

## What is plantar fasciitis?

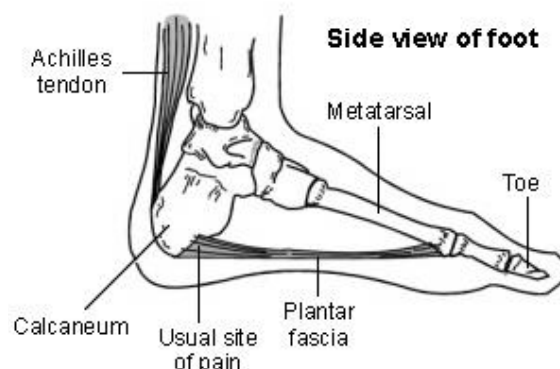
Plantar fasciitis is a common condition that affects about 10% of the population at some point in their life. It causes pain, typically under the heel, or sometimes in the arch of the foot. Your plantar fascia is a strong band of tissue (like a ligament) that helps support the arch of the foot and also assists with shock absorption. It is usually most painful when you take your first steps in the morning, after a long period of rest or when you have been on your feet for a long time. There are other reasons why you can get heel pain and your clinician will tell you if they suspect you have something other than plantar fasciitis.

## What causes plantar fasciitis?

Plantar fasciitis occurs when tissue in the foot called the plantar fascia gets damaged. Little tears occur, most commonly where the plantar fascia attaches to the heel bone (calcaneum), but pain can occur anywhere along its length. It often starts for no obvious reason. A common wrong belief is that the pain is due to a bony growth or 'spur' coming from the calcaneum. Many people can have a bony spur of the calcaneum but do not suffer any symptoms.

## How is plantar fasciitis diagnosed?

Your clinician can usually diagnose plantar fasciitis just by talking to you and examining your feet. Rarely, tests may be needed if the diagnosis is uncertain. These tests are more likely to be arranged if you have had the pain for a long time and if it is not settling with normal treatments. The test would normally be an ultrasound scan of the heel which will help with the diagnosis.



## Will the pain go away?

Usually, most cases get better within a few months with or without treatment. In some cases, however, the pain may last for many months and, in some cases, for a year or more.

Reasons why the pain can last for a long time and why you can be more likely to get it in the first place include:

- If the foot is not rested enough – for example, if you do lots of running, walking or standing (particularly on a hard floor).
- Wearing the wrong type of footwear – for example, shoes with poor cushioning or limited arch support.
- Being overweight – this will place extra strain on your feet, particularly your heel and plantar fascia.

## What can you do to help your plantar fasciitis?

### Ice

This can help to reduce the pain and inflammation associated with the condition and can be very effective at the end of a busy day. Roll your foot over a small, round plastic water bottle that has been cooled in the freezer for 10-15 minutes. This can be repeated on the same day though not within 2 hours of the last application.

## Footwear modifications

Do not walk barefoot on hard surfaces. Choose shoes with a good, thick, cushioned sole and a good arch support. A heel of up to 2 inches (5cm) can be beneficial. Avoid very flat shoes such as some slippers and sandals, plimsolls, pumps and flip-flops. A fastening shoe, ideally a lace up gives more support than a slip-on shoe. Avoid old and worn shoes that don't support and cushion the heel. Look for shoes that are designed for walking and running long distances. Wearing proper running trainers can greatly speed up the healing process.

## Pain relief

Painkillers such as paracetamol will often help ease the pain. Sometimes anti-inflammatory medicines such as ibuprofen are useful. These are painkillers but also reduce inflammation and may work more effectively than ordinary painkillers. Some people find that rubbing a cream or gel that contains an anti-inflammatory medicine onto their heel is helpful.

## Stretching exercises

Tight calf muscles are often a factor in plantar fasciitis. Regular, gentle stretching of your Achilles tendon and plantar fascia can help to ease your symptoms. This is because most people with plantar fasciitis have a degree of tightness in their Achilles tendon, as well as their plantar fascia. When asleep, the Achilles tendon and plantar fascia relaxes and shortens. This is why, when you first stand up, there is pain at the heel, as the tight plantar fascia pulls where it attaches into the heel. The aim of these exercises is to gently loosen up the Achilles tendon and plantar fascia.

