



YOUR GUIDE TO

# PLANTAR FASCIITIS

MUSCULOSKELETAL

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## Introduction

**Please take note of the following before starting any of the exercises in this guide:**

- The information contained in this guide is intended to assist in managing your recovery.
- This guide is based on the latest medical research in the field and contains the best advice available to the best of our knowledge.
- This guide is complimentary to other medical services and is not intended as a substitute for a health care provider's consultation. Never disregard medical advice or delay in seeking advice because of something you have read in this guide.

● Many people have found quick and lasting relief from their foot pain by acting upon the information provided, but everyone decides for themselves what to do with this information. Should you doubt a particular exercise in your situation, please consult your health professional.

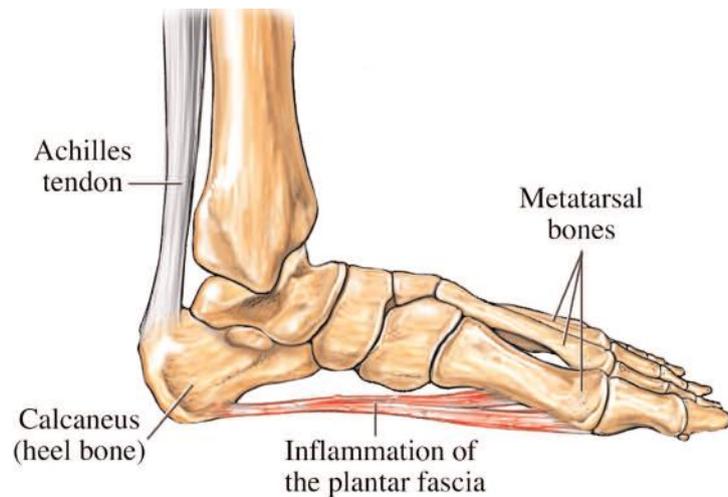
**When consulting your health professional, it is wise to take this guide with you to show them.**

## What is Plantar Fasciitis?

Plantar fasciitis is an overuse injury that affects the sole or flexor surface (plantar) of the foot. A diagnosis of plantar fasciitis means that the tough, fibrous band of tissue (fascia) connecting your heel bone to the base of your toes is inflamed. This strong band of tissue (the Plantar Fascia) serves to support the arch of the foot, and when inflamed or injured can cause stabbing or burning pain that is usually worse first thing in the morning. Pain is one of the main symptoms and is usually experienced about 4cm in front of where the plantar fascia attaches on the heel bone, but can be felt anywhere along the underside of the foot. Walking for long periods of time or sudden stretching of the sole of the foot often makes the pain worse.

The condition starts gradually with mild pain at the heel bone often referred to as a stone bruise and can be tender to the touch. You are more likely to feel pain after rather than during activity, with the pain classically occurring again when arising after a period of rest.

If you don't treat plantar fasciitis effectively, it may become a chronic condition and could also result in you being unable to keep up your current activity level. Foot pain could also result in changes in your walking pattern which can lead to further symptoms of knee, hip and back pain in the long term.



## What Causes Plantar Fasciitis?

Plantar fasciitis is caused by straining this strong band of fascia that supports the arch of your foot and acts like a shock absorbing bowstring. Repeated strain can cause tiny tears in the plantar fascia, which in turn leads to pain and inflammation. The causes of plantar fasciitis can therefore be a result of:

- **Physical activity overload:** Plantar fasciitis is common in long distance runners. Jogging, walking or climbing stairs can also place too much stress on the heel bone and surrounding soft tissue, especially if you do it for long periods of time or are not used to it. Even household exertion, such as moving furniture or large appliances, or being on your feet all day in your job, can trigger pain.
- **Arthritis:** Some types of arthritis can cause inflammation in the tendons in the bottom of your foot, which may lead to plantar fasciitis.
- **Diabetes:** Although doctors are unsure why, plantar fasciitis occurs more often in people with diabetes
- **Faulty foot mechanics:** Being flat-footed, having high arches, or even having an abnormal pattern of walking (e.g. overpronating - foot rolls inwards) can adversely affect the way weight is distributed when you are on your feet. These poor mechanics add extra stress to the plantar fascia and can result in plantar fasciitis.
- **Poor Shoes:** Shoes that have; poor cushioning, are loose, lack arch support or the ability to absorb shock, provide poor protection to your feet and can result in injury. Regularly wearing high heeled shoes, can result in your Achilles tendon (which is attached to your heel bone) contracting and shortening, causing strain to the tissue around the heel.
- **Overweight:** Sudden gains in weight or being overweight will put extra strain on the heel and arches of your feet.
- **Age:** Heel pain tends to be more common with aging i.e. over 40, as the arch of your foot begins to sag, putting stress on the plantar fascia.

