

# Posterior Tibial Tendon Dysfunction (PTTD)

Posterior tibial tendon dysfunction (PTTD) is an inflammation and/or overstretching of the posterior tibial tendon in the foot. An important function of the posterior tibial tendon is to help support the arch. But in PTTD, the tendon's ability to perform that job is impaired, often resulting in a flattening of the foot.

The posterior tibial tendon is a fibrous cord that extends from a muscle in the leg. It descends the leg and runs along the inside of the ankle, down the side of the foot and into the arch. This tendon serves as one of the major supporting structures of the foot and helps the foot to function while walking.

PTTD is often called "adult-acquired flatfoot" because it is the most common type of flatfoot developed during adulthood. Although this condition typically occurs in only one foot, some people may develop it in both feet. PTTD is usually progressive, which means it will keep getting worse, especially if it isn't treated early.

## Symptoms of PTTD

The symptoms of PTTD may include pain, swelling, a flattening of the arch and an inward rolling of the ankle. As the condition progresses, the symptoms will change.

For example:

- When PTTD initially develops, typically there is pain on the inside of the foot and ankle (along the course of the tendon). In addition, the area may be red and swollen.
- Later, as the arch begins to flatten, there may still be pain on the inside of the foot and ankle. But at this point, the foot and toes begin to turn outward and the ankle rolls inward.

As PTTD becomes more advanced, the arch flattens even more and the pain often shifts to the outside of the foot, below the ankle. The tendon has deteriorated considerably and arthritis often develops in the foot. In more severe cases, arthritis may also develop in the ankle.

## What Causes PTTD?

Overuse of the posterior tibial tendon is frequently the cause of PTTD. In fact, the symptoms usually occur after activities that involve the tendon, such as running, walking, hiking or climbing stairs.

## Treatment:

### *Non-surgical Approaches*

If treated early enough, your symptoms may resolve without the need for surgery and progression of your condition can be arrested. These approaches may include:

- **Orthotic devices or bracing:** To give your arch the support it needs, your foot and ankle surgeon may provide you with an ankle stir-up brace or a custom orthotic device that fits into the shoe.
- **Immobilization:** Sometimes a short-leg cast or boot is worn to immobilize the foot and allow the tendon to heal.
- **Physical therapy:** Ultrasound therapy and exercises may help rehabilitate the tendon and muscle
- **Medications:** Non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, help reduce the pain and inflammation.
- **Shoe modifications:** Shoes and special inserts designed to improve arch support.

### *Surgical Approaches*

In cases of PTTD that have progressed substantially or have failed to improve with non-surgical treatment, surgery may be required. For some advanced cases, surgery may be the only option. Surgical treatment may include repairing the tendon, realigning the bones of the foot or both.

