Heel and Arch Pain

What causes heel and arch pain?

A broad band of fibrous tissue called the plantar fascia supports the long arch on the sole of your foot. The plantar fascia is attached under your heel bone (calcaneus) at one end, and to bones in the ball of your foot and toe area at the other end. Over-stretching of this band causes inflammation of the plantar fascia (plantar fasciitis) that can lead to arch pain, heel pain, pain under the forefoot and the formation of heel spurs. Heel spurs are bony outgrowths of the heel bone in response to the excessive pull on the plantar fascia.

Excessive stretching of the plantar fascia can be caused both by functional flat feet (the arch collapses towards the floor on weight-bearing) and high-arched feet under load bearing. Excessive weight on the plantar arch can be due to sudden increased activity such as starting gym, moving home or climbing stairs. Excessive body weight due to pregnancy or weight-gain can also be implicated. Trauma can damage the arch structure, leading to fasciitis (inflammation of the fascia).

Weak ankles or poorly balanced feet can result in over-pronation of the foot, in which the foot and ankle roll inwards excessively during walking and running. Over-pronation is a leading cause of plantar fasciitis, as it stretches the fascial band with every step taken.

Other causes of pain under the heel can include foreign objects (splinters, carpet fibres, etc.); fractures; bursitis; enthesopathy; metabolic illnesses such as gout or arthritis; Dupuytren's contracture; tumours; muscle imbalances; periostitis; nerve compression and even just deep bruising.

Pain behind the heel may be due to paratendonitis of the Achilles tendon; bursitis; irritation of a Haglund's exostosis, or nerve entrapment.

How do I know I might have plantar fasciitis?

Your feet hurt getting out of bed in the morning and you can hardly put your heels down to begin with. The pain hurts more first thing in the morning, than at the end of the day. It can also hurt more when you've been sitting for a while and then stand up. Your arch may ache at any time but the pain is always worse during and after exercise.

The back of your ankle may feel tight and sore. You have heel pain which may start on the inner side of the heel but later spreads to the outer side as well. The inside of your ankle may swell because your ankle is working harder to compensate for the loss of flexibility in your foot.

Your big toe may ache or have callus buildup on the inner edge. You may have a bunion or notice one developing. This is because you are subconsciously shifting your weight towards the big toe to relieve pressure on your arch. Fallen arches don't necessarily cause bunions, but they can make them worse.

What should I know about footwear to prevent heel and arch pain?

The heel area needs cushioning and the type of shoe you wear should not encourage over-pronation but rather provide some form of arch support. Avoid thin-soled shoes for everyday use. Replace worn out heels since these can tilt your foot into over-pronation, and this will over-stretch the plantar fascia in the arch area. Replace worn out sports shoes - the internal cushioning may be worn out long before the sole wears out.

Avoid high-heeled shoes that tilt body weight on to the ball of the foot, causing overload on the bones under the ball of the foot. Choose lower heels for everyday use and reserve high heels (if you must)
for short one to two-hour functions or events.
Thin soled shoes or shoes without innersole cushioning will transfer all the ground reaction forces of hard impact surfaces directly into the bones of your feet, especially into the heel.

What can I do about heel and arch pain?

Find out what caused the over-stretching of your plantar fascia. Anatomically correct, well-balanced and cushioned shoes should replace worn-out footwear that tilts your feet out of balance.

Avoid walking on hard or uneven ground and abstain from stressful activity such as running, sports or heavy housework for a few weeks. If you have to stand behind a counter all day, investigate the purchase of duck-boards or rubber cushioned mats to stand on.

Avoid the use of high-heeled shoes for general daily wear since they will affect ankle stability. If you have worn high-heeled shoes all your life, you may have shortened Achilles tendons, so you need to gradually shorten heel heights while combining this with stretching exercises for your calf muscles.

Wear shoes with cushioned heels to absorb shock. Relieve pain by rolling the arch of the foot over an ice pack or a bottle filled with iced water. Cushioned heel pads may offer temporary relief until you can see a podiatrist.

When should I consult a podiatrist about heel and arch pain?

Always consult a podiatrist, firstly to avoid future complications, and certainly if temporary measures don't help. Your podiatrist can accurately assess and so diagnose the cause of your heel and arch pain and treat accordingly. Diagnosis may include laboratory tests, x-rays, sonar or ultrasound.

Podiatric treatment for plantar fasciitis can include anti-inflammatories, rest, ice therapy, taping, stretching exercises, plantar fasciitis night splints, custom heel cradles or heel cups for your shoes, or heel cushions that distribute body weight away from the heel bone centre of pain plus custom arch supports. These can be built into custom innersoles or orthotics, depending on requirements determined by your foot biomechanics (the way and range or extent in which your feet and ankles move).

Ask your podiatrist to simply assess your shoes and your feet if you're uncertain. Untreated heel and arch pain can result in complications. The most common is development of knee, hip or back pain as you change your posture and/or gait to avoid further pressure on the area. Always seek professional help.