



## What is it?

Peroneal tendinopathy is characterized as any impairment to the structure and function of the tendons of the peroneal muscles (peroneus longus and peroneus brevis) that run down the outside of the lower leg. The most common symptoms include pain, discomfort, and/ or swelling to the outside portion of the ankle. There are a number of different pathologies that fall under the ‘tendinopathy’ umbrella, but the most common include peroneal tendinitis and peroneal tendinosis. The two conditions are similar in clinical presentations and are commonly mistaken for one another; differentiation however, is important.

One key difference is that tendinosis does not have the associated swelling that occurs with tendinitis. Tendinitis is classified as an inflammation, or swelling, of the tendon resulting from a micro-tear due to an acute overload, such as forceful trauma, that is too heavy and/or sudden (1).

Tendinosis is differentiated in that the tendon damage results from chronic overuse, such as repetitive strain over time, without allowing appropriate time for the tendon to recover (1). Both diagnoses are commonly associated with athletes or workers who are involved in repetitive strain type activities, like running or factory line work.

The primary focus of treating tendinitis is to control swelling, whereas initial treatment of tendinosis is focused on the elimination of the source of repetitive strain (1). With each of the pathologies, controlling biomechanics and protecting the tendon from excessive strain is the focus of long-term treatment. Many of the treatment options overlap, but one distinction between the two is the use of anti-inflammatory medications (1). Speak with your family physician to determine whether anti-inflammatories are appropriate for you.

## What do people experience?

Symptoms are typically insolated to the lateral or outside portion of the ankle and may include:

- Sharp pain or a dull ache
- Muscular tightness
- Swelling
- Reduced ankle stability, range of motion, and strength
- Ankle sprains
- Stiffness upon waking in the morning
- Pain or stiffness when rising after extended periods of sitting
- Changes to the way you walk

## Risk factors

### **Risk factors for discomfort include:**

- Activities with lateral (side-to-side) movement or sudden direction changes
- Poor fitting or worn out footwear
- Unsupportive footwear, such as wearing sandals while being active; it is important to select appropriate footwear that will control and cushion the movements of your foot and lower limb
- Uneven terrain – avoid surfaces with uneven terrain like trails or loose gravel, as they may place a greater strain on the involved tissues
- High impact and high volume, or intensity of exercise
- Weight – depending on your mechanics, being overweight or obese may increase the strain on the muscles and tendons in your lower legs

Your mechanics may also be an issue. Depending on your alignment and mechanics, you may be predisposed to straining the muscles and tendons in the outsides of your lower limbs. Consult with your physiotherapist or pedorthist if you suspect this may be the case.

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

Your family physician typically serves as the first line of defense for treatment. He or she will be able to assist you with medications and life style alterations if appropriate, or to refer you to the right type of medical professional for further care.

- Physiotherapists and kinesiologists may be appropriate to assist with exercises, stretches, or lifestyle alterations.
- Pedorthists may be appropriate to control motions of the foot that may be impacting the load placed on the peroneal muscles.
- Kinesiologists may assist with ergonomics (ensuring living environments and work stations are conducive to your posture and mechanics).
- Massage therapists may be able to assist with muscular stiffness or discomfort.

### **Staying active with pain**

Staying active while you recover is important for overall health and well-being. Appropriate exercise selection, however, is important. As a general guideline, avoid any exercises or activities that induce or intensify your symptoms – that means both during and after the activity. With soft tissue injuries, like some tendinopathies, once the tissue is warmed up it will often feel fine while active. If this is the case, the discomfort will usually set in once you stop the activity, after a period of rest, or may come the next morning when you get out of bed. If any of these are the case, reduce the intensity or duration of the activity until you reach a point that does not induce your symptoms. In particular, avoid sports with sudden direction changes like soccer, basketball, volleyball, or racquet sports, and exercises with lateral (side-to-side) movements such as plyometrics, Zumba, kickboxing, etc. Choose mild intensity exercises or cross-training activities that will keep you active while encouraging a healthy recovery.

1- Bass E. Tendinopathy: Why the difference between tendinitis and tendinosis matters. *International Journal of Therapeutic Massage and Bodywork*. 2012; 5:1 14-17.

# DON'T LET PERONEAL TENDINOPATHY GET YOU DOWN. GET BACK ON YOUR FEET, TODAY.

To feel better, read on!

## How can SoleScience help you feel better?

Your SoleScience Pedorthist will create an individualized treatment plan that suits your specific needs, goals, and symptoms. We will work with you to determine not only what we need to do to address your current concerns, but also to prevent future problems.

Your pedorthist will complete a thorough and comprehensive foot examination at your initial appointment. A comprehensive follow-up exam will ensure that you are meeting your goals and allow your pedorthist to reassess your treatment plan (as necessary).

- Gait and movement testing:
- Static alignment and posture analysis
- Strength and flexibility testing
- Dynamic movement testing
- 2D clinical gait analysis
- \*3D clinical gait analyses

The pedorthists at SoleScience will work with you to get you feeling better immediately following your first visit. While you are waiting for your custom foot orthoses to be manufactured (typically 3 to 5 days), your pedorthist will work with you to improve comfort both in and out of the house. Whether you know it or not, both the shoes and activities you select may be your best friend or your worst enemy!

## Our take on the need for custom foot orthoses

Your foot type and movement patterns are almost as unique as your fingerprint. Depending on your specific mechanics, custom foot orthoses may be used to support or cushion the motions of the foot and lower leg that may be affecting your discomfort.

With support found in the current medical literature, custom foot orthoses have been shown to reduce the strain placed on the peroneus longus and lateral gastrocnemius muscles while walking. The peroneus longus and peroneus brevis are the two muscles in the outside portion of the lower leg that can be affected with tendinopathy, so any effort to offload the strain placed on these muscles is beneficial. If it has been confirmed, or you suspect that you may have a peroneal tendinopathy, call the experts at SoleScience to see if you may be a candidate for custom foot orthoses.

## Custom vs. OTS

OTS, or off-the-shelf orthotics, are pre-fabricated devices that can be fit in to your shoes right from the shelf. This type of orthotic is typically heat moldable, allowing for a degree of immediate customization. Truly custom-made foot orthoses are differentiated in that they are designed specifically around a 3D model of your foot. This type of orthotic can be completely tailored to suit your needs. Depending on your symptoms and mechanics, OTS devices may be a great first step. In cases where the support offered by the OTS device is enough to address the concern, that may be as far as you need to go in terms of orthoses. If the OTS device provides some relief, but doesn't quite offer enough support, or if it does not match well to your foot type, custom may provide the most comfort and relief of symptoms.

## Footwear recommendations

Appropriate footwear selection is important for daily comfort and depends on your specific mechanics. Generally speaking, footwear with ample cushion and support work well while recovering from peroneal tendinopathy. With peroneal tendinopathy, the type of shoe you select is important. A shoe with added support for the inside part of your foot, such as a pronation control shoes, is intended to limit how much your foot pronates, or moves toward the midline of the body. In cases when this movement is already naturally reduced, or just the opposite where your foot moves away from the midline of the body (supinates), this type of shoe may actually worsen your symptoms. No matter which shoe you select, proper fit is vital. Length, width, depth, and heel height are important considerations to make. Consult with your pedorthist for recommendations specific to your foot type and intended use.