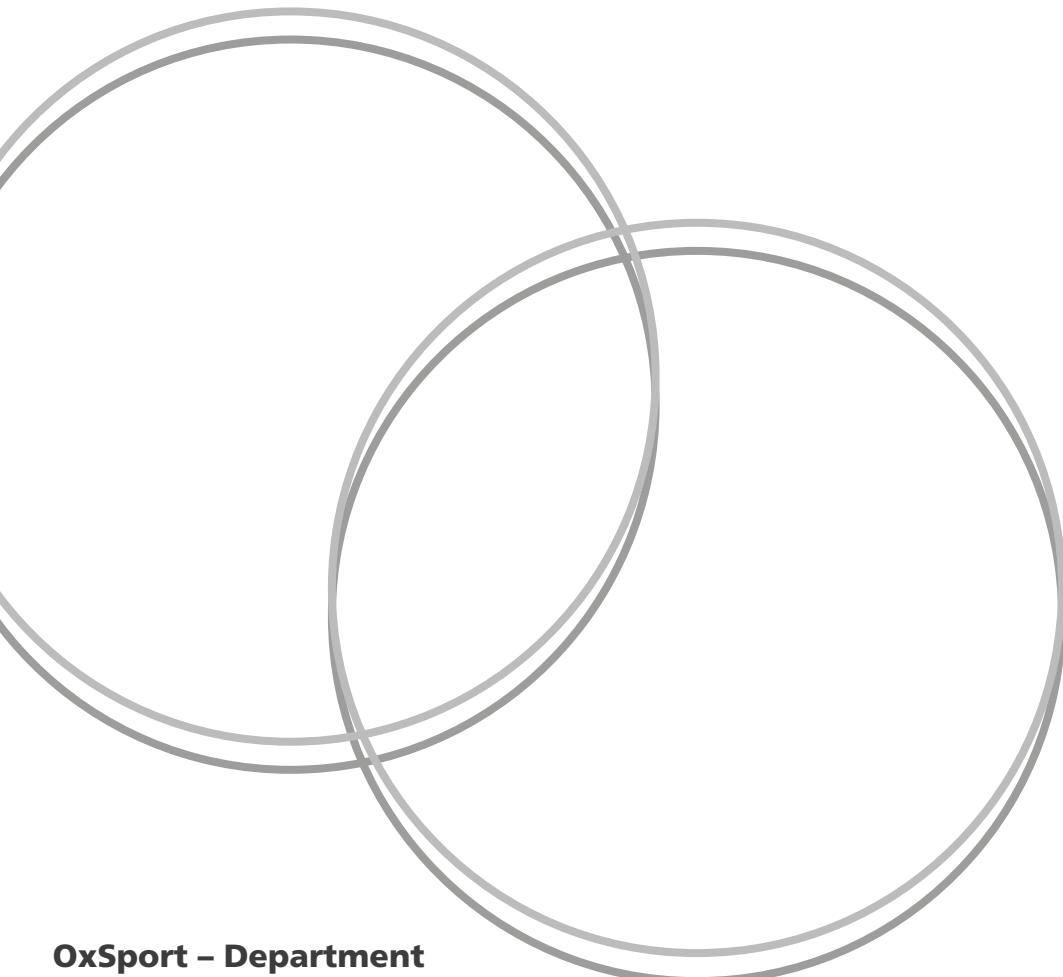


# **Plantar Fasciitis**

## **Advice and management**

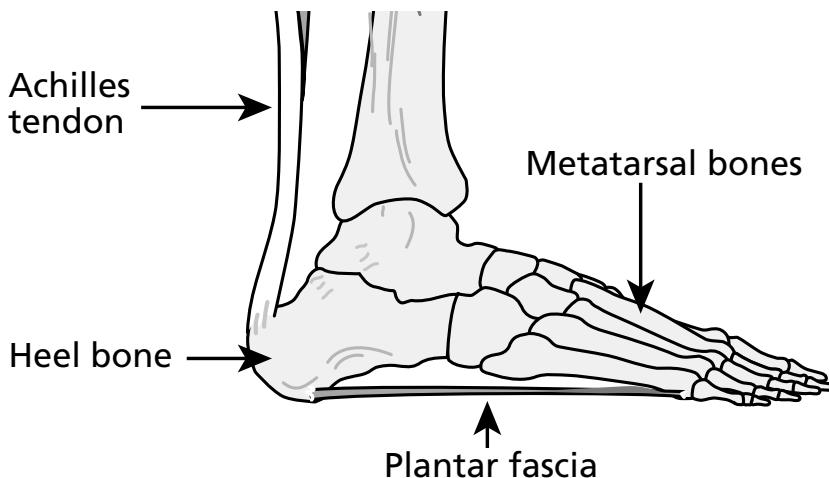
**Information for patients**



This booklet has been written to help guide you through the management of your plantar fasciitis. It is important that you read this booklet, so you have a better understanding of the condition and its management.

