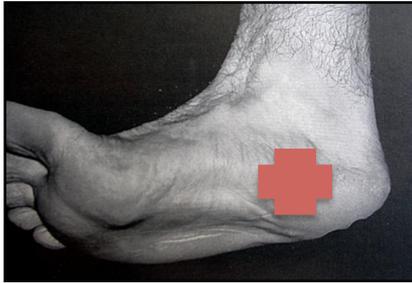


# Plantar Fasciitis (heel pain)

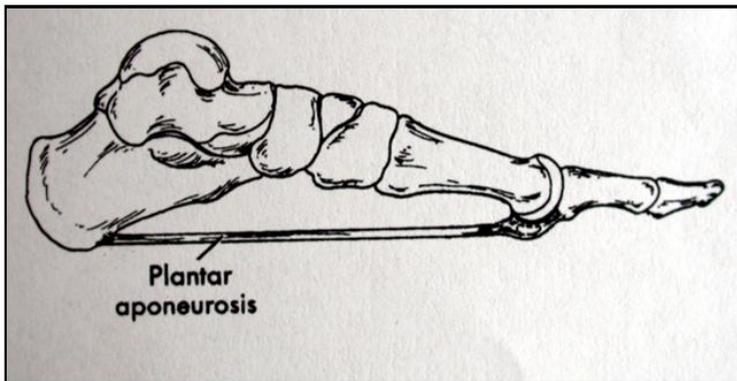


**PETER AMMON**  
MBBS(WA) FRACS(Orth)  
**ORTHOPAEDIC SURGEON**  
Foot, Ankle & Knee Surgery  
Minimally Invasive Foot Surgery

**Murdoch Orthopaedic Clinic**  
St John of God Medical Centre  
Suite 10, 100 Murdoch Drive  
Murdoch WA 6150

Telephone: (08) 9311 4700  
Facsimile: (08) 9311 4701  
Email: [reception@peterammon.com](mailto:reception@peterammon.com)

**Plantar fasciitis** is a very common cause of heel pain. The plantar fascia is a thick cord of fibrous tissue connecting the heel bone to the toes. It acts like a bow string to support the arch of the foot. When the foot is bearing weight, the plantar fascia is placed under tension.



## Pathology

Repeated stretching of the plantar fascia can lead to microtears in the fascia where it connects to the heel bone. The repair mechanism fails and inflammation results causing pain.

The inflammation may also lead to bone formation at the origin of the plantar fascia resulting in a heel spur.

A spur is present in only 50% of patients with plantar fasciitis and it is only an association not the cause of the condition.

Plantar fasciitis has no known cause. It is rarely associated with gout and some inflammatory arthritic conditions. Most patients with plantar fasciitis also have a tight calf or gastrocnemius muscle. This contributes to the problem by increasing the stress placed on the plantar fascia.

You're more likely to get the condition if you're a woman, if you're overweight, or if you have a job that requires a lot of walking or standing on hard surfaces. You're also at risk if you walk or run for exercise, especially if you have tight calf muscles that limit how far you can flex your ankles. People with very flat feet or very high arches are also more prone to plantar fasciitis.

## Symptoms

Pain is usually well localized to the undersurface of the heel, but may radiate into the arch. It is typically worse when:

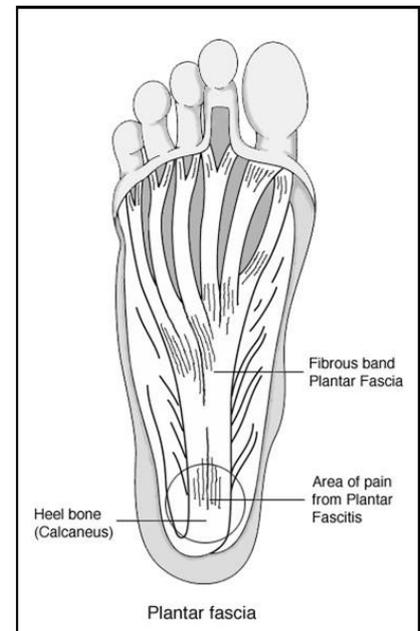
- first arising from bed and
- after long periods sitting.

This is because the plantar fascia shortens or tightens up when the foot is not bearing weight over a long period of time.

