

Plantar Fasciitis - Heel Spur Syndrome

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Treatment Program

You have been diagnosed as having the disorder "Plantar Fasciitis or Heel Spur Syndrome". The disorder begins as an irritation of the long chord supporting the arch of the foot, where it inserts into the heel bone. Chronic repetitive tears at this weak point, may induce bone to form and a "heel spur" to develop. Strain on this chord is most often caused by everyday poor foot posture, collapsing the arch, overloading the chord and producing an aggravating inflammatory pain. The plantar fascial chord becomes strained, when the foot flattens and elongates, with each step. To halt this condition, we must proceed in two phases.

Phase one attempts to arrest the inflammation in the chord with medication and to support the chord's function. Over a three week period, this attempts to restore everyday walking function with relative comfort.

Phase two attempts to restore and maintain long term structural strength in the chord by mechanically supporting the foot's function with orthotic shoe inserts. It is absolutely essential to continue supporting this chord, over the next few months, to ensure structural repair and prevent regression of the disorder. Repetitive episodes of tearing and inflammation can cause the condition to become so resistant to conservative measures, that surgery may be the only remaining option for care.

Care Plan

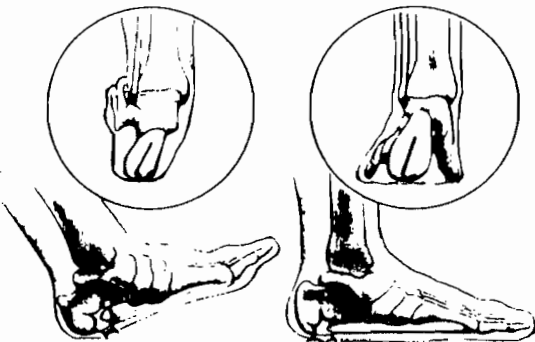
Phase (1) : (Short term)

- 1) A series of tapings are applied to the foot over 3- 4 weeks, holding the foot's posture in an alignment that reduces strain on the plantar fascial chord, allowing the weakened fibers to heal. As necessary, physical therapy modalities may be included in the initial care plan. Heel cushions and athletic walking shoes may be recommended.
- 2) Your Podiatrist may prescribe, an oral anti-inflammatory medication (ex. Motrin, Feldene, Naprosyn), reducing inflammation in the chord. If the condition is resistant to oral medication, injections of a more effective cortisone steroid into the heel may be required.

Phase (2): (Long Term)

- 1) It is essential that the treatment program continue, in order to sustain strain off the Plantar Fascial chord. This is accomplished, by wearing in your shoes, devices called "Foot Orthotics". Foot Orthotics are custom designed inserts, made from plaster impressions and molds taken of your feet. Acting as a brace of the foot, your body weight will be guided properly through the 28 bones of the foot. These bones and their respective joints will be held in alignment, so that flattening of the foot is avoided. Over the next few months, the chord repairs and strengthens. Since fabrication of the orthotics can take up to 4 - 5 weeks, it is important to arrange for casting and ordering of the orthotics early in Phase (1), to avoid losing any level of improvement gained.

**Incorrect Movement
Strains Your Foot**
When your foot flattens too much, some bones and soft tissue are forced to support too much body weight. Muscles may pull on these areas making it difficult for your ligaments to hold the joints and bones in place. Over time, the strain on the soft tissue and joints may cause foot problems.

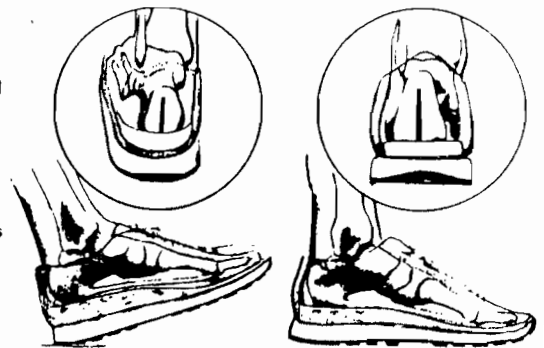


At contact, the inner part of your heel hits the ground instead of the outer edge

During midstance, the ankle and heel are misaligned, and your foot has no arch

Orthoses Control Movement, Stop Strain

By limiting the swing of your heel, orthoses control the amount your foot flattens. The stress of weight bearing is better distributed throughout your foot, reducing strain on soft tissue and joints. Existing bone or soft tissue changes may not disappear, but orthoses can help reduce or eliminate your foot pain. If your hips or knees also hurt, orthoses may relieve this symptom, too.



At heel contact, orthoses limit the swing of your heel so your heel strikes the ground correctly

During midstance, your orthoses support your foot so it can regain its arch allowing the ankle and heel to align

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Essential Steps in Therapy for Plantar Fascitis

(1) Foot Strapping: *(Available through Loudoun Foot & Ankle Centers)*

A major joint in the rearfoot “The Subtalar Joint” controls most of the stability in the foot. It is essential that we control this joint with a **weekly** strapping to the foot that prevents the arch from rolling in, which otherwise will eventually overstretch the plantar fascia.

(2) Posterior Night Splints: *(Available at Loudoun Foot & Ankle Centers)*

A splint worn at night over the foot and leg effectively keeps the foot at a 90 degree angle with the ankle, keeping the plantar fascia in an elongated position while it mends. Otherwise, the plantar fascia will temporarily mend in a shortened position as the foot crouches during sleep; only to tear with the first steps in the morning as the foot outstretches.

(3) Brooks Walking Shoes™ with Gel Heels: *(Available at Loudoun Foot & Ankle Centers)*

We have found that dispersing the shock at the heel with each impact of the foot while walking, effectively reduces the insulting pain adding to the biomechanical injury to the Plantar Fascitis. *Brooks Walking Shoes™* have a unique gel bladder design that both disperses the shock exceptionally well and offers sufficient resistant for you to easily continue to propel forward with the normal cadence of walking. Athletic shoes with air bladders tend to be quite unstable on impact, adding to a variety of soft tissue tendon and muscle strain to the lower extremity. Brooks Shoes™ are available at Loudoun Foot and Ankle Centers.

(4) Prescription Foot Orthotics: *(Available at Loudoun Foot & Ankle Centers)*

Each foot has a unique genetic design that deviates from the “Ideal” foot shape. These design variations will cause aberrant strain at the subtalar rearfoot joint, forcing the foot into various potentially damaging functional positions. These design flaws are the crux of the biomechanical faults that develop into the symptoms experienced by most patients with plantar fascitis. Custom Foot Orthotics are essential in-shoe devices made from molds of the foot to counter the design flaws in various foot types. They eventually relieve strain off both the subtalar joint and the plantar fascia. Molds are taken holding the foot into the most optimal “Neutral Position” which stabilizes overall foot function. A custom foot orthotic balances the delivery of body weight through your foot in a coordinated cadence, transferring weight from the rearfoot onto the forefoot. Long term therapeutic results are highly dependent on the early administration of custom foot orthotics to support the repair and remodeling phases of soft tissue repair. Foot orthotics can take anywhere between 4-5 weeks to be made. For this reason we recommend patients commit to obtaining these devices as soon as possible in the early strapping stages of therapy.