## Are there any other treatments?

### Heel pads, arch supports and foot orthoses

People with a flat foot profile or a high arched foot profile can be more likely to get plantar fasciitis in the first place. This can also lead to a longer healing time. Foot orthoses can be used to elevate the heel and add increased support to the arch of the foot. Gel/silicone heel pads can help cushion and protect the heel.

## Taping

There are ways that the foot can be strapped to help lessen the strain on the plantar fascia.

## Steroid injections

A steroid (cortisone) injection, which usually also includes a local anaesthetic, is sometimes tried if your pain remains bad despite given the above 'conservative' measures a good chance to work. This can work effectively though it may only offer temporary relief by reducing the inflammation. Symptoms can recur as there can remain damage to the plantar fascia which still needs to repair. These injections can be given 'guided' with the use of ultrasound or 'blind', without the use of ultrasound. When ultrasound is used, a procedure called 'dry needling' can be performed which aims to stimulate the damaged tissue to 'kick start' the healing process. These injections can be uncomfortable at the time of the injection. Sometimes the injections are performed under ultrasound guidance to improve the accuracy.

## Night splints

This treatment involves the use of a splint that is worn overnight to maintain the Achilles tendon and plantar fascia in a slightly stretched position. The reasoning behind this treatment is that, when you first stand up in the morning, you don't get the tight pulling of the plantar fascia at the heel as the tissues have not been allowed to become tight overnight.

## Surgery

This may be considered in very difficult cases which have been present for a long period of time. It is not always successful in recent years we have operated less for this problem.

## What is the prognosis (outlook) for plantar fasciitis?

Most people will have completely recovered from an episode of plantar fasciitis within a year. However, some of the treatments above will help to speed up your recovery.

**Your clinician will be able to give you further information with regard to following these treatments. If you have any further questions with regard to your heel pain, or any aspect of your treatment, please contact your clinician.**

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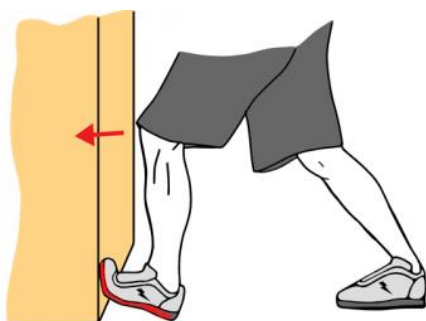


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## SELF TREATMENT ADVICE FOR PLANTAR FASCIITIS



Exercise 1



Exercise 2

### Exercise 1 – calf stretch

- Stand facing the wall with arms straight or bent, as in picture
- Ensure that both feet are in a direct line to the wall, roll slightly onto the outside edge of your foot so that your heel bone is straight and your foot is not flat.
- Bend the front knee and keep the back knee straight. Make sure that the back heel is kept on the ground.
- You should feel the calf muscles in the back leg being stretched. Hold this position for 30 seconds, repeat 3 times and perform 2 times every day.
- You should feel the stretch but if it is painful, the exercises won't work. If painful, try not to put the back leg so far back. You should feel the calf muscles in the back leg being stretched.

### Exercise 2 calf and plantar fascia stretch

- Stand facing a wall and lean onto the wall for support with your hands.
- Put your forefoot (toes) against the wall keeping your heel on the floor.
- Gently lean forwards and apply gentle pressure so that your toes and ankle bend gently and you feel a gentle stretch in your calf and under your foot.
- Hold for 30 seconds, repeat 3 times and perform 2 times every day

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Exercise 3



Exercise 4

## Exercise 3 – plantar fascia stretch

- Place the affected foot over the opposite knee.
- Place your fingers around the base of the toes and pull back towards the shin until you can feel a stretch in the arch (plantar fascia).
- You may be able to see or feel the plantar fascia become prominent as in the picture.
- Hold this position for 30 seconds, repeat 2 times every day

## Exercise 4 – plantar fascia stretch/massage

- Place a soft drinks can or a small, round, plastic water bottle in the freezer for approximately 30 mins until it is very cold.
- Ensure that it is not left too long or the can/bottle may become distorted/burst.
- Run under a cold tap briefly before allowing contact with skin.
- Roll your foot over the can / bottle, ideally for about 10 minutes.
- Reduce this length of time if your foot becomes uncomfortably cold.
- This can be repeated, but not within 2 hours of each application.
- A thin sock can be worn if it feels too cold

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