

## Red hot and tender? No, not Elvis – this is a right pain in the heel!

**By Paula Shingler, BSc, MCSP**

Powering along to that last control before the dash to the finish when you land, heel first, on a heel sized rock. Ouch, but never mind, that finish is close and you might be in the running for one of those fab badges. A few days later you cannot weight bear and your heel is hot, red and tender. Traumatic heel pain is a reasonably common scenario but non-traumatic (no apparent incident causing the problem) heel pain can come on spontaneously, which is even more frustrating, and there can be many causes of this. First of all a little anatomy lesson!

### Basic anatomy lesson first

The heel is part of the ankle; I regard it as the soft bit you land on! It is made up of an odd shaped bone called the calcaneus with a saddle shaped bone resting on top. Several tendons attach onto the calcaneus; the Achilles (the tendon of the calf muscle), the peronei (affects the inversion and eversion of the ankle) and the plantar fascia (the tendons of the muscles of the underside of the foot). The ligaments that support the ankle attach onto it as well. There are also lots of bursa (fat pads) that provide cushioning, shock absorption and friction between the tendons, ligaments and bone.

### Favourite causes

There are many non-traumatic causes of heel pain; here are a few of the most significant in my experience:

**Plantar fasciitis** - inflammation of those fascia that attach onto the calcaneus

**Heel spur** - outgrowth of bone, this just happens! Diagnosis is by x-ray or bone scan

**Tension/stiffness** in calf and hamstrings – this can cause extra tugging on the Achilles tendon

**Ankle instability** - wobbly ankles can mean extra joint movement and irritation. It also can be aggravated by ankle strapping being too restrictive and causing excess heel pressure

**Flat feet or fallen arches** – yes, it is an age thing! As we all get a little older the ligaments that support the arch of the foot stretch out and relax, this can lead to the arch of the foot losing height which can have an impact on the heel.

**Poor posture** – this can be due to a weak core or abdominal muscles or just too much slouching in front of the TV after a hard day in the bush! This can cause abnormal pressure on the legs and eventually lead to heel pressure.

**Sciatica or low back problems** - pressure on nerves in the low back can give referred pain in the leg or into the feet.

**Change in routine, terrain or an extreme event** - this includes getting lost and being out for over 2 hours on what should be a 30minute course!

### So what can we do?

As with any unexplained pain accurate diagnosis is essential.

Acute trauma causes inflammation, bruising, and swelling which leads to pain. The treatment is the usual RICE - rest, ice, compression and elevation,

followed by a gradual return to activity when the acute symptoms have resolved, probably with a heel raise initially to reduce the impact.

If the pain is spontaneous then a careful check by a professional is advised. Most of the causes I've mentioned will give pain on weight-bearing, and often at rest too, with possible visible signs of redness, swelling, heat and tenderness. These symptoms can be easily treated but unless the cause is isolated, the symptoms will recur when activity is resumed and you are back where you started!

Any inflammation can take a while to resolve – the initial inflammation can take 10-14 days to settle! Try to be patient – yes, it's not in my vocabulary either really! Trying to resume activity too soon or doing too much too early can re-inflate the injury and be really, really irritating. So take it slowly with those acute injuries and get unexplained pain properly diagnosed. Remember, there is no rush to get to a particular event - there will be plenty more when you have completely recovered and you will compete more effectively if you are confident that your body will hold up - well at least the heel will!

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