● **Overuse or poor technique:** Athletes who increase their running intensity or distance or those with poor techniques can result in overuse and over stretching of the plantar fascia.

# What can I do to manage my condition?

Usually the inflammation and pain will ease with time; however fascia tissue, like ligament tissue, heals very slowly and therefore it may take several months or more to go. There are however a number of factors that could help to speed up the recovery process. With these measures, recovery is likely to be within weeks rather than months.

● **REST:** It is important to rest as much as possible from the activities that are aggravating your condition. Avoid running, excess walking or standing, and undue stretching of the sole of the foot. Gentle walking and the exercises provided below should not aggravate your condition and should help to maintain range of movement and increase the strength in the lower leg and foot.

● **ICE:** Apply ice to the painful area for 10-15 minutes three to four times a day to relieve your symptoms. Never apply ice directly to the skin, always wrap it in a thin cloth or towel to prevent a burn from occurring and make sure that you regularly check your skin.

● **TAPING:** Complete rest is not always possible especially if your job requires you to be on your feet, with regular walking. Effective plantar fasciitis taping techniques can help the foot to get the rest required by supporting the plantar fascia. Tape applied to the foot serves to take the stress off the fascia which allows the inflammation to settle and healing to take place. Ask your physiotherapist about taping your foot.

● **MEDICATION:** Often a doctor will prescribe Nonsteroidal anti-inflammatory medication such as ibuprofen, as this will help to reduce both pain and inflammation. Some people find that rubbing a cream or gel onto the heel that contains an anti-inflammatory medication effective in reducing the pain and inflammation. In some more severe cases, a cortisone injection may be injected into the inflamed fascia by your doctor to try and relieve the inflammation. This should not however be a first option and other conservative measures should be tried first.

● **EXERCISE:** Exercises are an important part in the treatment for plantar fasciitis and help to reduce the chance of recurrence in the future. A home exercise programme to stretch and strengthen the muscles of your lower leg, ankle and foot is important to ensure that full function is restored. The plantar fascia tends to tighten up at night, which is why it is usually most painful first thing in the morning. A good stretching and strengthening programme, at least twice a day can help to reduce these symptoms of pain.

● **FOOTWEAR:** Limit walking barefoot and walking or standing for long periods of time on hard surfaces. Choose shoes with cushioned heels and a good arch support. Laced sports shoes rather than an open sandal will provide more support for everyday activities. Also ensure that when participating in physical activity, the shoes are correct for the activity you are doing. Always avoid old or worn shoes that will not give good enough support.

● **HEEL PADS / ORTHOTICS:** Orthotics or heel pads are often prescribed by your Doctor or Allied health professional. An Orthotic can help to restore normal foot biomechanics (movements) and reduce over pronation (rolling in of

the foot) which is a contributory factor for plantar fasciitis related heel pain. It is important that the right shoe support is used for your particular foot type and condition. It is therefore essential that you consult with your allied health professional so that a full assessment of your foot biomechanics can be performed before foot orthotics are prescribed and used.

● **CHRONIC TREATMENT:** About 90 percent of people with plantar fasciitis improve significantly after two months of initial treatment. If your plantar fasciitis continues after a few months of conservative treatment, your doctor may inject your heel with steroidal anti-inflammatory medications (corticosteroid). If you still have symptoms, you may need to wear a walking cast for 2-3 weeks or positional splint when you sleep. In very few cases, surgery may be required to release the fascia which has become shortened.

# What exercises should I do?

It is important that you are aware that this is a general exercise programme for Plantar Fasciitis, which can be

adjusted depending on advice that you have been given by your health professional on assessment.

## Exercises

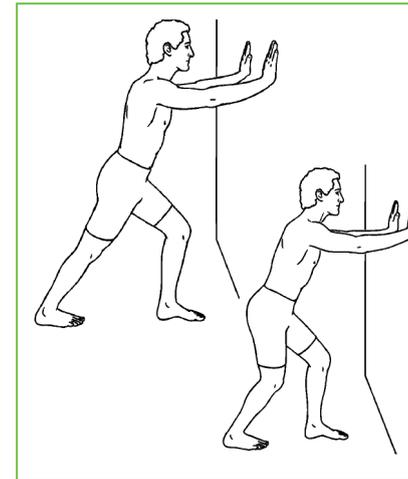
- Keep all exercises in your pain free limits. **Trying to work in painful ranges will only prolong your recovery.**
- If you experience pain during any of the exercises, decrease the intensity of the exercises by:
  - decreasing the number of sets
  - decreasing the number of repetitions
  - decreasing the range of movement
  - decreasing the resistance

## STRETCHING

- Repeat each of these stretches **3 times** (on both sides if necessary).
- Hold each stretch for at least **30 seconds**.

