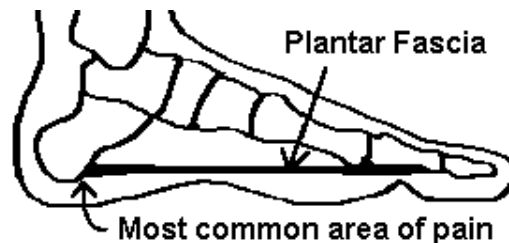


## **Plantar Fasciitis**

Plantar fasciitis is the most common cause of pain around the heel and rear-foot. Typically pain is most intense with the first few steps after a period of non weight-bearing, such as after sleeping or sitting for a long time.

### **What is causing the pain?**

The plantar fascia is fibrous band of connective tissue that joins the heel bone (calcaneus) with the bones at the base of the toes (metatarsals) in the sole of the foot. Its function is to provide support for the arch of the foot (see picture). When the plantar fascia is placed under increased stress it pulls hard on its attachment to the heel bone and small tears can develop at this point. These tears result in inflammation and pain in the area of the attachment. When the foot is not supporting the body's weight the plantar fascia tends to contract and shorten slightly, consequently there is an increased pull during the first few steps after a period of rest and pain is most acute at this time.



### **Why is this happening?**

Over-stressing of the plantar fascia can result from any one of a number of causes. These include:

- Large increase in the amount of weight-bearing activity eg. walking, running:
- Weight gain:
- Shortened or tight calf muscles:
- High or low arches in the foot:
- Excessively worn or poorly fitting footwear.

### **What are heel spurs?**

Sometimes a small bony projection (spur) can be seen on x-ray jutting forward from the heel bone. A spur may develop due to the excessive pull of the plantar fascia, however the spur is not necessarily the cause of your pain and its presence or absence does not change the management of the condition. In fact, some people with spurs may experience no symptoms at all.

### **Treatment**

Management in the early stages of the condition involves trying to reduce inflammation and relieving the stress on the plantar fascia, this allows the body to commence healing of the damaged tissue. At this stage a short course of anti-inflammatory medications may be recommended and you will be asked to reduce pain-provoking activities. More commonly however, people do not seek treatment until they have been experiencing pain for weeks or even months. At this point, reducing stress on the fascia may be achieved by taping or provision of an insert for your shoe, your physiotherapist will also recommend that you wear supportive shoes at all times (even around the house).

Ongoing treatment is aimed at gently stretching the plantar fascia and ensuring appropriate mobility around the foot. Techniques include soft tissue massage, stretches for the plantar fascia and calf, ice or heat, a plantar fascia night sock and exercises to encourage foot mobility. All these techniques promote the healing process by restoring tissue flexibility and correcting foot biomechanics. Your physiotherapist will also advise on warm-up stretches and exercises to be done in preparation for activity.

### **What to expect**

Plantar fasciitis can be a frustrating condition and may linger indefinitely if not managed properly. Recovery rates are variable, but generally patients with a longer history of pain will take longer to recover. Acute symptoms will often reduce quickly as inflammation resolves over the first week or so but beyond this point improvement will occur more slowly. Full recovery can take anywhere from 3-4 weeks to 6 months or more depending on severity and symptom history. Return to sport or activity needs to be graduated to prevent further overload and recurrence. In rare circumstances, plantar fasciitis may not respond to the above type of management and in such cases a cortisone injection or surgery may be considered to relieve symptoms.

Prognosis for this condition is good, most people will make a full recovery and return to activity at their pre-injury levels. Provided the precipitating factors are addressed, there is no reason to expect recurrence.

### **Physiotherapy tips**

1. Warm-up before getting out of bed – stretch the plantar fascia, move the foot.
2. Supportive footwear – leave your runners next to your bed and put them on before you take your first step, don't walk in bare-feet.
3. Do your exercises 3-4 times per day, as prescribed by your Physio.
4. Keep your foot taped.
5. Reduce weight-bearing activities, consider alternatives such as cycling, swimming.