## What is plantar fasciitis?

Plantar fasciitis is a painful condition of the foot caused by repetitive strain to the plantar fascia. This is a fibrous band of soft tissue connecting your heel bone to your toes. It helps to reinforce the arch of your foot and acts like a 'bow string' to stiffen your foot when you walk.



## How common is plantar fasciitis?

Plantar fasciitis is a relatively common condition that affects approximately 1 in every 10 adults. Both sedentary and physically active people can suffer with this condition. It tends to be more common in people whose occupations involve standing on hard surfaces for long periods, and those who carry out sporting activities, such as long distance running.

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

Many things affect the load being put through your plantar fascia. Plantar fasciitis is not simply the result of exercising or standing or walking too much. General risks include:

- Age: it is more common between the age of 40 and 60 years
- 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: reduced ankle movement can increase the risk
- Foot type: it is more common in people with high arched feet
- Footwear: old or poor quality footwear with little cushioning and support can also increase the risk.

# What are the symptoms of plantar fasciitis?

## **The most common symptoms are:**

Variable pain: Pain is felt around the heel bone, usually on the sole of the foot. People often complain of 'first step' pain, when they first get up. You may find this pain settles during the day and with exercise, but is worse at the end of the day or after a lot of activity. Some people experience severe pain from their plantar fascia, which stops them doing their sport and may cause a limp.

Morning stiffness: Many people complain of stiffness around the heel bone, particularly when they first get up. This usually eases after a few minutes of walking, but may last longer.

Tenderness: Often the underside of the heel is tender when pressed. Sometimes this is quite general, but usually there is one particularly tender spot.

## **X-rays and scans**

It is often not necessary to carry out imaging (X-rays or scans) to be able to diagnose plantar fasciitis; it can usually be confirmed by your doctor or physiotherapist using your medical history and examination.

If imaging is necessary, we are likely to use an ultrasound scan. This is a handheld probe, which is rolled over your skin above your plantar fascia. The ultrasound machine uses sound waves to create an image on a screen. This is a quick, safe and effective way of us being able to see your plantar fascia. Magnetic Resonance Imaging (MRI) is also sometimes used.

Sometimes an X-ray may show a heel spur, which is a small piece of bone that can grow on the underside of the heel bone, near the plantar fascia. This can be mistaken as the cause of plantar fasciitis. We know that approximately 3 in every 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**

The following treatment options are likely to improve your pain, but it can take up to 18 months for plantar fasciitis to fully resolve.

### **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/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 and load management:**

Try to manage the load going through the plantar fascia by avoiding long periods of time standing or lots of walking and running. You can help to maintain your fitness using different forms of exercise that do not significantly aggravate your symptoms, such as swimming, cycling, aqua jogging (running in water).

### **Home exercises:**

- Stretching the plantar fascia (see page 7)
- Rolling of the plantar fascia (see page 9)

### **Footwear:**

We recommend supportive footwear with a stiff outer sole and a shock absorbing insole.

- Wear footwear that has arch supports and cushioning for your heel. It is recommended to wear shoes where the heel is slightly higher than the ball of the foot. In addition, buying a small over-the-counter heel raise to insert into your shoe to lift and cushion the heel can help.

- Avoid walking in bare feet, flip flops high heels or tight pointy shoes
- Maintain your shoes in good condition and renew your trainers every 300 to 500 miles. Consider having two pairs of trainers 'on the go' at the same time if you are a runner.

### **Managing your weight and long term conditions:**

If you are overweight, see your GP to discuss strategies to help you lose weight. This can make a big difference to your plantar fasciitis and general health. Similarly, better control of long term conditions such as type 2 diabetes can help recovery from plantar fasciitis.