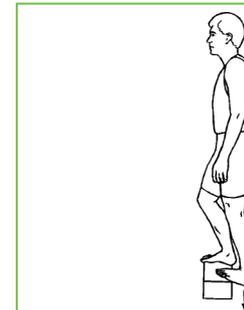
- Do all exercises slowly and breathe normally.
- Progress gradually according to your own level of comfort.
- Following exercise, stiffness or fatigue may result but should not last longer than 24 hrs. The symptoms of your injury should not be aggravated.

- Hold a steady stretch, **do not bounce**.



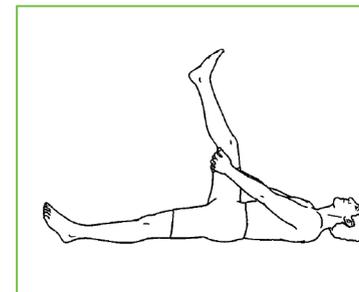
### CALF STRETCH

Stand about a metre away from a wall. Place both hands against the wall with one foot further back than the other. Now lean in towards the wall, bending the front knee and keeping the back knee straight and the heel on the floor. Hold for 20-30 seconds, and then simply bend your back knee slightly, still keeping your heel flat on the floor. You should feel the stretch lower down your leg in the region of your Achilles tendon. Hold for 20-30 seconds and then repeat with the other leg.



### PLANTAR FASCIITIS STRETCH

Stand with the ball of one foot on a stair. Slowly reach for the bottom of the step with your heel until a stretch is felt through the arch of your foot.



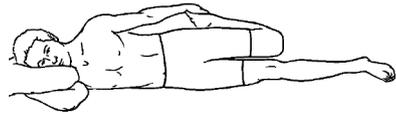
### HAMSTRINGS

Lying on your back, one leg straight and one knee bent. Raise the bent leg up towards your chest until your knee is in line with your hip. Now straighten the knee. You should feel a stretch at the back of your leg. You can use a towel if necessary to aid you in lifting your leg for the stretch.

## Exercises (continued)

### QUADRICEPS

Lying on your right side, your right arm extended up to cushion your head, use your left hand to grasp your left ankle as you bend your left



knee backwards. You should feel the stretch along the front of your thigh. Repeat this twice on your right before rolling over to stretch your left leg. It is important to keep the other leg bent at both the hip and the knee, so as not to hyperextend your back. A towel can be used to aid you in this stretch if you are unable to reach your ankle or bend your knee too far.

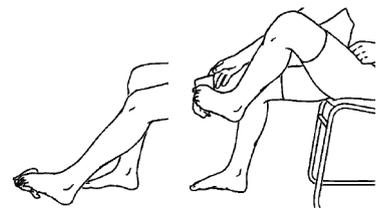
### STRENGTHENING

- Ensure that you work in a pain free range of movement
- Complete **2 sets of 10-15 reps** unless otherwise stated in the exercise
- Only start the hopping sequence exercise after you have been doing the other strengthening exercises for a week or two and you are pain free with them.



### BALL ROLL

Use a rolling pin or tennis ball. While seated, roll the rolling pin or ball with the arch of your foot. Progress to doing this exercise while standing as you can tolerate it.



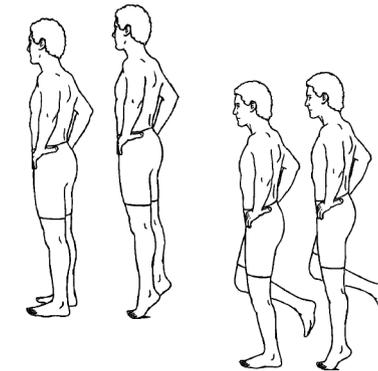
### PICK UP EXERCISES

Use toes of one foot to pick up objects from floor, such as coins, marbles, tissue.



### SINGLE LEG TOE CURLING

Sitting on a chair with your feet on the end of a towel on the floor. Keeping your heels on the floor, use your toes to crunch the towel up. Keep doing this until you reach the other end of the towel and then start again. Repeat this for 5 towel lengths. Progress by adding weight on the towel and then using one foot at a time.



### CALF RAISES

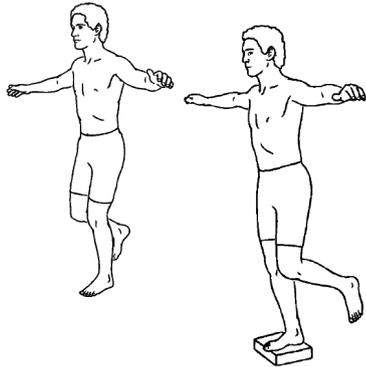
Standing, raise up onto your toes in the following manner: First onto your big toe, then onto your middle toes and lastly onto your little toe. Repeat this sequence 10 times. This can be progressed by completing the above exercise on one foot at a time



### TOE RAISES

Stand supported with your back against a wall, place your weight on your heels and rise up onto your heels (i.e. raise your toes off the ground) in the same sequence as the calf raises, i.e. middle of your heel, outside and inside. Repeat this sequence 10 times.

