

End Stage Ankle Arthritis



How do you choose between ankle fusion and replacement?

What are my choices?

You have been diagnosed with end-stage ankle arthritis. The two main surgical options that can help with pain and mobility are:

1. Ankle Fusion (Arthrodesis or AF)
2. Ankle Replacement (Total Ankle Replacement or TAR)

This leaflet explains the differences in a simple and easy-to-understand way.

What is an ankle fusion?

The worn-out ankle joint is fixed (fused) so it no longer moves. This removes pain by stopping bone-on-bone rubbing. Other joints in the foot take over some of the lost movement.

Benefits

- Excellent pain relief
- Very reliable long-term results
- Once fused, the joint does not wear out
- Very low revision (repeat surgery) rate
- Usually a one-off procedure

Things to consider

- Loss of ankle movement
- Walking on slopes or uneven ground may feel stiffer
- About 1 in 10 people need metalwork removed later
- A small number may need further surgery (e.g., injections or hardware removal)

What is an ankle replacement?

The damaged joint surfaces are removed and replaced with a metal and plastic implant. The aim is to preserve ankle movement.

Benefits

- Excellent pain relief
- Maintains some ankle movement
- Walking on slopes may feel more natural than after fusion
- Modern implants last longer than older designs

Things to consider

- Implants can loosen or wear over time
- Higher chance of needing further surgery in the long term
- Revision surgery is more complex than revising a fusion
- Occasionally the implant needs to be removed and the ankle fused later

Which Operation Is Best for Me?

Younger, more active patients often do better with fusion because it lasts longer with fewer revisions. Older patients (usually over 60) may benefit more from replacement, especially if other hindfoot joints are stiff, as preserving movement may improve everyday activities. Your surgeon will discuss the best option for your lifestyle.

Things to consider



How long do they last?

(Information based on the 25-year national study from England)

Ankle Fusion

- Very durable and usually permanent
- Revision surgery is rare (about 2–3% over 20 years)

Ankle Replacement

- Implants work well but may need maintenance or revision
 - About 10% need revision by 10 years
 - About 13% need revision by 20 years
- Younger patients have higher revision rates than older individuals.

Will I need more interventions later?

Ankle Fusion

- Most extra surgeries are minor, mainly metalwork removal
- Major revision is uncommon (2–3%)
- Long-term follow-up shows about 30% need some extra procedure, mostly minor (injection and removal of metalwork most common)

Ankle Replacement

- More likely than fusion to need further surgery
- May require: Debridement (clean-out surgery), Liner exchange, Revision of the implant, Fusion if the implant fails
- Around 35% need some further procedure over 25 years, with more major interventions than fusion.

What about arthritis in nearby joints?

The large 25-year study showed no major difference between fusion and replacement in whether nearby joints (like the subtalar joint) needed fusion later.

- Ankle Fusion: 8.6%
- Ankle Replacement: 6.8%

These rates are low and very similar.

Summary

Pain relief

AF - Excellent

TAR - Excellent

Ankle Movement

AF - Lost

TAR - Preserved

Long term Durability

AF - Lifelong

TAR - May need revision

Risk of further surgery

AF - Lower

TAR - Higher

Revision complexity

AF - Straightforward

TAR - Complex

Other joint arthritis

AF - theoretical but no

higher other joint fusion in 25 year study

TAR - similar rate of other joint fusion in 25 year study