

**PLANTAR FACIITIS**

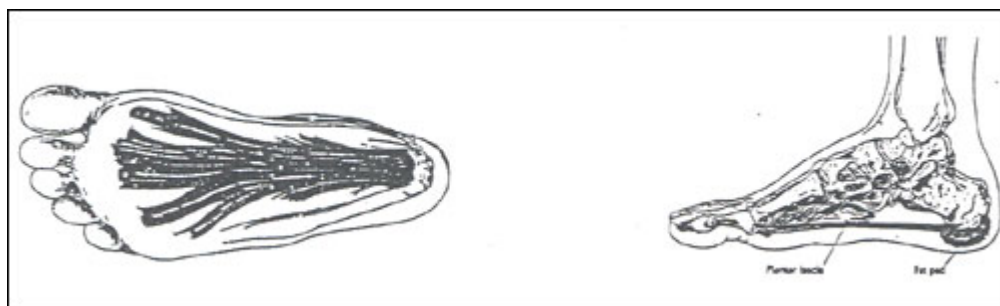
**INTRODUCTION**

**Plantar faciitis** is one of the most common causes of foot pain. It is found in athletes, as well as sedentary individuals. Symptoms typically include pain that is worse in the morning when first getting out of bed or after sitting for a period of time. The pain usually diminishes after walking but can recur after prolonged or stressful activity. The pain is often described as sharp or burning and is usually localized to the inner side or center of the heel and can radiate along the arch of the foot.

**Risk factors** associated with plantar fasciitis are repetitive stress, obesity, middle age, and abnormal foot biomechanics (flat feet, high arches, tight achilles tendon).

**ANATOMY**

The plantar fascia originates at the inner side of the calcaneus (heel bone) and fans out along the arch of the foot attaching to the base of each of the toes. It functions like a bowstring supporting the arch of the foot. Overlying the origin of the plantar fascia at the calcaneus is a fat pad that functions as a shock absorber.



The pain experienced with plantar fasciitis is the result of inflammation/degeneration from microtears occurring at its origin. There may or may not be an associated spur noted on x-ray. The spur is **not** the cause of the pain.

**TREATMENT**

Treatment options are multiple and with the exception of casting, no one treatment or combination of treatments seems to work better or consistently to relieve the symptoms of plantar fasciitis. Treatment options include:

- **NSAIDs** - medication to decrease the inflammation.
- **REST** - to allow the fascia time to heal
- **STRETCHES** - to decrease the strain on the origin of the plantar fascia.
- **MASSAGE** - symptomatic relief can often be obtained while sitting by rolling a cold can of soda or a tennis ball under the foot to massage the plantar fascia.
- **ORTHOTICS** - inserts used to correct biomechanical foot problems that may be contributing to the symptoms of plantar fasciitis.

- **HEEL PADS** - may be helpful for acute symptoms and seem to benefit individuals who stand on hard surfaces for extended periods of time or older patients who may have a thinner heel fat pad. Viscoelastic heel cushions (such as Bauerfeind Viscoheel cushions) work better than foam pads.
- **STEROID INJECTIONS** - injections, in conjunction with other therapies, may be helpful in diminishing the symptoms of plantar fasciitis. Injections are usually limited to two per side. Complications of steroid injections include rupture of the plantar fascia or thinning of the heel fat pad.
- **NIGHT SPLINT** - splint is worn nightly to keep the plantar fascia at maximum length. This prevents the stiffening that normally occurs during sleep, thus minimizing the pain that is experienced upon first getting out of bed in the morning. Night splint should be used in addition to other therapies.
- **CASTING** - is an effective treatment for plantar fasciitis. Casting enforces rest, while keeping the plantar fascia at an unchanging degree of tension, thus minimizing the trauma that occurs with daily ambulation. Casts are left in place for 5 - 6 weeks. Patients may weight-bear in the cast.
- **SURGERY** - since over 90% of patients respond to non-surgical treatment within 6 - 12 months, surgery should be reserved as a last resort. There is no consensus on what is the optimal surgical procedure. Surgery is not without risks. Foot biomechanics are altered after release of the plantar fascia and can result in pain in other areas of the foot.

## CONCLUSION

Plantar fasciitis is a common and frustrating cause of heel pain. No one-treatment plan is effective for all patients, but most patients will respond to some form of therapy. The key to success is to be consistent with your treatment plan and to be patient!

**Ankle Plantarflexion — Stretching**  
Stand with forearms on wall, left foot in front of right foot. Lean body forward with back knee slightly bent. Keep heel on floor. Stretch is felt in calf.  
Hold 10 counts.  
Repeat to opposite side and hold.  
Repeat 10 times.



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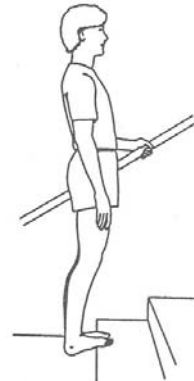
**Ankle Plantarflexion — Stretching**  
Stand with forearms on wall, left foot in front of right foot. Lean body forward with back leg straight. Keep heel on floor. Stretch is felt in calf.  
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Repeat 10 times.



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**Ankle Plantarflexion — Stretching**  
Stand with balls of feet on step. Lower heels with knees straight. Stretch is felt in calves.  
Hold 10 counts.  
Repeat 10 times.



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