

Tibiototalocalcaneal Arthrodesis (TTC Fusion)



Ankle Hindfoot Nailing™ (AHN) System—Source: Orthofix®

What Is a TTC Fusion?

A tibiototalocalcaneal (TTC) fusion is a complex reconstructive procedure that permanently joins (fuses) the ankle joint (tibia to talus) and subtalar joint (talus to calcaneus).

This procedure is usually reserved for end-stage deformity or advanced limb salvage reconstruction when pain, deformity, or instability cannot be corrected by other surgeries.

The main goal is to create a stable, plantigrade (flat and functional) foot that can fit into a shoe or brace and allow walking.

What Patients Should Expect?

- ✓ **Significant pain relief, better alignment** and improved ability to bear weight.
- ✓ **The fused joints will no longer move**—stiffness in the ankle/hindfoot is permanent.
- ✓ **Walking becomes more stable**, though a brace or supportive shoe may be needed long-term.
- ✓ **This is considered a salvage procedure**—the focus is on function and stability, not restoring normal motion.

Why Is It Done?

- ✓ **To relieve** severe pain in the ankle and hindfoot.
- ✓ **To correct** deformity and improve alignment.
- ✓ **To create** a foot and ankle that can be supported by a brace or shoe.
- ✓ **To prevent** progression to amputation in certain severe cases.

Recovery Timeline

Your recovery will be long and gradual:

-  **Weeks 0–6/8**
Non-weight-bearing in a cast or CAM boot.
-  **Weeks 6+**
Begin progressive weight-bearing and start physical therapy.
-  **Weeks 6–12**
Continue in a CAM boot while the fusion strengthens.
-  **Around 12 weeks**
Transition to an ankle brace, which is usually worn for the first year after surgery.
-  **Up to 1 year**
Continued strengthening and adaptation. Most patients achieve their maximum recovery by one year.



Case 1: 10 weeks post-op



Case 2: Post-op lateral view

? Questions

If you are considering a TTC fusion, please discuss with your surgeon whether this approach is right for you. Our goal is to help you understand the reasons, benefits, and recovery expectations so you feel fully informed in making this decision.