Pain is also worsened by:

- standing for long periods,
- walking on hard surfaces and
- wearing shoes with little cushioning

If left untreated, the condition often lasts six months or more and in some patients it continues indefinitely.



## Treatment

The basis of treatment is non-operative management as surgery is not often required.

Standard treatment includes:

- Regular stretching exercises
- Orthotics/insoles
- Cortisone injections
- Anti-inflammatory medication

Cortisone injection can be useful early, ie within 6 months. There is no point repeating it if the first injection fails or wears off.

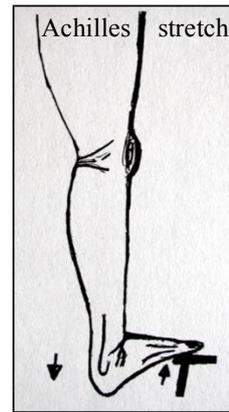
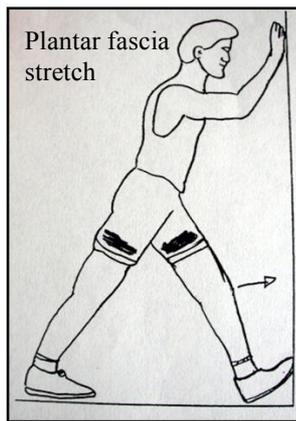
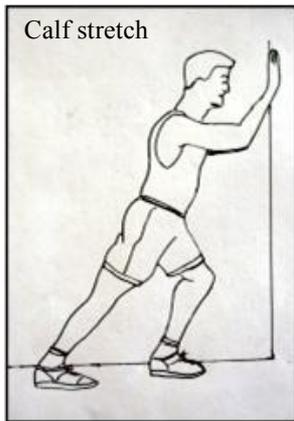
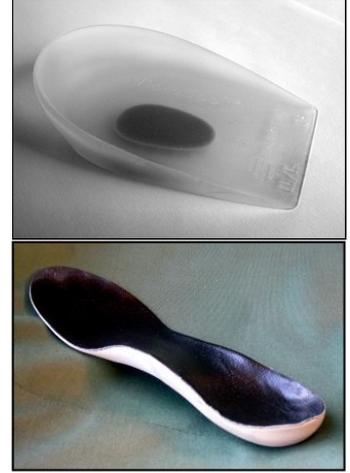
Some patients find a silicone insert in the heel more comfortable others prefer a custom made arch support

Anti-inflammatory medication may also be used in some patients.

The most important component of treatment is regular stretching exercises. The stretches are designed to stretch

- the gastrocnemius (calf) muscle
- the plantar fascia
- and the Achilles tendon.

Each stretch needs to be held for 20 seconds and repeated ten times. Doing all three stretches should take about ten minutes and must be done three times a day. This is critical.



The **gastrocnemius (calf) stretch** is performed by standing against a solid wall with the painful foot (right foot in this picture) behind you. Point the toes of this foot inwards towards the heel of the front foot. Keep the knee of the painful foot straight and bend the front knee forward—you should feel the calf muscle becoming tight.

The **plantar fascia stretch** is done by wearing a shoe with a flexible sole and jamming the shoe (left foot in this picture) into the junction between the wall and the floor. Bend the front knee forward and you will feel the sole of the foot and the Achilles tendon being stretched.

Lastly, the **Achilles tendon** is easily stretched by hanging both heels over a step and letting the heels gently drop. You should feel the stretch in the Achilles and the sole of the foot.

### Resistant Plantar Fasciitis

For the resistant cases there are other options

- Heel lithotripsy
- Plaster cast
- Night splint

Heel lithotripsy (ultrasound shockwave therapy) is effective in about 50% of patients. It is performed at an x-ray clinic as an outpatient. It takes three sessions at weekly intervals and at least six weeks to feel the effects.

A walking plaster cast for four weeks is also sometimes effective.

For patients who are particularly sore first thing in the morning, a night splint is often useful. The splint holds the plantar fascia under tension and prevents it shortening overnight.

