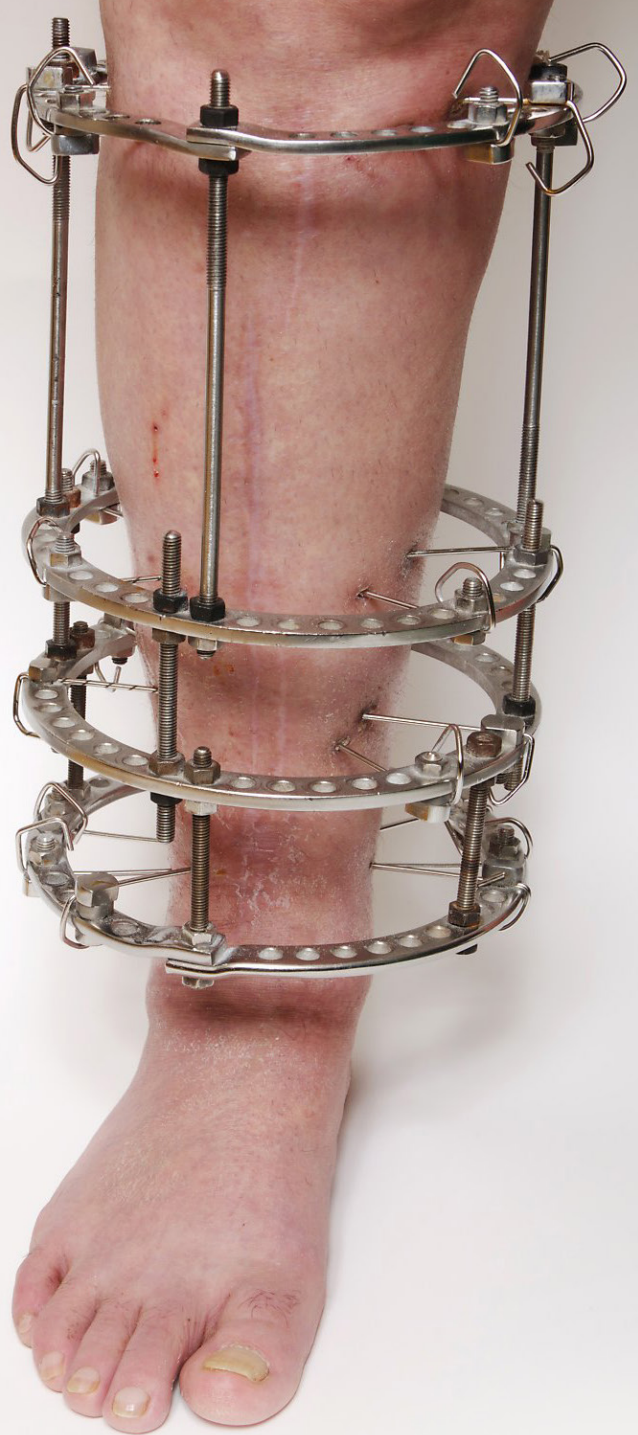
It is most suitable for younger patients, and returning to activities like running is possible using this method. Joint restoration is the primary focus of using an external fixator.

## Symptoms of Ankle Arthritis

Early symptoms of arthritis primarily include pain, swelling and stiffness. These symptoms will typically be noticed after activity, including standing or walking, as well as higher impact activities like running or jumping.

Progression of the disease results in more pain and stiffness. Patients with end-stage ankle arthritis will be in constant pain, even during periods of inactivity. Other symptoms include cracking sounds that cause an uncomfortable sensation or pain because of loose cartilage or bone.

**General weakness and the ankle giving way is a sign of ligament looseness that is associated with ankle arthritis.**



## Ankle Fusion

In ankle fusion (ankle arthrodesis), individual bones within the ankle joint are fused. This eliminates some motion within the joint that is otherwise causing pain and discomfort. Ankle fusion allows the patient to weight bear and walks post-recovery. It is a short and straightforward procedure that will help relieve pain. Patients typically spend around **12 weeks** in a cast, which is removed given good fusion. Patients may be required to wear a boot after surgery to assist with stability. Desired outcomes of surgery involving activity levels should be discussed with their surgeon. While results are typically successful in greater than **90%** of cases, it is essential to note that mobility will be compromised.

# Ankle Replacement

Total ankle replacement (ankle arthroplasty) is a solution to ankle osteoarthritis.

It can help relieve pain and maintain motion in the ankle joint and gives more mobility to the patient than traditional joint fusion. It is not optimal for a younger, athletic patient, and its main impact is on pain relief. It is therefore ideal for an older patient that is less active.

Ankle replacement is not suitable for a very stiff joint or for a joint with very severe misalignment, which would cause joint failure. Total ankle replacement does allow the patient to return to some low-level activities (such as walking, swimming, or biking) and potentially medium-level activities (tennis, hiking). Rehabilitation is required up to **6 months** after surgery. Out of the three surgical options, ankle replacement results in the quickest recovery; however, it is essential to note the high failure rate of the device (**25% within 5 years**), and revision is typically required within **10 years**.



## Post-Surgery: Ankle Replacement and Ankle Fusion

**After undergoing an ankle replacement or ankle fusion, you will spend 1-2 days in the hospital. Post-surgery you are to remain non-weight bearing for 6 weeks in a Range of Motion Boot. This will stabilize the ankle joint during the rehabilitation period.**

**You will be required to wear this for 12 weeks post operatively.**

Crutches and another rehabilitation aid (such as a knee scooter) will need to be organised before surgery. You can expect some pain and swelling following surgery. The leg will need to be kept elevated, and you will require oral pain medication. You will likely be examined at 1 week, 4 weeks, 6 weeks and 12 weeks, 6 months and 1 year post-operatively. After the initial 6 weeks, you will be able to begin weight-bearing in the boot (Dr. Slater will advise this at your 6-week appointment), and you will continue to wear the boot for approximately another 6 weeks.

# Post-surgery: Ankle Distraction

Following ankle distraction, you will have an external fixator frame attached for between 8 and 12 weeks. This can be a confronting change, both physically and visually.

It is important to follow proper pin site management guidelines that are recommended by your surgeon to prevent infection and further complications. Post-surgical imaging and check-ups will be required, after 1 week, 4 weeks, 6 weeks and 12 weeks, as well as 1 year post-operatively.

Since the frame provides mechanical support, patients can weight bear and walk on the operated leg two days after surgery

Oral pain medication and pin site care represent important parts of recovery for the ankle distraction patient.

## Potential Complications

Some complications are related to surgery in general. These include the risks associated with anesthesia, infection, damage to nerves and blood vessels, and bleeding or blood clots.

## CONTACT

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