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Heel Spurs
Plantar Fascitis

The pain of a heel spur, also called plantar fascitis, is caused by inflammation of the tendon that attaches to the bottom of the heel. This is usually caused by excess tension on the tendon (the plantar fascia) where it attaches to the heel bone (calcaneous). Excess tension on the tendon is caused by weak arches in the foot, abnormally tight ankle joints or calf muscles that are too tight.

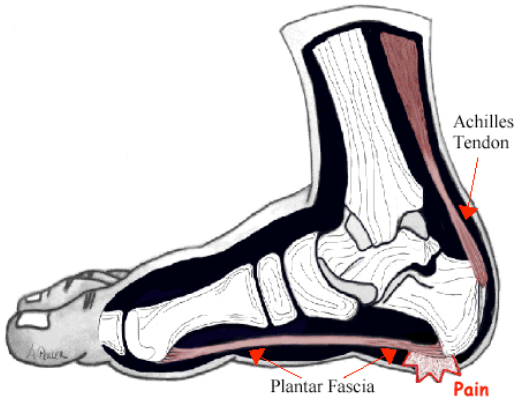


Figure 1: Plantar fascia extends from the heel bone to the ball of the foot. The Achilles tendon also inserts in the heel bone (behind the leg).

Temporary relief from heel spur pain can be obtained by protecting the heel with a device known as a "heel cup". This is a pad that is worn in the shoe that has an area cut out or an area with soft gel under the heel so that the spur is not carrying as much body weight.

Anti-inflammatory medication like aspirin or Advil can reduce the swelling and reduce the pain temporarily. Prescription anti-inflammatory medications, steroids and steroid injections are sometimes used in difficult cases. Surgical removal of the spur is rarely done any more because it is a fairly invasive procedure, the results were not always that good and because good conservative care almost always resolves the condition.

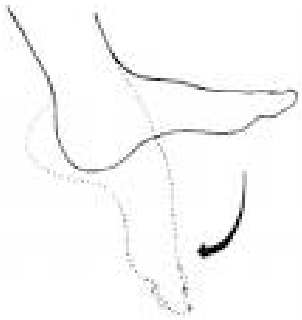
Long term correction of heel spur pain requires correction of the mechanical problems that create excess tension on the tendon. Those problems again are: **weak arches, tight ankle joints, tight calf muscles.**

Weak Arches cause tension on the tendon by allowing the foot to lengthen excessively when you stand. Weak arches can be supported with arch supports. Most of the time, a good pair of shoes or inexpensive over-the-counter arch supports will be sufficient to do the job. Sometimes an individual may have hard to fit feet or an exceptionally stubborn condition and custom made arch supports, or orthotics, will need to be made.

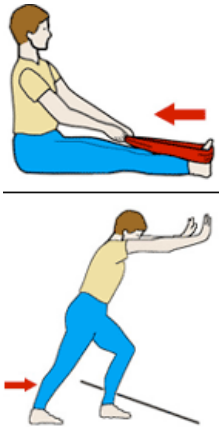
The most important thing is that the arch support be worn anytime the individual is weight bearing (standing) for at least 6 weeks and preferably 16 weeks to give the heel spur a chance to heal. No barefoot walking at any time, except showering. That means when you get out of bed your shoes must be there so that you can put them on before your feet hit the floor. This prevents the arch from flattening and pulling on the tendon.

Other devices and strapping or taping of the arch is sometimes used. Arch supports are generally the easiest to use but some people prefer, or need, a different kind of support.

<u>Tight ankle joints</u> are treated with professional manipulation and with home exercises to maintain flexibility of the ankle mortice. Do 10 repetitions of each of these two exercise before getting out of bed each morning and before rising from a chair if you have been sitting for a couple of hours.



Tight calf muscles must be stretched diligently. Look back at the first picture on page one. You can see that the calf muscles attach to the top of the heel bone while the plantar fascia attaches to the bottom of the heel bone. They work as a unit to balance forces on the heel bone. But if the calf muscle is too tight it causes a functional rotation of the heel bone that puts more strain on the plantar fascia. All muscles are best stretched when they are warm so stretch them after you have been up for a while, at bed time or after exercising, especially if you have been exercising your legs by either walking, running, stair climbing, elliptical machine or strength training. The stretches should be held for at least 10 seconds and repeated three times. Below are some variations on calf stretches. Do whichever one feels best to you or switch off and do a different one from time to time.



Occasionally these stretches are not enough. If you have had chronically tight calf muscles for years you may have to wear a night splint like the one shown below for a few weeks to get the calf to stretch adequately.

Occasionally other procedures like deep tissue massage, ultrasound and interferential therapy will help speed up the recovery. With proper conservative treatment you should be pain free in a few weeks. Long term adherence to the procedures described above will prevent a return of the symptoms. Ask the doctor or therapist if you have any questions.

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