

HEEL PAIN AND PLANTAR FASCIOPATHY (Pain beneath the heel)

What is it?

Persistent pain beneath the heel is one of the most common symptoms within the foot and ankle.

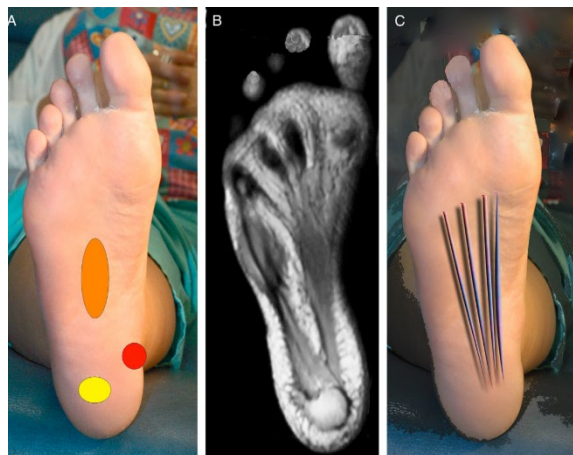
Numerous medical terms are used to describe heel pain including plantar fasciitis or policeman's heel, clinicians prefer to use the terms plantar heel pain or plantar fasciopathy. These refer to pain under the sole of the foot (Plantar), within collagen connective tissue (Fascia) and disorder (opathy). The plantar fascia is a broad band of fibrous tissue located from the heel to base of toes, beneath muscles of the foot, assisting in stability of the arches during weightbearing.

What does it do?

It stores and releases energy making walking and running activities more efficient.

Why does it get painful?

Pain occurs after unaccustomed increased activities such as prolonged standing or running. Excessive strain loads the fascia, causing fraying and secondary thickening. It can become irritable at its attachment to the heel bone (calcaneum), known as traction periostitis.



A – common sites of heel pain
B – MRI scan showing the plantar fascia
C – sites of tension strain within the plantar fascia

James L. Thomas et al. 2010

How long does it last?

Pain may settle without treatment, but pain is better managed in those who follow advice. Typically, it lasts for six to nine months but may remain for up to 3 years in few cases, but 80% of peoples' symptoms are clear by 24 months.

Are there other reasons it may occur?

It is most common in people over the age of 40. People may experience pain due to:

- Excessive, intense or sudden spikes in exercise
- Weight gain
- Stiffness or weakness about the foot, ankle or lower limb
- Foot posture particularly those with high or low arches
- Occupations that require long periods of standing upon hard floors

Signs and Symptoms

Pain typically occurs gradually without specific injury.

It is triggered by sudden increases in activity or changes in footwear used, e.g., using flat shoes after normally wearing heeled shoes.

This results in excessive loading upon the plantar fascia, causing inability for it to adapt over time, tissue injury and pain.

Pain in one heel is most common but one third of people experience pain in both.

Pain upon standing up and getting going after resting is common. Pain typically eases as you start to move but returns at the end of a long day.

It is known that standing for long periods, long walks and intense exercise may aggravate.

If you experienced an injury with sudden pain, swelling, bruising, redness or changes in the appearance of your foot shape, ask your GP to refer you into your local Musculoskeletal (MSK) service for opinion from a Foot & Ankle Health professional

How can I manage my heel pain?

It can be treated with simple changes performed by yourself at home, without need to see a medical specialist. The following strategies may reduce pain and lead to a quicker recovery:

- **Rest / activity modification:** Avoid activities that typically aggravate pain, e.g., consider swapping long walks or running for gym-based exercise, swimming or cycling. Improvement is indicated by how pain feels upon standing up after resting, if pain is more intense than normal, this is a sign that you have overdone things the day before, therefore, reduce intensity and amount of exercise next time. Start exercises slowly, allowing tissues time to adapt and avoid increasing exercise duration too quickly. Following the traffic light system below can help with this, it is acceptable to feel some discomfort but not significant pain.

Pain during exercise
0 = no pain 10 = worse pain imaginable



- **Time:** Allow pain to settle and for a realistic time of tissue repair. This may take 3-12m in most cases but can take 24-36m for some.
- **Footwear:** Use a well fitted shoe, wide enough to allow toes to spread and use a cushioned sole. Avoid walking barefooted and using thin soled unsupportive footwear. A shoe with a small heel may feel more comfortable.
- **Medication:** National guidelines suggest paracetamol for pain and an anti-inflammatory tablet (NSAID) such as Ibuprofen to reduce pain and inflammation. Use NSAID's only after food and for 3-4 days only. Follow the recommended dosage, as NSAIDS can raise the risk of heart attack or stroke if susceptible. You should consult with a pharmacist or GP if concerned and have a known history of cardiovascular disease.
- **Heel pads:** Use foam or gel heel pads or insoles with arch support for comfort. These can be purchased in shops or online.