### **Cross training:**

Vary your exercise in different ways, to train other parts of your body. This is called 'cross training' and is a valuable method of reducing injury and keeping fit. Here are some examples of cross training that you may find useful:

• Swimming	• Weight training	• Gym equipment
• Rowing	• Cycling	• Circuits
• Alternative sport	• Pilates	
• Spin classes	• Aerobics	

### **Physiotherapy:**

This may involve several different treatment options including:

- manual techniques
- specific exercises.

### **Other treatments:**

If initial treatments do not improve your symptoms, your physiotherapist or doctor will discuss other options with you. These may include:

- podiatry referral for assessment for shoe inserts (orthotics)
- night splints to stop your plantar fascia tightening up overnight
- foot or ankle taping to provide additional foot support
- dry needling, with or without autologous blood injection (a procedure to try and stimulate healing in the tendon)

- extracorporeal shockwave therapy (a machine is used to deliver sound waves to the painful area, to stimulate healing)
- very rarely surgery is required.

The latest evidence suggests that steroid injections are not the best treatment option. There is a risk of the plantar fascia rupturing (tearing) following a steroid injection, and it may cause wasting of the fat pad cushion under your heel. This can lead to long term problems. For these reasons, we do not routinely use steroid injections as a treatment option.

## Stretches

Regular stretching of the plantar fascia is a very important part of treatment. Carry out these stretches with your affected foot at least twice every day.

### **Stretch 1: Plantar Fascia – Standing**

Place the front of your foot and toes against a wall and lean forwards from the ankle.

Hold for 1 minute.



### **Stretch 2: Plantar Fascia – Sitting**

Sit in a chair with your affected leg crossed over your good one. Grab hold of your toes and bend them backwards until you can feel the stretch in the sole of your foot.

Hold for 1 minute.



### **Stretch 3: Soleus muscle**

Using a wall for support, plant your feet flat on the floor, one behind the other.

With your front knee bent, lean forwards, reducing the angle between your foot and your shin, until you feel the stretch in the back of your calf muscle in the front leg.

Hold the stretch for 30 seconds to 1 minute.



Do not let your heel come off the ground. In the photo the right leg (touching the wall) is the one which is being stretched.

### **Stretch 4: Gastrocnemius muscle**

Using a wall for support, plant your foot flat on the floor behind you.

With your leg straight, lean forwards, reducing the angle between your foot and your shin, until you feel the stretch in the back of your calf muscle in the leg you have planted behind you.

Hold the stretch for 30 seconds to 1 minute.



Do not let your heel come off the floor. In the photo the right leg (the one furthest from the wall) is the one being stretched.

## **Rolling/Tissue release**

Plantar fascia soft tissue release with golf ball

Place your bare foot on a golf ball.

Put some pressure through your foot and roll the golf ball backwards and forwards for approximately 1 minute.

This helps reduce the tightness in the plantar fascia.

Do this 2 to 4 times a day.



## **Frozen bottle rolling**

Take off your footwear and place your foot on a frozen bottle of water.

Roll the bottle backwards and forwards underneath the arch of your foot.

Continue rolling for 5 minutes.

Do this 2 to 4 times a day.



## 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 while doing the exercises in this booklet.

Q. When can I go back to my sport?

A. The return to your sport is guided by your symptoms. We advise a gradual return to your sport. You may have lost condition during your injury and recovery, which is why maintaining your cardiovascular fitness through other activities (such as swimming and cycling) is important. Return to sport as pain allows.

Q. Can I still run during my rehabilitation phase?

A. There is no evidence that you will do yourself further harm if you return to running. You can run, providing you have little discomfort. However, your rehabilitation may take longer, as running may aggravate your symptoms. You may want to consider alternative forms of exercise, such as swimming or cycling, to maintain your fitness.

Q. Is there a surgical treatment for plantar fasciitis?

A. Surgery tends to be the last resort when all other treatments have failed. Even in this instance, it is not guaranteed to relieve your symptoms.

## How to contact us

Appointments:  
01865 737 871

Physiotherapy:  
01865 738 074

Radiology:  
01865 738 189

Pathway Administrator:  
01865 738 285

## Useful websites

OxSport:  
[www.ouh.nhs.uk/oxsport](http://www.ouh.nhs.uk/oxsport)

## Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

Author: Hamish Reid and Simon Wood, OxSport

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Oxford University Hospitals NHS Foundation Trust

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