



What is Posterior Tibial Tendon Dysfunction?

Posterior tibial tendon dysfunction (PTTD) is the sudden or gradual loss in strength of the tibialis posterior tendon/muscle. The tibialis posterior muscle begins in the back of the lower leg, and its tendon runs around the inside of the ankle and inserts into various areas of the foot. This muscle supports the medial longitudinal arch of the foot, controlling how much and how fast the foot can roll in, or “pronate.”

There are four stages of PTTD (1):

1. Weakness of tibialis posterior muscle
2. Degeneration of the muscle
3. Fixed deformity
4. Arthritic changes

What do people experience?

Symptoms of PTTD can include:

- Pain around the inside of the foot and ankle
- Morning ankle stiffness that initially gets better

- Increased pain with activity
- Decreased walking distance
- Change in foot shape/lowering of the arch
- Feeling of “rolling in”

Risk factors & how to avoid discomfort

Risk factors for discomfort include:

- Flat feet
- Repetitive movement causing strain on the tibialis posterior muscle
- High impact activity
- Increasing age

What are my options for treatment? Who else can help?

Many options are available to you, and vary from conservative to invasive treatments. Often if symptoms are not present, treatment is not necessary. Conservative treatments include exercise, footwear modifications, foot orthoses, and bracing. These options are typically used in the earlier stages of PTTD and may be discussed with physiotherapists, kinesiologists, pedorthists, and other healthcare professionals. Medical and surgical interventions are generally used in the later stages of PTTD and may be discussed with your family physician.

Staying active with pain

Staying active with PTTD means being able to support the medial longitudinal arch and reduce the strain on the tibialis posterior muscle enough to reduce symptoms. This can be done in several ways, including choosing more supportive footwear, adding custom off-the-shelf orthoses, and bracing. These devices work in similar but slightly different ways to reduce strain on the tibialis posterior muscle, thus reducing pain during and after activity.

High impact activity can cause a greater amount of strain on muscles than lower impact activity. Choosing low-impact activities can reduce the amount of abrupt movement and strain on the muscles and limit the overall strain on injured structures.

PAIN AROUND THE ANKLE?

To feel better, read on!

How can SoleScience help you feel better?

A visit with a SoleScience pedorthist will involve a full assessment. This may include:

- Static alignment
- Dynamic movement testing
- 2D gait analysis
- 3D gait analysis
- Pedograph scans (Harris Mat)
- Footwear analysis and education
- 3D foot casting

The pedorthists at SoleScience are eager to work with you to begin improving your symptoms right away. While waiting for your custom foot orthoses to be manufactured (3-5 business days), your pedorthist will discuss possible changes to footwear and activity to help you feel better as soon as possible.

It is important to remember that every person tolerates correction differently. Adjustments are completely normal and your pedorthist will always be more than happy to make adjustments until you are happy and comfortable in your new custom foot orthoses.

Our take on the need for custom foot orthoses

Custom foot orthoses are a useful tool with PTTD, especially in the earlier stages. Custom foot orthoses work to build the ground up to the foot and support the medial longitudinal arch. This will reduce the amount the foot rolls in, offloading the weight placed on the tibialis posterior muscle.

The success of custom foot orthoses depends on several factors, including the cause of the disorder, individual biomechanics, foot type, tolerance to correction, and the stage of the disorder.

Custom vs. OTS

OTS, off-the-shelf foot orthoses, are prefabricated devices that are fit to your foot and shoe in the store and are often somewhat customizable. This can be a great starting point in the early stages of PTTD. Whether or not OTS orthoses have made a difference in your level of pain can be a good indication of whether custom foot orthoses will be beneficial. Truly custom-made foot orthoses are manufactured specifically to a mold of your foot and tailored to suit your needs.

Footwear recommendations

Appropriate footwear is important for management of pain associated with PTTD. Choosing footwear that provides more stability and has a wide base of support (wide through the mid portion of your foot) will limit the amount your foot can roll in, or pronate, thus reducing the strain placed on the tibialis posterior muscle.