



## Plantar Fasciitis (PF)

The Plantar fascia is a ligamentous structure that supports the arch of the foot.

PF (an inflammation of the plantar fascia) is caused by repetitive strain and is the most common cause of heel pain.



### Symptoms

- Typically, the pain starts as dull, intermittent pain in the heel or arch, and progresses to sharp or persistent heel pain.
- Pain and inflammation are often worse with the first steps in the morning or after resting and gradually lessens with walking
- Tightness in calf muscles
- Heel pain or achy arch pain at the end of the day or during exercise.

### Causes

- Inflammation may result from increased activity, exercise, long periods of standing on hard surfaces, or in association with aging.
- Flat feet or high arched, rigid feet.
- Poor supporting shoes
- Large weight gain in a short period of time
- Running on hills, balls of feet, or uneven surfaces.

### Treatments

- **Daily plantar fascia stretching** is the key to preventing the inflammation caused by the ligament pulling on the heel. (Stretching exercise provided on the reverse side)
- Use of **silicone heel cups** eases the pressure on the plantar fascia by spreading and absorbing shock. They are particularly important for long periods of standing or activity on hard surfaces.

- Use of **night splint** will maintain a gentle, constant stretch across the plantar fascia at night. This prevents the fascia from tightening at night and therefore reduces morning pain. It also helps you maintain your stretching progress.
- **Boot Cast** immobilization. Allows ambulation while resting the plantar fascia.
- Decrease standing and ambulatory activity
- Periods of **rest and ice** can reduce inflammation, especially after activities and long periods of standing. A gel pack or frozen bag of peas works well to surround the heel. Try 20 minutes on, 20 off, 20 on.
- Wear Birkenstock or Croc type of **sandal** instead of bare feet or slippers.

### In Resistant cases of plantar faciitis

- Cortisone **injections**
- Physical **therapy** to decrease pain and inflammation, stretch plantar fascia, and strengthen foot muscles to support weakened plantar fascia.
- Extracorporeal **shock wave** therapy for chronic plantar fasciitis that is not improved with other therapies.

### Plantar Fascia Stretches:

One of the most important stretches is a direct stretch of the plantar fascia. This stretch should be done before getting out of bed in the morning. Place your foot on you opposite knee. Grab your heel with the opposite hand. Use the other hand to pull back at the toes, especially the big toe. The plantar fascia should be prominent and you should feel a stretch within the arch.



A heel drop down stretch should also be done three times per day, for 2-3 minutes per session. Choose a stair or step where you have a handrail for balance. Place the ball of the foot at the outer edge of the step. Slowly drop the heel for a **20-30 sec.** stretch while supporting the majority of weight with the other foot. Go slow and **do not bounce.**



Plantar fascia stretch

Some mild, temporary discomfort occurs with most stretching exercises. Discontinue stretch for severe or persistent pain.