

**DESCRIPTION**

A common cause of heel pain for sports participants is plantar fasciitis, an inflammatory condition of the plantar fascia due to a strain or to overuse.

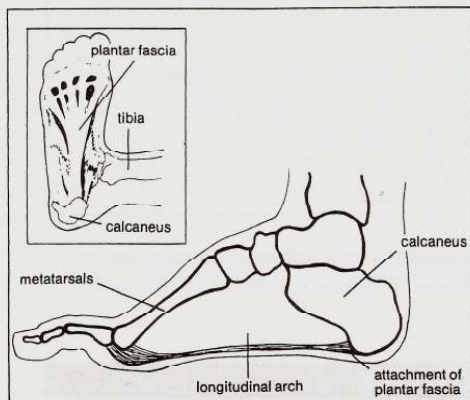
It generally starts as a dull intermittent pain on the bottom of the heel and may progress to a sharp persistent pain. It tends to feel worse in the morning, i.e. stiff and sore and/or at the beginning of activity. The pain may diminish or disappear only to return later.

The pain is usually felt on the heel bone where the fascia begins, although it may be a midsole or closer to the toes.

**ANATOMY**

The plantar fascia is a thick, inflexible, fibrous material on the bottom of the foot. It is attached to the heel bone (calcaneus) and fans forward toward the toes, where it attaches to ligaments.

The plantar fascia is responsible for the longitudinal arch of the foot and supporting the underneath of the foot.



**ETIOLOGY**

The most common cause of this condition is an overuse or pulling away from the bone of the fascia. This causes an inflammation and the pain. Every step taken is an aggravation and the condition worsens.

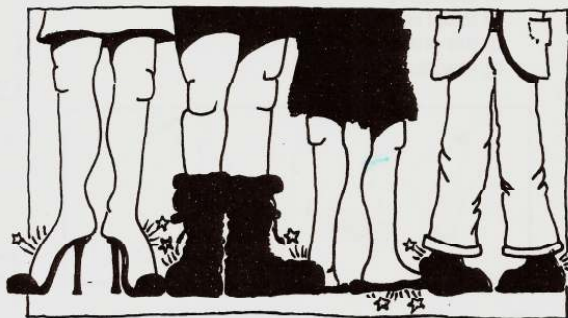
The pulling away from the bone by the fascia may lead to development of a bone spur as new bone is laid down. Note that the heel spur is a result of the problem and not the cause.

**CAUSE**

There are various factors that may cause or contribute to the development of this painful heel condition.

1. Flat pronated feet.
2. High arched rigid feet.
3. A sudden attempt to change arch of foot, e.g. a person with flat feet suddenly wearing shoes with a high arch all day.
4. Inappropriate/improper shoes for the activity or foot.
5. Toe running, hill running.
6. Soft terrain, e.g. running on sand.
7. Inflexibility of sole of foot and Achilles tendon due to disuse, lack of fitness or increasing age.

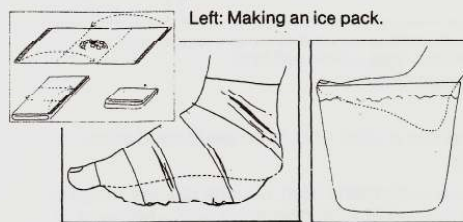
One must also be aware that medical problems such as gout (especially in males over 40 years of age) or rheumatoid arthritis may present as plantar fasciitis.



**TREATMENT**

The goals of treatment are to reduce inflammation (and so relieve pain), correct cause and fully rehabilitate to allow complete return to activity.

1. Cold application by use of
  - a) ice packs, made from crushed ice in a damp towel, applied for 15-20 minutes, several times daily
  - b) immersion in a water bath made from one third ice, two-thirds water, 15-20 minutes, several times daily ice should also be applied after activity, especially if pain is felt.



Above: Ice Pack, Ice Immersion

2. Anti-inflammatory medication may be prescribed.
3. Physiotherapy may be required to decrease the inflammation. This will be done through use of
  - a) ice and mild stretching
  - b) electrical muscle stimulation or TENS units
  - c) ultrasound
  - d) massage