- **Ice massage:** Roll your barefoot back and forth from toes to heel over a frozen plastic bottle or can. This can alleviate pain and be comforting at the end of the day.
- **Taping:** Using sports tape can rest the plantar fascia and reduce discomfort. Avoid tape if you have sensitive skin or if a rash occurs. Follow the steps below to apply the tape.



- **Plantar fascia mobilisation:** Gently bend toes upwards and push with your finger or thumb into your arch, changing location frequently. Perform this 10 times for 10 seconds, three times per day.



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- **Calf stretches:** Performed each day, frequent calf stretching may ease heel pain symptoms, as stiff calf muscles aggravate the plantar fascia during standing and walking. The aim of these exercises is to increase ankle motion during activity and reduce tension at the plantar fascia.



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Keep your feet pointing straight ahead and heels flat to the floor. Hold still for 15 seconds and increase the hold progressively until 60 seconds, 5 times per day is comfortable. Perform 5 x day and ensure you swap legs.

- **Strengthening exercises:** Improvement in calf muscle strength assists the leg, ankle and foot to better tolerate activities. Roll up a small towel and place under your toes. Lift both heels from the floor. Return to the start position and repeat until you can perform 15 easily. Progressing when comfortable, this exercise performed upon 1 leg is a good sign of leg strength.



Continue performing all exercises once pain has settled, to ensure recovery is complete. It is normal to feel some discomfort whilst performing exercises, but pain can be managed by reducing the number of repetitions, taking rest days between exercise days and slowly building up again.

Summary

Heel pain occurs from overdoing things, with symptoms that can settle quickly or last for one to two years if not managed appropriately. It is important to consider weight management if relevant. By following advice, most people self - manage and experience pain resolution.

For distressing cases of heel pain and those not responding to 3 months of exercise advice, **Electro Corporal Shockwave Therapy (ESWT)** can be used typically in cases of pain less than 12 months duration. Pain relief is not guaranteed.

In patients not responding to **ESWT**, or if unable to have **ESWT** (e.g., pacemaker / anticoagulants), steroid injections performed under ultrasound guidance may be considered. These come with risks of pain, infection and plantar fascia rupture (1/100). Steroid Injections are not guaranteed to reduce pain.

This leaflet aims to provide you with all the information regarding heel pain and its treatment. After receiving this leaflet, you have six months to consider your options. No further appointment will be made for you.

You should now consider what options are best for you?

1. **Self-management:** Using exercise advice for at least 3m or until pain eases. This approach requires no further appointments.
2. **Shockwave therapy or steroid injections:** If you have exhausted exercise advice and are unable to manage normal daily activities, exercise or work despite treatments.

If you wish to be considered for shockwave or steroid injections within six months of receiving this leaflet

Contact the Podiatry team to speak with a clinician: we will discuss by telephone your request and refer you onwards if appropriate.

Tel: 0300 1314536 or Email: esh-tr.PodiatryEnquiries@nhs.net

We cannot guarantee treatments as this depends upon your medical status and is a choice between you and a clinician.

If you wish to proceed with ESWT or injection therapy after 6 months of receiving this leaflet, discuss your case with your GP.

Sources of information

James L. Thomas et al. The Diagnosis and Treatment of Heel Pain: A Clinical Practice. Guideline–Revision 2010. The Journal of Foot & Ankle Surgery 49 (2010) S1–S19.

Rehab My patient: plantar fascia exercises:

<https://app2.rehabmypatient.com/exercise-plan?id=0&mode=plan>

Important information

This patient information is for guidance purposes only and is not provided to replace professional clinical advice from a qualified practitioner.

Your comments

We are always interested to hear your views about our leaflets. If you have any comments, please contact the patient experience team on 0300 131 4784 or esh-tr.patientexperience@nhs.net.

Hand hygiene

We are committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

Other formats

If you require any of our leaflets in alternative formats, such as large print or alternative languages, please contact the Equality and Human Rights Department on 0300 131 4434 or esh-tr.AccessibleInformation@nhs.net

After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

Reference

The following clinicians have been consulted and agreed this patient information:
Graeme Hadlow Foot & Ankle MSK Advanced Practitioner

The Clinical Specialty/Unit that have agreed this patient information leaflet:
Community Health and Integrated Care - Podiatry

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