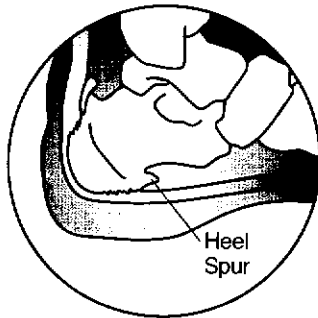
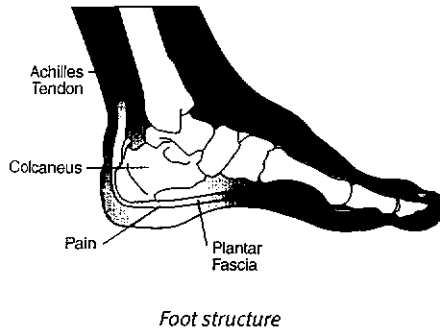


HEEL PAIN



Heel pain (*Plantar Fasciitis*) can have a variety of causes, but is most often caused by inflammation of the plantar fascia ligament. The plantar fascia ligament is a sheet of tough, fibrous tissue that runs along the bottom of the foot from the toes back to the heel bone (*calcaneus*). Part of it also wraps around the heel to become the Achilles tendon in the back of the ankle.

Heel pain usually occurs where the plantar fascia ligament has partially torn away from the calcaneus. The cause is usually related to the aging process, although there may be other factors. There is no scientific proof that standing all day on a hard, unpadded surface will cause the fasciitis. There is also no evidence that this problem is caused by a "heel spur" or other bone problem.

Plantar fasciitis pain is described as "tearing", burning or aching that begins with a sharp pain when weight is first placed on the foot, such as the first step after getting out of bed. It hurts less after a few minutes of movement, but gets worse with continual standing. When weight is off the foot, the arch relaxes and the ligament attempts to repair itself. Upon standing, the foot slightly flattens and the arch stretches, pulling the ligament away from the bone again, causing sharp pain. With a few steps, the ligament stretches, and the pain may go away or at least diminish.

The good news is that over 90% of people with heel pain will fully recover without surgical treatment. The bad news is that it can take one or two years to recover. If surgery is performed, 70-75% of patients will have great improvement, but full recovery takes about nine months.

Non-surgical treatments which have been effective include stretching exercises, night splints, heel pads, cortisone injection, cast immobilization, physical therapy, taping, and shock wave therapy.

A heel pad relaxes the tension in the plantar fascia by raising the heel. It also provides extra cushioning and cups the natural, cushioning fat pad around the heel. Sometimes just wearing a shoe with an elevated heel or a shoe with extra padding cupping the heel, like a running shoe, can help reduce the pain.

continued on back

A cortisone injection can be very helpful in reducing inflammation and pain, but commonly lasts only a few weeks. Unfortunately, the plantar fascia is more likely to tear if more than two or three injections are made in the same area, especially within a few months of each other.

By far, the best treatments for most people have been those that stretch the Achilles tendon. The Achilles tendon and the plantar fascia are both tightened at the same time while walking or running. When the Achilles tendon is stretched, the plantar fascia doesn't have to stretch as far and is able to heal. These treatments include:

- **Walking Cast** – A non-removable cast from knee to toes that holds the tendon in a stretched position for four weeks.
- **Night Splint** – A removable, half-cast holds the ankle up, stretching the Achilles tendon during sleep.
- **Exercise** – Stretching the two main muscles of the calf (*upper/gastrocnemius* and *lower/soleus*) which provide the pull for the Achilles tendon, can provide some relief within days. Stretching the lower muscle, especially, before getting out of bed or after sitting, even if only for 60 seconds without the repeat exercises commonly prescribed (see information sheet available), may help dramatically.

There is no special order for trying these non-surgical treatments. Generally the patient is started on the simple and less expensive stretching exercises and heel pads before advancing to other treatments.

A new treatment that holds great promise is shock wave therapy. It has commonly been used for breaking up kidney stones (*lithotripsy*) without surgery and more recently applied to ligament problems. About 60% of those who were treated for heel pain saw almost complete relief of their symptoms with a single treatment. An additional 30% were relieved of pain with a second treatment. Apparently the sound waves irritate the plantar fascia, stimulating it to kick its own healing process into high gear. It does require "twilight sleep" anesthesia and insurance companies do not currently cover the treatment because of expense, but it remains an option if other, non-surgical procedures don't work.

Hopefully, this information has been interesting and helpful to you. As with any general information, some of it may not apply to your case and it is not intended to take the place of an orthopedic evaluation and personalized treatment plan. If you still have questions, please do not hesitate to discuss them with Dr. Nickel.

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