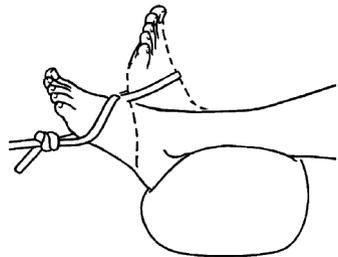
## Exercises (continued)



### STORK STANDING

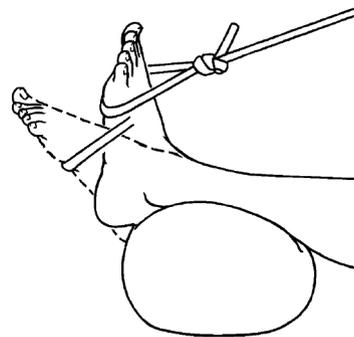
- Balance on one leg for 30 seconds and repeat with the other leg.
- Repeat the above with your eyes closed.

Progress the above to standing on an unsteady surface, e.g. a cushion or a narrow piece of wood, and by throwing a ball in the air or against the wall at the same time



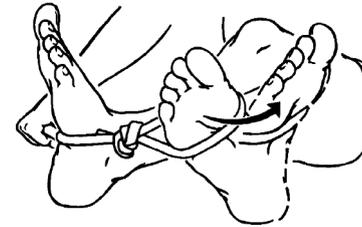
### RESISTED DORSIFLEXION

With the theraband anchored to a fixed object (i.e. table), pull your foot towards you. Return slowly to your starting position. The movement should be slow and controlled in both directions.



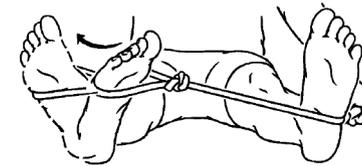
### RESISTED PLANTARFLEXION

Whilst holding one end of the tubing and the other tied around your ankle, press the foot downwards, away from you. Return slowly to your starting position. The movement should be slow and controlled in both directions



### RESISTED INVERSION

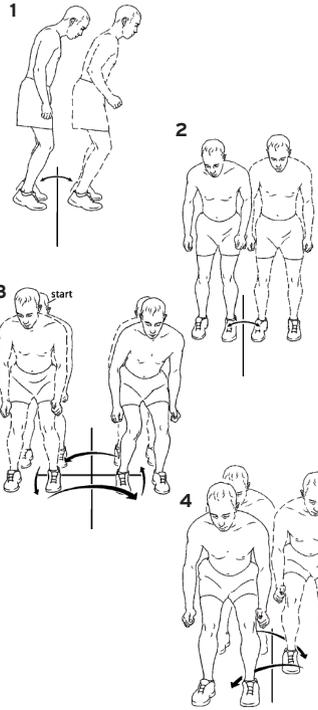
Attach one end of the theraband to a secure surface (i.e. table leg), and attach the opposite end around your ankle. The leg you are exercising should be closest to the table. Now pull your foot away from the attachment, towards your midline. The movement should be slow and controlled in both directions.



### RESISTED EVERSION

Attach one end of the theraband to a secure surface (i.e. table leg), and attach the opposite end around your ankle. The leg you are exercising should be furthest away from the table. Now move your foot away from the attachment so that it moves away from the midline. The movement should be slow and controlled in both directions.

## Exercises (continued)



### HOPPING

Standing on two legs hop from one point to another in the following manner

1. Forwards and backwards
2. Side to side
3. In a square (clockwise and anti-clockwise)
4. In a zigzag forwards and then backwards

Repeat each sequence 10 times per leg.  
Progress to hopping on one leg.

### RUNNING DRILLS

These can be done once the above can be performed without pain and with good control. With the drills try replicating movements that you could do in your sport i.e. running forwards, backwards, side to side, sudden change of direction, zigzag running etc. Also try and change the pace as you do them i.e. sudden sprinting, sudden stopping.

## Contact us

This guide is designed to assist you in the self-management of your injury/condition.

We are here to assist your recovery in the shortest but safest possible time. If you have any uncertainties or queries regarding the information, please do not hesitate to contact us on:

Phone 017890400999 / 07870166861

[www.mdphysiotherapy.co.uk](http://www.mdphysiotherapy.co.uk)