

# Plantar Fasciitis

## Information for patients

### Tayside Foot and Ankle Service

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#### What is plantar fasciitis?

Plantar fasciitis is one of the most common causes of pain in the foot, typically affecting the bottom of the heel. This occurs when the strong fibrous band of soft tissue (plantar fascia) that connects your heel bone to your toes becomes inflamed. The function of the plantar fascia is to help reinforce the arch of your foot and act like a 'bow string' to stiffen your foot when you walk.



#### What are the symptoms of plantar fasciitis?

The most common symptoms include:

- Pain on the bottom of the foot near the heel.
- Pain with the first few steps after getting out of bed in the morning, or after a long period of rest, such as after a car journey. This pain subsides after a few minutes of walking.
- Greater pain after exercise or activity.

## **How common is plantar fasciitis?**

Approximately 1 in 10 adults are affected at some point by plantar fasciitis and so it is a relatively common condition.

## **What are the risk factors for developing plantar fasciitis?**

Many things affect the load being put through your plantar fascia. Often more than one factor plays a part in contributing to the development of plantar fasciitis.

Contributing factors can include:

**Age:** It is more common between the age of 40 and 60 years old.

**Gender:** It is more common in women than men.

**Weight:** You have a higher risk if you are overweight.

**Diabetes:** People with diabetes are more likely to get plantar fasciitis.

**Flexibility:** Tighter calf muscles resulting in reduced ankle movement can increase the risk.

**Foot alignment:** Poor foot alignment can be a contributing factor.

**Footwear:** Excessively worn or poor quality footwear can also increase the risk.

**Activity level:** New or increased activity can exacerbate plantar fasciitis.

## **X-rays and Scans**

It is not common to carry out imaging (x-rays or scans) to diagnose plantar fasciitis; it can usually be confirmed using your medical history and examination.

An x-ray may show a heel spur, which is a small piece of bone that can develop on the underside of the heel bone, near the attachment of the plantar fascia. This can be mistaken as the cause of plantar fasciitis. Approximately 3 in 10 people have a heel spur and few of them have heel pain. Similarly, many people with plantar fasciitis do not have a heel spur.

## **Treatment options**

### **Ice:**

Applying ice wrapped in a damp tea towel to the affected area helps reduce pain. Apply for a maximum of 20 minutes,

4 times a day, or after exercise. Please take care not to apply ice for too long or directly to the skin, as this can cause ice burns. Do not apply ice packs to an area where you have numbness, decreased sensation or poor circulation.

### Simple painkillers:

A short course of Paracetamol or anti-inflammatories (such as Ibuprofen) for a few days can be helpful. Anti-inflammatories should be taken with food.

### Relative rest:

Avoid any activity which appears to aggravate the pain. You can help to maintain your fitness using different forms of exercise that should not significantly worsen your symptoms, such as swimming, cycling and aqua jogging (jogging in a pool). Try to adjust your work pattern (where applicable) by breaking up long periods of standing or being on your feet.

### Home exercises:

Where appropriate you may be given a separate sheet of stretching exercises for your calf muscles. You can also massage and stretch the plantar fascia itself as shown below:

#### Plantar fascia massage:

While seated, roll your foot back and forth over a frozen water bottle, ice-cold can, foam roll, or similar.

Do this for 2 – 3 minutes, twice per day.



#### Plantar fascia stretch:

Sit on a chair with your bare foot crossed over the opposite knee. With the hand on the affected side, pull the toes and foot backwards towards the shin until you feel the stretch in the arch of the foot. To check that the stretch is correct feel the taut plantar fascia with the opposite hand.

Hold stretch for 10 seconds and repeat up to 10 times, twice per day.



**Night splints:**

For those who experience pain when getting out of bed in the morning, a night splint can be very effective. Most people sleep with their feet pointing down. In this position the plantar fascia and calf muscles are relaxed and the sudden increase in tension when rising from bed can be very painful. A night splint maintains a stretch on both the plantar fascia and one of the main muscles in your calf while you sleep, helping to promote healing and reducing pain in the morning.

**Heel pads/Insoles:**

Depending on where your pain is felt and taking into account the alignment of your feet, you may be supplied with an orthosis to place inside your shoe. This typically takes the form of either a heel pad, which cushions under the heel as well as slightly reducing the tension in the plantar fascia and calf muscles, or an insole which can help to improve foot alignment and reduce stress on the plantar fascia. Either of these devices should be worn in shoes as consistently as possible until the pain has fully settled. Insoles can also be worn whilst carrying out any weight bearing stretching exercises you have been given, helping to make these more effective.

**Footwear:**

We recommend supportive footwear with an outer sole that is not too flexible. If you are not prescribed an insole from the orthotics department then the ideal footwear will have a good quality shock-absorbing insole in place.

Footwear should be neither completely flat (slippers or pumps) or with a higher than standard heel height. Avoid walking in bare feet or flip-flops.

**Managing your weight:**

If you are overweight, seriously consider strategies to help you lose weight (you can discuss this with your GP) as this can make a big difference to your plantar fasciitis and also benefit your general health.

**Other treatments**

If initial treatments do not improve your symptoms, you may be referred for a steroid injection. You should consider first whether this is something you want to have. There are risks associated with steroid injections including rupture of the plantar fascia or wasting of the fatty pad which cushions under the heel. This can cause problems over the longer term. These risks are relatively small however and many people receive benefit from correctly applied steroid injections.

Non-surgical treatments almost always improve the pain.

Treatment needs to continue anywhere from several months to 2 years before symptoms settle fully. Most people feel better within 6 – 18 months.

## **Frequently asked questions**

### **Q. Will I always have to do my exercise programme?**

A. Normally once your pain has settled you do not need to keep up the daily exercises. However, if you find your symptoms returning then it is best to return to your exercise programme.

### **Q. Is there a risk that my plantar fascia will rupture while I'm doing my exercises?**

A. There is no evidence that the plantar fascia is at risk of rupture whilst doing the exercises you have been given.

### **Q. Is there a surgical treatment for plantar fasciitis?**

A. Surgery may be considered as a last resort when all other treatments have failed. Even in this instance, it is not guaranteed to relieve your symptoms and does carry its' own risks.

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