

# PLANTAR FASCIITIS

By Dr. Robert G. Silverman, DC, MS, DACBN, CCN, CNS, CSCS

Do you feel pain on the sole of your foot that is often localized to the front of the heel?  
Do you experience heel pain with the first few steps in the morning?  
Is your heel pain aggravated by standing, walking, or running – with running being the most painful?

If you've answered yes to any of these questions, then you may suffer from one of the most common injuries experienced by joggers – plantar fasciitis<sup>(1)</sup>.

## **What Is It?**

The plantar fascia is a thick, broad, inelastic band of fibrous tissue that courses along the bottom of the foot. It is attached to the heel bone (calcaneus) and fans out to attach to the bottom of the metatarsal bones in the region of the ball of the foot. Plantar fasciitis occurs when these tissues are irritated and inflamed. Plantar fasciitis is the most common cause of heel pain<sup>(2), (3), (4)</sup>.

## **What Causes It?**

- 1) Biomechanical flaws due to physical activity/training errors
- 2) Excessive pronation
- 3) Weight gain
- 4) Changing running surfaces
- 5) Sudden increases in training mileage
- 6) Soft tissue restrictions ranging from the foot through the hamstring

The most common restriction is a tight Achilles tendon. The Achilles tendon is at the back of the ankle and connects to the calf muscles. When the Achilles tendon is contracted or tight, so is the plantar fascia. With each step the patient takes, the tightness of the Achilles causes irritation at the attachment of the plantar fascia into the calcaneus<sup>(5)</sup>.

## **What To Do About It?**

Various treatments have traditionally been used to treat plantar fasciitis (i.e. ice, rest, orthotics, anti-inflammatories, ultrasound). Another alternative would be a medically patented soft tissue technique (ART<sup>®</sup>) that is quite effective in “freeing up” the soft tissue restrictions to allow normal function/movement to the affected areas. To fully resolve plantar fasciitis, the following additional structures need to be evaluated and treated as well:

- 1) plantar aponeurosis (in the center of plantar fascia) and two of the most commonly ignored muscles deep in the plantar aponeurosis:
  - a. quadratus plantae<sup>(6), (7)</sup>
  - b. flexor digitorum brevis
- 2) hamstring restrictions in the biceps femoris, semitendinosus and semimembranosus muscles (can cause excessive pronation)<sup>(6), (7)</sup>
- 3) small intrinsic muscles of the foot:

- a. flexor digiti minimi<sup>(6), (7)</sup>
  - b. abductor hallucis
  - c. flexor hallucis brevis
- 4) further up the kinetic chain, structures such as the internal and external rotators of the hip can also cause problems with the biomechanics of the lower extremities<sup>(6), (7)</sup>

### **To Avoid Re-occurrence**

- 1) Incorporate stretching and strengthening exercises for the plantar fascia, Achilles tendon complex and other involved structures
- 2) Conduct a biomechanical analysis, which finds the soft tissue structures that are the primary cause of the biomechanical dysfunction, as well as affected structures that restrict your performance<sup>(7), (8)</sup>.
- 3) Incorporate an anti-inflammatory nutritional protocol:
  - a. Bromelin
  - b. Papain
  - c. Trypsin
  - d. Chymotrypsin
  - e. Tumeric rhizome extract
  - f. Avoid saturated fats
  - g. Omega-3 fats (fish oils)

### **References:**

- 1) Phy and Sports Med, August, 1991
- 2) American Family Physician, April, 1999
- 3) Hammer, W. Soft tissue examination and treatment methods, p. 590, 1999
- 4) Greenfield, B. Evaluation of overuse syndromes. The Biomechanics of the Foot and Ankle, 1990
- 5) Hammer, W. Soft tissue examination and treatment methods, p. 590-591, 1999
- 6) Active Release Technique, LLC, Lower extremity manual. P. Michael Leahy, DC, CCSP, Copyright 2000
- 7) Abelson, Brian. Release your pain: Resolving repetitive strain injuries with Active Release Technique, 2003
- 8) Active Release Techniques, LLC, Biomechanics, P. Michael Leahy, DC, CCSP

---

Robert G. Silverman is a Doctor of Chiropractic, Certified Nutrition Specialist, Certified Clinical Nutritionist, has a Masters of Science in Human Nutrition, is a Certified Strength and Conditioning Specialist, and is a Diplomate with the American Clinical Board of Nutrition. He has a full-time private practice in White Plains, where he is a practicing family and sports chiropractor and clinical nutritionist, while advocating the use of natural-based medicine. Dr. Silverman is one of the few practitioners in Westchester County who is certified in the highly acclaimed, medically patented, Active Release Non-Force Soft Tissue Technique, and also the cutting-edge Graston Technique, which is an advanced form of FDA-approved instrument-assisted soft tissue mobilization technique. For the past 3 years, he has been a member of the medical team of New York City's Triathlons and Marathons, Westchester Triathlons and local races. His Chiropractic associations include professional wrestling teams and local sports teams, where he has presented seminars on various topics including sports injuries and sports nutrition. In addition, Dr. Silverman has been chosen as the national spokesperson for the Vitamin Ester-C.

For further information, Dr. Silverman can be contacted at (914) 287-6464; e-mail: [DrRgs@hotmail.com](mailto:DrRgs@hotmail.com)