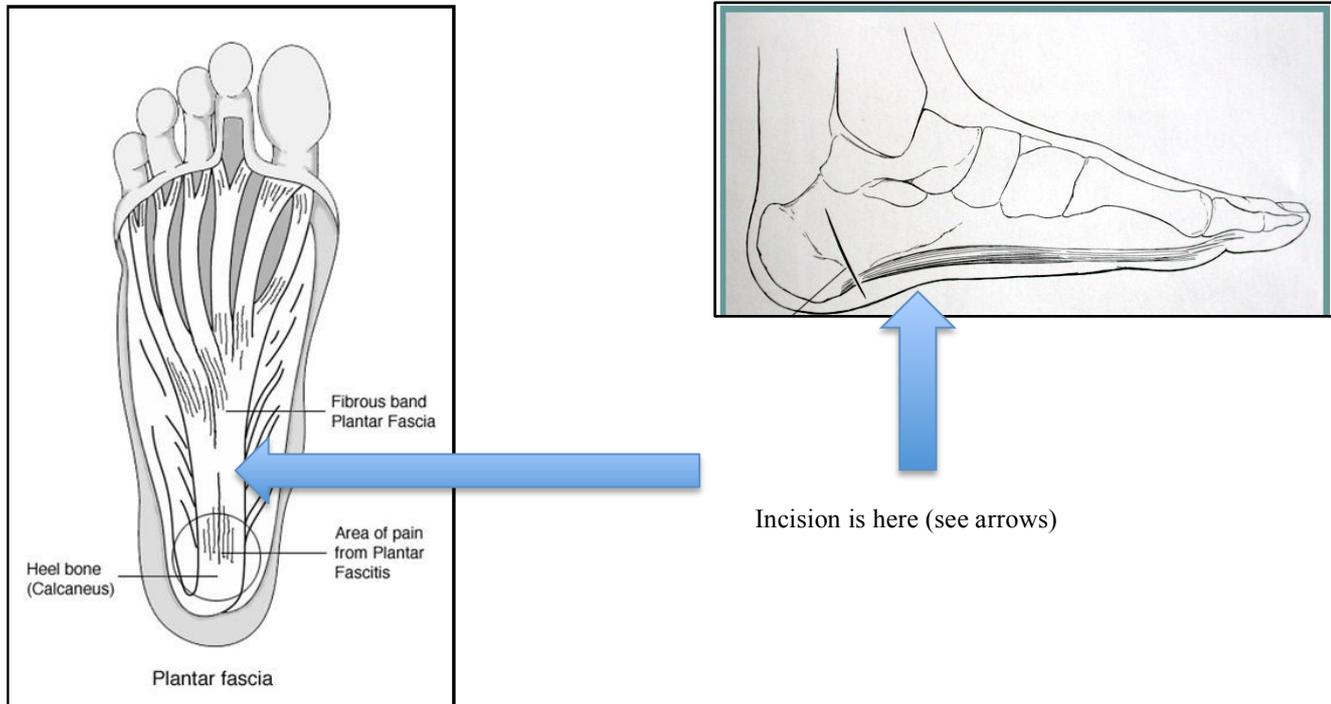
## Surgery

This is the last option for those who have severe symptoms and have failed all the previous measures.

Approximately, 90% have a significant improvement or are even cured with surgery. This leaves a small proportion that is no better. If there is no improvement with surgery then little else can be done.

Surgery involves releasing the plantar fascia to reduce its tension on the heel. This is done by a small open 3cm incision in the arch of the foot.

- Day case surgery
- Plaster cast and crutches for 2 weeks
- Tender scar for 6 weeks



## Complications of Surgery

You should be aware that all surgery has a risk of complications and this surgery is no different.

Medical complications that can occur include:

- heart attack
- stroke
- drug reaction
- blood clots in the legs or lungs
- and even death in very rare circumstances.

The chance of one of these happening is very small and is reduced by doing the surgery under modern anaesthesia combined with local anaesthetic.

Surgical complications include:

- *Infection:* antibiotics are given before and after surgery to reduce the chance of infection but cannot eliminate it.
- *Wound healing* problems are rare and tend to happen in diabetics and smokers. If you do smoke you should stop smoking for at least four weeks around the operation.
- *Blood clots:* you will be given blood thinners to reduce the risk but cannot eliminate it

Surgery is *effective* in the *majority* of patients with at least nine out of ten being happy with the result.

However it is possible, although very unlikely, to be made worse by surgery if a complication develops that cannot be easily fixed.

**PETER AMMON**  
MBBS(WA) FRACS(Orth)  
**ORTHOPAEDIC SURGEON**  
Foot, Ankle & Knee Surgery  
Minimally Invasive Foot Surgery