

Plantar Fasciitis

Following your consultation with a member of the Foot and Ankle Team you have been diagnosed with plantar fasciitis. This leaflet aims to give you additional information about your condition and the treatment. It is designed to give you some general details about the recovery from surgery if necessary and the common risks and complications. This leaflet is not for self diagnosis. Please ask your practitioner if you have any further questions.

What is plantar fasciitis?

The heel's function in walking is to absorb the shock of your foot striking the ground as it is put down and to start springing you forward on the next step. It contains a strong bone (the calcaneum). Under the bone are a large number of small pockets of fat in strong elastic linings, which absorb much of the shock (fat pads). The heel is attached to the front of the foot by a number of strong ligaments which run between the front part of the calcaneum and various other parts of the foot. The strongest ligament is the plantar fascia, which attaches the heel to the toes and helps to balance the various parts of the foot as you walk. It therefore takes a lot of stress as you walk. In some people the plantar fascia becomes damaged and painful. This usually happens where it is attached to the heel bone, although sometimes it happens in the midpart of the foot. This condition is called plantar fasciitis.

Causes include:

- Usually it is due simply to constant mechanical stress and is commoner in people who spend all day on their feet or are overweight.
- Stiffness of the ankle or tightness of the Achilles tendon increase the stresses on the heel. Most people with plantar fasciitis have a rather tight Achilles tendon.
- People who have high arched ("cavus") feet or flat feet are less able to absorb the stress

of walking and are at risk of plantar fasciitis.

- Sometimes it starts after an injury to the heel.
- People who have a rheumatic condition such as rheumatoid arthritis or ankylosing spondylitis may get inflammation anywhere a ligament is attached to bone (enthesopathy) and plantar fasciitis is part of their general condition.

Usually plantar fasciitis eventually gets better itself, but this can take months or even years. If you have it once you are more likely to have it again.

I have been told my pain is caused by a bone spur. Is this likely?

Near the damaged plantar fascia attachment, but not in it, some extra bone may form, producing a small "spur". This is a shelf of bone, not a sharp spur. These "heel spurs" are commoner in people with plantar fasciitis, but they can be found in people with no heel pain. The heel spur is caused by the same process as the heel pain, but the spur is not itself the cause of the pain.

Can I do anything about heel pain myself?

You can try to avoid the things that cause heel pain to start:

- Weight loss if you are overweight
- Where your job allows, minimise the shock to your feet from constant pounding on hard surfaces.
- Reduce the shocks on your heel by choosing footwear with some padding or shock absorbing material in the heel.
- If you have high arched feet or flat feet, a moulded insole in your shoe may reduce the stresses on your feet.
- If you have an injury to your ankle or foot, make sure you exercise afterwards to get back as much movement as possible to

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reduce the stresses on your foot and your heel in particular.

If you start to get heel pain, doing these things may help the natural healing process to start and the pain to improve.

Alternative treatments for heel pain?

- As heel pain is basically a mechanical stress problem in the tissues of the heel, the main treatment is to reduce stress.
- Your doctor will advise you about weight loss and appropriate footwear.
- It is helpful to wear a soft heel pad in your shoe to act as a shock absorber when you walk.
- Avoid walking barefoot on hard surfaces.
- If you have a stiff ankle or tight Achilles tendon. Stretching the Achilles tendon and plantar fascia is very effective general treatment for many patients.
- If you have a high arched or flat foot, a podiatrist may advise an insole to reduce stresses.
- Simple painkillers such as paracetamol or anti-inflammatory medicines can help reduce the pain. Ask your doctor or pharmacist for advice before taking anti-inflammatory medicines as they can have troublesome side-effects for some people.

These simple measures will help the majority of people with heel pain. If the pain continues, try wearing a splint on your ankle at night to prevent your Achilles tendon tightening up while you are asleep. This is often very effective in improving the severe pain that many people have first thing in the morning and breaking the pain cycle. Shockwave therapy may be offered if you have longstanding heel pain and other treatments have failed. This works

by encouraging the healing of the damaged plantar fascia ligament under the heel. This is a safe and non invasive treatment. Success rates for this treatment are around 80%. You will require three session of treatment about 1 week apart. Your practitioner may inject some steroid into the attachment of the plantar fascia to damp down the swelling and pain. This is successful in approximately 50% of patients. These measures will reduce the pain in most people who are not helped by simple treatment. However, the pain may return after a few months in some people. If you still have pain after one or two injections, your doctor may wish to investigate your problem further. If no other medical problem or cause of stress in your heel is found, a number of other treatments can be tried:

- Further physiotherapy.
- Wearing a plaster cast to rest the inflamed tissues.
- Pain control treatments such as transcutaneous nerve stimulation (TENS) or acupuncture.

Do I need an operation?

It is rare to need an operation for heel pain. In our experience less than 5% of patients require surgery. An operation would only be considered if all simpler nonsurgical treatments have failed and you are a reasonable weight for your height and the stresses on your heel cannot be improved by modifying your activities or footwear. An operation would release part of the plantar fascia from the heel bone and reduce the tension in it. Many surgeons would also explore and free the small nerves on the inner side of your heel as these are sometimes trapped by bands of tight tissue. This surgery can be performed through a cut about 3 cm long on the inner side of your heel. As yet, performing the operation by keyhole surgery

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has not been proven to be effective and safe.

Risks

Most people who have an operation are better afterwards, but it can take months to realise the benefit of the operation and the wound can take a while to heal fully. Tingling or numbness on the side of the heel may occur after operation.

COVID-19 infection increases the risk of complications to surgery and we recommend you read the separate leaflet about this. If you are in one of the vulnerable groups you should think very carefully about proceeding with surgery unless it is absolutely necessary.

Further information

The figures for complications given in this leaflet have been taken from information produced by the British Orthopaedic Foot Surgery Society using audits from all areas of the UK.

The British Orthopaedic Foot Surgery Society web site is available at: www.bofas.org.uk/

Mann, Coughlin and Saltzman (2007) Surgery of the Foot and Ankle 8th edition, Elsevier, Philadelphia

NHS Constitution. Information on your rights and responsibilities. Available at www.nhs.uk/aboutnhs/constitution