

## PLANTAR FASCIITIS (FOOT ARCH AND HEEL PAIN)

### ◆ What is it?

Plantar fasciitis is one of the most common conditions causing foot arch and heel pain. The condition involves inflammation of the *plantar fascia* -- a tough, fibrous band of tissue that runs along the sole of the foot with attachments to the heel bone (*calcaneus*) proximally and to the base of the toes distally. The plantar fascia provides support to the arch of the foot and has an important role in normal foot mechanics during walking. Tension or stress in the plantar fascia increases when one places weight on the foot (such as with standing) and as one pushes off on the ball of the foot and toes -- motions which occur during normal walking or running.

Inflammation and pain start in the fascia either as a result of an increase in activity level (as in initiating a walking or running program), or in association with the normal aging process. With aging, the fascia loses some of its normal elasticity or resilience and can become irritated with routine daily activities. Less commonly, plantar fasciitis can develop in association with general medical conditions such as lupus or rheumatoid arthritis. Patients often experience the most severe symptoms upon first awaking and trying to walk in the morning or after prolonged rest/sitting and then getting up to walk.



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### ◆ Signs and Symptoms of this Condition

- The pain associated with plantar fasciitis is typically gradual in onset and is usually located over the bottom and inner aspect of the foot and heel.
- The pain is commonly most severe upon arising from bed in the morning, or after periods of inactivity during the day.
- Discomfort can sometimes lessen with activity during the course of the day or after "warming-up", but can become worse if prolonged or vigorous activity is undertaken.
- Pain is also often noted to be more severe in bare feet or in shoes with minimal or no cushioning in the sole.

### ◆ Causes

- Tight calf muscles or flat feet.
- Going barefoot, in sock-feet, house shoes, or slippers a lot such as around the house. Not wearing good cushioned, supportive shoes.
- Stress or injury to the heel tissues, which causes inflammation and calcification of the fascia of the foot.
- Shoes that are poorly fit, have inadequate arch supports, have soles that are too stiff, or have insufficient arch support.

### ◆ **What Can I do to Prevent Plantar Fasciitis?**

- Appropriately warm up and stretch before exercise, sports, or strenuous physical activity.
- Maintain appropriate conditioning:
  - Calf, ankle, and foot flexibility
  - Strength and endurance
  - Cardiovascular fitness
  - Ideal body weight
- Avoid activities that put a constant strain on the foot.
- Wear good cushioned shoes that provide plenty of arch support at all times, TO INCLUDE AROUND THE HOUSE). DO NOT GO BAREFOOT, IN SOCK-FEET, OR WEAR SLIPPERS AROUND THE HOUSE.

### ◆ **Prognosis**

This condition usually heals with appropriate rest and conservative treatment. Sometimes in chronic, unresolving cases with heel spurs, injections or surgery is required.

### ◆ **Treatment**

- Rest – NO running, jumping, hiking or other types of weight-bearing exercise.
- Ice massage over the bottom of the foot and heel 10 minutes 1-2 times per day. (Ice massage is performed by filling paper or foam cups with water and freezing them. Take the frozen cup and tear off the outer edge of the cup near the lip to expose the ice. Hold the cup with one hand and place the ice portion so that it is in contact with the injured/painful area and rub in circles over the painful area). **See Below**
- Plantar fascia stretching. (Big toe stretch holding 30 seconds and repeating 3 repetitions 2-3 times per day, rolling ball/can/cylinder under foot from heel to ball of foot 30 repetitions 3-5 times per day). **See Below**
- Anti-inflammatory medication (aspirin, ibuprofen, etc) may be helpful in reducing both pain and inflammation.
- Calf stretching with leg straight and knee bent (hold each stretch 30 seconds, repeat 2-3 repetitions, 2 times per day). **See Below**

- **Wear good cushioned shoes that provide plenty of arch support at all times, TO INCLUDE AROUND THE HOUSE). DO NOT GO BAREFOOT, IN SOCK-FEET, OR WEAR SLIPPERS AROUND THE HOUSE.**
- Change to a new pair of running shoes if indicated.
- When symptoms are resolving, **SLOWLY** progress back into jogging by alternating between walking and jogging every other day with a gradual increase in jogging distance and decrease in walking distance until performing straight jogging.
- Symptoms can return if you resume running, jumping, or prolonged walking too early.

