The Royal Liverpool and Broadgreen University Hospitals

NHS Trust



Patient information

Plantar Fasciitis

Therapies Directorate

Royal Liverpool Hospital and Broadgreen Hospital

PIF 1899 /V1

#### What is Plantar Fasciitis?

The Plantar Fascia is a tough and flexible band of tissue present in the sole of the foot, spreading from the heel to the base of toes. It is responsible for maintaining the natural arch of the foot and acts as a shock absorber during standing, walking and running.

Plantar Fasciitis is a painful condition affecting the plantar fascia of the foot. Commonly patients complain of pain on the underside of the heel which is worse on weight bearing, particularly after a period of rest. It is most common to experience this pain when standing on the foot for the first time after waking.

Approximately one in ten people will experience some form of Plantar Fasciitis in their lifetime. It is more common in people aged between 40 and 60 years.

#### What causes Plantar Fasciitis?

Until recently we believed that Plantar Fasciitis was due to inflammation of the Plantar Fascia. We now believe this to be incorrect. Current evidence suggests that Plantar Fasciitis is caused by small amounts of degeneration (wear) of the Plantar Fascia. As a result, the condition is now also known as Plantarfasciopathy.

# Factors which increase this degeneration include:

- Obesity.
- Flat feet (over pronation).
- Tight calf muscles.
- Excessive or sudden increase in running activity.

#### Treatment for Plantar Fasciitis

Plantar Fasciitis is a self-limiting condition and will usually get better in time. The tissue heals slowly and can take several months or even a year to settle.

# The following treatments can help to speed up the recovery process:

#### 1. Rest

This does not mean total rest but try to avoid activities that specifically aggravate your pain such as running, excessive walking or prolonged standing. **Gentle walking and the exercises described below are fine.** 

#### 2. Footwear

Try to ensure you wear shoes with cushioned heels that **fasten securely onto your foot.** Avoid open shoes or heavily worn shoes which are unlikely to offer the support your foot requires.

## 3. Heel pads and arch supports (orthotics)

These can be provided by your Doctor, Physiotherapist or Podiatrist as required. They can help to provide extra cushioning for your heel or correct any abnormal foot position which may contribute to your symptoms. They should be worn all the time for maximum benefit.

#### 4. Pain relief

Simple over the counter pain relief can help you to manage your pain to allow you to complete the exercises prescribed below. Please speak to your family doctor (GP) or pharmacist if you have any questions about the types of pain relief to take safely.

## 5. Night splints

These can be provided by your Doctor, Physiotherapist or Podiatrist in severe cases. They aim to keep your foot in a neutral position overnight which can reduce symptoms on waking.

#### 6. Exercises

Current research suggests specific stretches are **very important in the successful treatment of plantar fasciitis.**Both calf muscles and the associated Achilles tendon plus the Plantar Fascia must be stretched regularly to achieve good results.

These exercises are explained on the following pages.

## Calf stretch 1 – Gastrocnemius (long muscle)

Stand about 40 cm (approx.16 inches) away from a wall and place both hands on the wall at about shoulder height. With your feet slightly apart and your toes pointing forward, take a step back with your affected foot so you are stood with one foot in front of the other.

Use your insoles or a small rolled up towel underneath the inside of your back foot to ensure your foot does not roll in (see picture below).

Slowly bend your front knee and keep your back knee straight with both heels on the floor and lean towards the wall until you begin to feel a stretch in the calf of your back leg. Keep an upright posture throughout and avoid leaning or rotating to either side.

Hold ..... seconds.

Repeat ..... a day.





## Calf stretch two – Soleus (short muscle)

Stand about 40 cm (approx 16 inches) away from a wall and place both hands on the wall at about shoulder height. With your feet slightly apart and your toes pointing forward, take a step back with the unaffected foot so you are stood with one foot in front of the other.

Use your insoles or a small rolled up towel underneath the inside of your front foot to ensure your foot does not roll in (see picture below).

Slowly bend your front knee taking your knee cap forward over your toes until you feel a stretch in the calf of your front leg; the centre of your knee cap should be in line with your second and third toes. Keep an upright posture throughout and avoid leaning or rotating to either side.

Hold ..... seconds.

Repeat ..... times ..... a day.





#### **Toe Flexor Stretch**

Stand about 40 cm away (approx.16 inches) from a wall and place both hands on the wall at about shoulder height. With your feet slightly apart and your toes pointing forward, take a step back with your unaffected foot so you are stood with one foot in front of the other.

Use your insoles or a small rolled up towel underneath the inside of your front foot to ensure your foot does not roll in (see picture below).

Use a small rolled up towel underneath the big toe to lift it two to three cm off the floor. Slowly bend your front knee taking your knee cap forward over your toes; the centre of your knee cap should be in line with your second and third toes. You may begin to feel a slight stretch in the calf of your front leg. Keep an upright posture throughout, and avoid leaning or rotating to either side.

Hold ..... seconds.

Repeat ..... a day.





#### Plantar Fascia Stretch

Sitting on a chair or over the edge of the bed, bring your affected foot to rest on your opposite knee. Place one hand on the sole of your foot, and using the other hand slowly pull the toes back towards your shin until you feel a stretch in the sole of your foot.

Use the hand on the sole of your foot to feel the tension in the tight band through the sole of the foot. This must be completed before standing up on waking and also following any significant period of inactivity.

Hold ..... seconds.

Repeat ..... times ..... a day.



If you are unable to perform the above stretch in that position it also can be performed in standing. Stand facing a wall and place both hands on the wall at about shoulder height. With your feet slightly apart and your toes pointing forward, place your affected foot against the wall so your toes are resting on the wall (see picture below).

Slowly bend your front knee until you begin to feel a stretch in the sole of the foot. This must be completed immediately on waking and also following any significant period of inactivity.

Hold ..... seconds.

Repeat ..... times ..... a day.



### **Further information**

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