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Plantar Fasciitis

Plantar fasciitis is often a very painful and persistent condition rooting from inflammation of the soft tissues around the heel. The plantar fascia is a thin ligament that spans from the heel bone, or calcaneus, and fans to the forefoot. It can become aggravated due to an increase in activity or stress on the foot, such as in obesity or very high-arched feet. Some people have a propensity to inflammation in this area and find that the issue is recurrent despite prior treatment.

The plantar fascia acts like the tight string of a bowstring on the arch of the foot and helps support the arch. Medial head tightness of the gastrocnemius muscle within the calf can put excessive stress on the arch of the foot when walking. The calf is tightest after a period of rest, and especially after a night of sleep. This leads to the classic symptom of increased pain with the first few steps in the morning or after standing from a seated position. For this reason, some providers recommend night splinting, but unfortunately, the knee must be kept straight to effectively stretch the calf, so many people find the splints to be uncomfortable and ineffective.

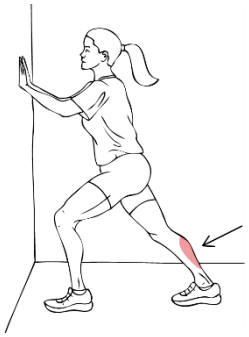
Pain also worsens after activity and is usually less so during activity.

There is sometimes a heel spur on x-ray which is a very common finding and is not the source of the pain. Approximately 1 out of 10 people have a heel spur on x-ray, but only 5% of those people have plantar fasciitis.

Because the calf tightness is the root of the problem of plantar fasciitis, the mainstay of treatment is stretching of the calf. This is the only treatment that will yield lasting results. However, there are measures that you can take to make daily activities more comfortable in the meantime. These include applying an ice pack to the area for twenty minutes each night, taking over-the-counter anti-inflammatory medication, using a cushioned heel lift or cup in your shoes, and avoiding bare feet even while at home. If overuse is aggravating the plantar fascia, you should rest from the offending activity until the pain subsides.

Stretching

Calf: Stand about three feet from a wall or counter. Turn the symptomatic foot inward slightly, then step forward with the opposite foot towards the wall and lean against the wall. Focus on keeping the back knee straight and the heel against the ground, while the front knee bends. Keep your torso in line with the back leg. You should feel the stretch high on the calf. Do not bounce. Hold this stretch for several minutes. In order to effectively stretch this muscle when tight, you should aim for about twenty minutes of stretching a day, though you can divide this into small increments at your convenience. Stretch both sides to prevent plantar fasciitis and other injuries on the other side.



Plantar fascia: In a seated position, cross one ankle over the other knee. Pull your big toe upwards with one hand while you firmly massage the arch with your other thumb. The fascia should feel tight. This should be done for several minutes at a time and can be done multiple times throughout the day including before and after activity.

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Ice

Only use ice if you have no numbness in your feet. If you have any neuropathy, ice application may not be safe. Set the ice pack on the floor and place a dry washcloth on top. Then, set your foot on the ice pack. Ice for up to twenty minutes at a time, and be sure to wait an hour if you are going to repeat the ice application.

Anti-Inflammatories

NSAIDs should be taken around the clock for two to three weeks for anti-inflammatory dosing. Speak to your physician if you have concerns about whether anti-inflammatories are safe for you.

Heel Cup/Lift

You may have already found that boots or shoes with a slight heel are more comfortable. This is because it takes a little tension off the tight calf muscle, and therefore off the plantar fascia. Adding a silicone heel cup with a slight lift in your dress shoes and tennis shoes can make activity more comfortable until your calf becomes less tight.

Avoid Bare Feet

Feet flat on a hard surface is the least comfortable state for a person with plantar fasciitis. Wear cushioned house shoes at home and protect the bottoms of your feet.

Treatments to Avoid

Do not immediately get injections or surgery for plantar fasciitis. Injections should be done sparingly to prevent rupture of the plantar fascia, which cannot be repaired once ruptured. Likewise, a surgical release of the plantar fascia, when not indicated, can lead to collapse of the arch. Because a heel spur is not the cause of the pain, removal of the heel spur will not help plantar fasciitis. Oral steroids are not recommended as first-line treatment of plantar fasciitis because of the systemic risks; there are more specific treatment options in most cases.

Seek attention from a specialist if you are concerned that the pain is worsening, or if is not responsive to these treatments. Other sources of heel pain can include stress fractures, and these should be ruled out.

Treatment Summary

1. Stretch
2. Ice
3. Oral Anti-Inflammatories
4. Heel Cup/Lift
5. Avoid Bare Feet

References

"Plantar fasciitis and bone spurs." Kadakia, Anish R. http://orthoinfo.aaos.org/topic.cfm?topic=A00149 accessed 09/27/2016.

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