

Plantar Fasciitis

The plantar fascia is the bottom lining of the foot, which inserts on the calcaneus, or heel bone. Inflammation of the plantar fascia can occur for a number of reasons, including a change in activity, improper shoe wear or trauma. Inflammation of the plantar fascia causes tightness of the calf muscle, which propagates the condition. Conservative treatment is very effective at resolving plantar fasciitis, although even with treatment, it may take 6-12 months to fully resolve. However, adhering to the treatment protocol typically results in a 50-75% improvement over the first 4-6 weeks.

Treatment

A supportive tennis shoe is an important component for alleviating plantar fasciitis. The back of the shoe should be vertical as opposed to angling in towards the heel, as this puts increased pressure on the Achilles tendon, which can aggravate heel pain. Some brands of shoes, particularly Nike, tend to have backs that dig into the Achilles tendon and continuously aggravate it. The back of the shoe should also be well cushioned. Shoes that are very flexible should also be avoided, as these types of shoe overwork the plantar fascia. Additionally, any shoe without a back, such as flip flops, will aggravate the plantar fascia as the toes must constantly curl to keep the shoes on. The plantar fascia attaches to the tendons that curl the toes, so shoes without a back also overwork the plantar fascia.

In addition to an appropriate shoe, a silicon heel cup is placed into the shoe. The heel cup raises the heel just enough to take some strain off of the plantar fascia, in addition to cushioning the heel. Avoid off-the-shelf gel inserts or heel cups as these quickly compress and don't provide the cushion and lift that a silicone heel cup does.

In addition to heel cups and good shoes, freeze a water bottle and roll it under the arch of your foot for 10-15 minutes a couple of times per day. The ice helps to reduce inflammation, while rolling the hard surface under the arch of the foot helps to loosen up the plantar fascia. Oral anti-inflammatories, such as Advil or Aleve, are found to be helpful in some, but not all patients. If you feel that they help alleviate symptoms, continue to use them.

A night splint is also provided to aid in loosening the calf. As we sit and sleep, our feet hang down and our calves sit in a shortened, relaxed position, causing them to get tight overnight. Upon standing, the calf is quickly stretched, re-aggravating the plantar fascia. A night splint holds the foot in a dorsiflexed position, keeping the calf stretched throughout the night. While it is not necessarily comfortable for the foot to be held in this position for hours, it significantly helps in resolving plantar fasciitis.

Finally, and most importantly, regular calf stretching is vital to resolve plantar fasciitis. Stretching should be performed before, during and after any prolonged activity including standing or walking. Stretching should also be performed prior to getting out of bed, getting up from a seated position and getting out

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of the car. Prior to standing, pull your toes of the irritated foot back towards the opposite shoulder and hold for 10-15 seconds. If you have a band, sheet or towel available, you can wrap that around the ball of the foot and pull towards the opposite shoulder to get a better stretch. Immediately upon standing, step your good foot forward and your bad foot back, about hip-width apart. Turn the toes of the injured side inwards to face the heel of your opposite foot, bend your front leg at the knee and keep your back leg straight with the foot flat on the ground. Hold this stretch for 30-45 seconds. In addition to performing this stretch upon standing, perform it also before, during and after any activity.

After a month of the above treatment protocol, patients are re-evaluated. Should the symptoms fail to improve despite adhering to the treatment plan, patients may also be referred to Airrosti therapy, where a full body evaluation is performed to determine if something else is contributing to the plantar fasciitis. Deep tissue manipulation to further loosen the calf may also be performed at Airrosti.

Surgery is not recommended for the treatment of plantar fasciitis. Steroid shots are also generally avoided, as they do not treat the underlying problem of a tight calf muscle and 90+% of the time symptoms return. Injections may also cause nerve damage or rupture of the plantar fascia.

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