

Plantar Fasciitis

Plantar Fasciitis is the most common form of heel pain. The Plantar Fascia is the flat band of tissue (ligament) that connects your heel bone to your toes, supporting the arch of your foot. Under normal circumstances the plantar fascia acts as a shock absorber, however if the tension on this ligament becomes too great, irritation or inflammation can occur causing pain. Plantar Fasciitis is inflammation of this ligament, occurring where it inserts into the heel bone. Plantar Fasciitis is most common in middle-aged to older people, with 50% of over 50 year olds developing Plantar Fasciitis. However it can also occur in younger people who are on their feet a lot.

Symptoms are a sharp pain in the heel, especially when getting out of bed in the morning. The pain will usually subside but then return after prolonged standing or walking.



Causes

Plantar Fasciitis is caused by over-stretching of the Plantar Fascia. Repeated strains cause tiny tears in the ligament. These can lead to inflammation, pain and swelling. This is more likely to happen if:

- You roll your feet inward too much (over-pronation)
- You wear shoes that are too worn, thin-soled, loose, lack arch support or lack shock absorption (e.g. thongs, high heels)
- You walk, stand or run for long periods of time, especially on hard surfaces
- You advance too quickly in your sport or activity
- You are overweight
- You have tight Achilles tendons and calf muscles
- Other factors: age, family, certain diseases such as arthritis and diabetes



By preventing over-pronation orthotics release the tension on the Plantar Fascia

Treatment

- **Rest:** Continued weight-bearing activities can tear and re-injure the fascia. Alternative activities such as swimming or cycling can help maintain conditioning as you heal.
- **Stretching & strengthening:** these can improve the foot mechanics and reduce stress on the foot. See reverse for exercises.
- **Inflammation & pain management:** massage with an ice cup or over a frozen water bottle 2-3 times a day. Anti-inflammatory medications can be helpful. Please consult with your doctor or pharmacist about the kind of medication that may be appropriate for you.

FACT:
75% of the Australian population suffers from over-pronation!
(rolling inwards of the feet + flattening of the arch)

- **Arch supports/orthotics:** these help to correct poor biomechanics and absorb shock, thus easing the stress on the plantar fascia. Your physiotherapist or podiatrist will help you correctly fit an appropriate pair. 95% of patients experience substantial relief with arch supports combined with daily stretching and strengthening exercises.
- **Use of well fitting, appropriate shoes:** consult your physiotherapist, podiatrist or athletic shoe specialist for proper shoe fit.

Exercises

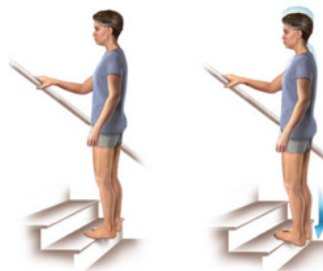
Many people with Plantar Fasciitis have intense heel pain in the morning when taking the first steps after getting out of bed. The pain comes from the tightening of plantar fascia that occurs during sleep. Stretching or massaging the plantar fascia before standing up can often reduce heel pain.

Towel stretch



Place a rolled towel under the ball of your foot, holding the towel at both ends. Gently pull the towel toward you while keeping your knee straight. Hold this position for 15 to 20 seconds. Repeat 4 times.

Achilles stretch



Stand on a step as shown. Slowly let your heels down over the edge of the step as you relax your calf muscles. Hold the stretch for about 15 to 20 seconds, then tighten your calf muscle a little to bring your heel back up to the level of the step. Repeat 4 times.

Calf stretch

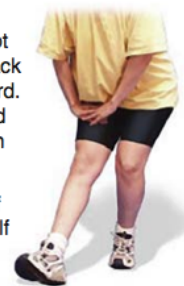
Stand facing a wall with your hands on the wall at about eye level. Put the leg you want to stretch about a step behind your other leg. Keeping your back heel on the floor, bend your front knee until you feel a stretch in the back leg. Hold the stretch for 15 to 20 seconds. Repeat 4 times.



Hamstring stretch

Extend one leg in front of you with the foot flexed. Bend your other knee and lean back slightly. Your pelvis should be tilted forward. Keep your upper body upright as you hold the stretch for 10-20 seconds, then switch sides.

You should feel the stretch up the back of your extended leg (all the way up your calf and thigh).



Soleus stretch

Standing with both knees bent, heels on the ground and toes forward, gently lean into a wall until a stretch is felt in the lower calf. Hold for 30 seconds and repeat 3 times.



Calf Raises

Lightly hold onto a chair or table for balance and lift your body weight up onto your toes. Slowly lift up over 2 seconds and lower down over 2 seconds. Complete 10 times



Towel Pickups

With the foot resting on a towel, slowly bunch the towel up as you curl your toes. Try to lift the towel off the ground with your toes. Repeat 10 times.



Tennis Ball Massage

While sitting in a chair roll a tennis ball under your foot to massage the painful area. Perform for up to 5 minutes

Alternative: massage with a frozen water bottle instead to assist with pain and inflammation as well.



NOTE: Stretching exercises should create a pulling feeling – they should not cause pain. It's best to do each exercise two or three times during the day, but you do not need to do them all at once.