



Pesky Plantar Fasciitis

What is Plantar Fasciitis?

Plantar fasciitis is the most common cause of heel pain. It is a condition in which the plantar fascia is irritated and develops tiny tears. The plantar fascia ligament is a flat band of connective tissue under the sole of your foot that runs from you heel to all five toes. It functions to maintain the medial arch (see image below) of the foot. When this ligament is strained, it becomes weak and tiny tears develop in the ligament. This causes pain in the bottom of the foot near the heel.

Symptoms of Plantar Fasciitis

- The most common symptom of plantar fasciitis is sharp heel pain, especially the first few steps upon getting out of bed in the morning, or after long periods of rest
- Often the pain eases after a little bit of movement, but can get worse when standing for long periods on hard surfaces
- Tenderness and pain in near the heel
- Pain as the heel strikes the ground during the gait cycle
- Pain while going up stairs



Cause of Plantar Fasciitis

Excessive tension on the plantar fascia due to repetitive and improper loading can cause tiny tears in the structure of the fascia. This in turn leads to a weakening of the connective tissue, calcium deposits and disorganized collagen fibres in the plantar fascia. All of these contribute to the sharp pain felt with this condition.

Risk Factors for Plantar Fasciitis

- Standing, walking or running for a long period of time, especially on hard surfaces (for example, concrete floors)
- Increase in amount of exercise (many patients have had a sudden increase in exercise prior to the onset of heel pain)
- Ill-fitting or non-supportive footwear
- Being overweight (seen in 70% of patients with this condition)
- Tight calf muscles
- Tight Achilles tendons
- Excessively high medial arch
- Flat feet (this increases foot pronation, which increase the load on the plantar fascia)
- Excessive foot pronation (see image above); this happens when one has flat feet, but also in those with normal or high arches as well
- Age (typically occurs between the ages of 40-60)

Non-Exercise Treatment of Plantar Fasciitis

Plantar fasciitis often takes 6-12 months to fully recover. Therefore, the sooner you can get treatment, the faster you'll be feeling better. Below are some treatment options that do not involve exercises.

- Rest
- Ice
- Pain medication
- Physiotherapy joint mobilization
- Night splints
- Taping of the medial arch
- Deep friction massage to the painful area



Pesky Plantar Fasciitis Part 2: Stretches and Exercises

In Part 1 of Pesky Plantar Fasciitis, we learned about what the condition is, what can cause or contribute to it, and some of the non-exercise-based treatment approaches. Part 2 focuses on the stretches and exercises you can do at home that are helpful in alleviating the discomfort of plantar fasciitis and preventing recurrence.

Generally, there are 3 objectives with the self-treatment of plantar fasciitis:

- stretch the calf muscle and Achilles tendon that get tight with this condition
- break up some of the excess scar tissue that has formed as the ligament tear begins to heal itself, and
- strengthen the intrinsic muscles of the foot and the larger muscles of the outer hip to help support the medial arch. If you are curious how the muscles of the hip affect the arch, please see my post



Hip Hip Hurray.

Standing Calf Stretch

- Start arm-distance away from the wall
- Step back with the affected leg
- Keeping the back heel on the ground, bend your front knee until you feel a stretch in calf muscles of your back leg
- Hold the stretch 30-60 seconds



Achilles Stretch

- Standing on a step, drop the heel of your affected foot off the edge until you feel a gentle stretch in the back of your ankle
- Hold the stretch for 30-60 seconds



Plantar Fascia Massage

- Cross the ankle of the affected foot over your opposite knee
- Pull your toes back with one hand
- With your other hand, use your knuckles (or your thumb) to press into the fascia of the sole of your foot from the heel to the base of the toes
- Use firm pressure (it may feel uncomfortable and that is normal)



Tennis Ball Rolling

- Using a tennis ball (or golf ball, or AcuBall), press the sole of your affected foot downwards

Roll the length of your foot on the ball with as firm pressure to help release the plantar fascia



Towel Scrunches

- Scrunch up a towel under your foot
- Try to avoid scrunching your toes and imagine the movement occurring more at the arch of your foot
- You should feel some muscle burn more in the medial arch and under your foot than your toes



Single Leg Balance

- Stand on a foam block on your affected foot for as long as possible
- Spread the toes of your standing foot

* This exercise helps to both strengthen the deep muscles on the underside of your foot and work the muscles of your outer hip that work together to help maintain your foot arch



Clamshells

- Lie on your side with the affected side up
- Slightly angle the top hip forward to help bias this exercise to your gluteus medius muscle in the side of your bum
- Keep your feet together but open your top knee to the ceiling using your side bum muscles to move your top leg
- Do as many repetitions as needed to feel some muscle burn in the top hip

* This exercise helps to keep your pelvis level while standing on one leg, which improves the alignment of your knee, ankle and foot

By Cat Kajary|September 2nd, 2015