

# What Is Peroneal Tendinosis?

The peroneal tendons run on the outside of the ankle just behind the bone called the fibula. Tendons connect muscle to bone and allow them to exert their force across the joints that separate bones. Ligaments, on the other hand, connect bone to bone. Tendinitis implies that there is inflammation in the tendon. Tendinosis means there is enlargement and thickening with swelling of the tendon. This usually occurs in the setting of overuse, meaning a patient or athlete does a repetitive activity that irritates the tendon over long periods of time. This article will focus on peroneal tendinosis.

## What Are The Symptoms Of Peroneal Tendinosis?

The history is very important in the setting of peroneal tendinosis. As noted above, these are overuse injuries. People with peroneal tendinosis typically have either tried a new exercise or have markedly increased their activities. Characteristic activities include marathon running or others which require repetitive use of the ankle. Patients will usually present with pain right around the back of the ankle. There is usually no history of a specific injury.

## What Causes Peroneal Tendinosis?

As discussed above, improper training or rapid increases in training and poor footwear can lead to peroneal tendinosis. Also, patients who have a hindfoot varus posture may be more susceptible. This is because in those patients, the heel is slightly turned inwards which requires that the peroneal tendons work harder. Their main job is to evert or turn the ankle to the outside, which fights against the varus position. The harder the tendons work, the more likely they are to develop tendinosis.

## Anatomy

There are two peroneal tendons that run along the back of the fibula (Figures 1). The first is called the peroneus brevis. The term “brevis” implies short. It is called this because it has a shorter muscle and starts lower in the leg. It then

runs down around the back of the bone called the fibula on the outside of the leg and inserts (i.e. connects) to the fifth metatarsal. This is in the side of the foot. The peroneus longus takes its name because it has a longer course. It starts higher on the leg and runs all the way underneath the foot to insert or connect on the first metatarsal on the other side. Both tendons, however, share the major job of everting or turning the ankle to the outside. The tendons are held in a groove behind the back of the fibula and have a roof made of ligamentous-type tissue over the top of them called a “retinaculum.”

## How Is Peroneal Tendinosis Diagnosed?

The diagnosis of peroneal tendinosis can be made in large part by history (i.e. the story a patient tells). As noted above, patients will have an overuse activity, rapid increase in recent activity, or other training errors and will have pain in the back and outside of the ankle. There is pain on exam to palpation right on the peroneal tendons. It is important to distinguish this from pain over the fibula, which might indicate a different problem (i.e. stress reaction of the bone). Pain on the fibula occurs directly over the bone which is easily palpated. Pain in the peroneals occurs slightly further behind. There is also pain with inversion or carrying the ankle to the outside. Patients may also have weakness in trying to bring the ankle to the outside (i.e. in eversion). It is important to look for the varus posturing of the heel which, as noted above, means that the heel is turned inwards. This can predispose a patient to the problem. The workup can also include using radiology. X-rays will typically be normal. Ultrasound is a very effective and relatively inexpensive way to assess the tendons and can show an abnormal appearance or tear which sometimes occurs. An MRI is also equally important and can also show a tear.

## What Are Treatment Options?

The vast majority of peroneal tendinosis will heal without surgery. This is because it is an overuse injury and can heal with rest. If there is significant pain, a CAM Walker boot for several weeks is a good idea. If there really is no tenderness with walking, an ankle brace might be the next best step. Patients should very much limit how much they are walking or on their feet until the pain abates. This usually takes several weeks. Resumption of training can

then occur, but must occur very slowly and be based on pain. For those patients who have hindfoot varus, as noted above, an orthotic that tilts the ankle to the opposite side may well help to offload the tendons. It is important to talk to your doctor about changing your training. This includes using new shoes for running or also cross-training, which means alternating activities each day. Physical therapy is also very important. This, as with ankle sprains, can be done to strengthen the tendons.

There is some interest at the moment in using platelet-rich plasma (PRP) to help stimulate healing growth. Currently, there are no studies showing that this works for the peroneal tendons. Steroids are probably best avoided as they can actually damage tendon. Surgical treatment is indicated if the pain does not get better with rest. Conservative treatment – that is, without surgery – should last, however, even up to a year before considering surgery. If there is a tear, meaning a split that runs along the length of the tendons, one could consider cleaning it out and repairing the tendon. Sometimes, making the groove in the back of the bone of the fibula deeper allows the tendons more space and can help as well. Finally, if the tendon is very bad, one may need to resect the tendon and connect both the longus and brevis together. Only the specific tendon involved should be addressed. Occasionally, both may be involved.

## How Long Is The Recovery?

Patients usually recover fully but this can take considerable time. You must be patient and allow the tendon to heal before going back to activity. If you need surgery, your recovery time may be substantial. You may be instructed not to put your foot down with weight for about six weeks. Your orthopaedic foot and ankle surgeon likely will order physical therapy ensue.

The outcome is usually good. However, sometimes it takes time for people to get back to their activity. When a tear develops and there is chronic thickening of the tendon, the outcomes are not as good.

## Potential Complications

If the tendinosis is not addressed, tearing of the tendon can occur. Also, weakness of the tendons can lead to an ankle sprain. In the case of surgery,

infection can develop. Nerve damage can occur if the sural nerve which runs along the side of the foot and provides sensation to the foot is cut or stretched. Instability itself can lead to many sprains which can damage the cartilage on the inside of the ankle.

## Frequently Asked Questions

### **What is the difference between tendinitis and tendinosis?**

Tendonitis implies that inflammatory cells have invaded the tendons. In studies that have taken the tendons and looked at them under a microscope, there really are not the types of inflammatory cells once thought. There is really more of an enlargement and thickening of the tendon. This is better termed tendinosis.