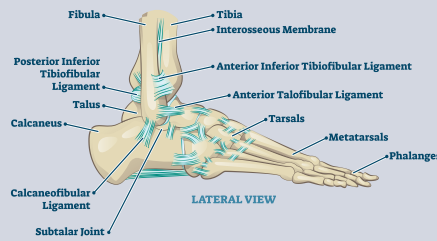


# Foot and Ankle Conditions and Treatments



## ADULT FLATFOOT

There are many conditions that can lead to adult acquired flatfoot, a deformity characterized by arch collapse and an outward aiming of the foot. This condition tends to be progressive and can cause significant pain and foot malformation.

### Causes

#### POSTERIOR TIBIAL TENDON DYSFUNCTION

The posterior tibial tendon connects a muscle in the calf and the bones on the inside of the foot (arch). The tendon supports the foot and maintains the arch as you walk. Over time, the tendon can become inflamed and degenerate. The tendon can no longer support the foot so the ligaments begin to stretch and the foot bones spread apart causing collapse of the arch. Females and people over the age of 40 are more likely to develop this condition. Other risk factors include: hypertension, diabetes, and obesity.

Your physician will examine the foot and look for the following signs:

- Loss of flexibility
- Inability to stand on your toes
- Loss of motion, especially while flexing foot up
- Swelling on the inside of the foot and ankle
- Pain along the inside of the foot
- Foot deformity such as collapsed arch and outward pointing foot

X-ray imaging can show bone deformity and flatfoot, yet MRIs are ordered to evaluate the soft tissue and tendon structures in the foot to confirm tendon dysfunction as the cause of flatfoot.

Initial treatment aims to reduce posterior tibial tendon inflammation allowing it to heal. Rest, anti-inflammatory medication, and immobilization in a boot can be effective. Orthotics and braces can help restore the foot arch and maintain stability after the initial symptoms calm down.

Surgery may be considered if the pain does not improve after six to nine months of conservative therapies. The type of surgery depends on many factors such as location and extent of tendon breakdown and severity of deformity. The procedure may involve simply lengthening the calf muscles and removing the irritated tendon tissue, to more complex procedures such as tendon transfers and reshaping the foot bones. Surgical details, risks, and expected outcomes should be discussed with your physician prior to undergoing any procedure.

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**RHEUMATOID ARTHRITIS (RA)**

A systemic disease that can attack the soft tissue and bones in the foot. Most individuals with inflammatory arthritis develop foot or ankle symptoms. The arthritis can soften bone, weaken ligaments, and inflame the joint lining; all of which can alter the arch of the foot and cause deformity. Orthotics, braces, and anti-inflammatory medication can reduce symptoms related to flatfoot caused by RA. However, these treatments will not stop the disease from progressing. Depending on the extent of joint damage, surgical fusion of the affected joints may be an option to remove the damaged cartilage and join the bones into one. This is an effective option to decrease pain.

**CHARCOT FOOT (DIABETIC COLLAPSE)**

Individuals with diabetes can acquire nerve and blood vessel damage causing loss of sensation and poor circulation in the feet. Continued pressure on the weakened bone can cause fractures and bone disintegration, leading to severe foot deformity. Pain is not common due to nerve damage so arch collapse tends to be more severe. Swelling, open wounds, and redness are common symptoms.

Bone healing and prevention of further deformity and joint destruction is crucial. Casting to allow bone healing followed by custom orthotic shoes is recommended for early stages of Charcot foot. Surgery to correct a flatfoot in this case tends to be very complex.

**MIDFOOT INJURY**

The ligaments in the foot support the bones and hold them in proper position. Injury to these ligaments can cause shifting of the bones, and subsequently arch collapse development. The most common injury causing flatfoot is an untreated Lisfranc injury. Treatment for a Lisfranc injury depends on severity of ligament tears and if concomitant bone fractures are present. For more information, visit [Foot Fractures](#) page.