

PLANTAR FASCIITIS

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Plantar fasciitis is an inflammation of the plantar fascia, a thick band of tissue that covers the bottom of the foot from the heel to the toes; it is one of the most common causes of heel pain. It typically presents gradually with a sharp, stabbing pain in the heel or arch of the foot first thing in the morning or after prolonged periods of rest; the pain is worse with the first few steps and decreases as activity continues.



Figure 1: Tearing & Inflammation of Plantar Fascia

Plantar fasciitis is typically an overuse injury common in athletes, especially runners; however it can also be seen in the general population. Predisposing factors can include obesity; unsupportive footwear; leg length discrepancy; tightness and weakness in the calf muscles and foot muscles; and improper foot biomechanics, specifically over-pronation of the feet. The plantar fascia normally acts as a taut band, supporting the arch of the foot and helping to absorb shock; when it becomes too tight and is stretched, small tears develop producing a localized inflammatory response and pain.

Plantar fasciitis is often self-limited and can resolve without treatment within 6 to 18 months. However there are various conservative treatment options that can accelerate this healing time. Needle acupuncture has been shown to be effective in reducing morning pain, activity associated pain, and overall pain. Isolated or combined use of various physiological therapeutic modalities can help to ease the inflammatory response, and break up adhesions or scar tissue that develop as a result of microtears in the plantar fascia; these modalities may include therapeutic ultrasound, interferential current, and cold laser therapy. Kinesio Taping®, a unique elastic therapeutic tape, may be used after therapy to help dissipate the inflammation.



Figure 2: Kinesio Taping®

In some cases changing to a more appropriately designed or fitted shoe may help to resolve symptoms. For example, individuals with low arches may respond well to a 'motion control shoe', which have increased arch support on the inside (medial) aspect of the foot. In chronic or long-term cases, custom foot orthotics may be indicated.

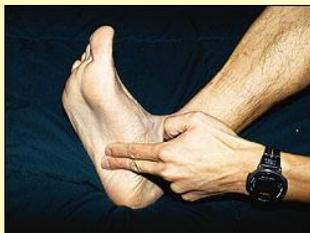
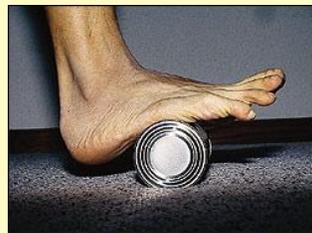


Figure 3: Massage Cross-Frictions



Effective home care protocols can involve stretching exercises of the calf muscles and plantar fascia, as well as massage techniques such as cross-friction and rolling the foot over a golf ball or ice bottle to release the plantar fascia. The use of night splints keeps the ankle in a

neutral position during sleep and provides a passive stretch of the calf muscles and plantar fascia reducing tension.



Figure 4: Night Splint

MayoClinic.com: *Plantar Fasciitis*. <http://www.mayoclinic.com/health/plantar-fasciitis/DS00508>

Young CC, Rutherford DS, & Niedfeldt MW. *Treatment of Plantar Fasciitis*. *Am Fam Physician* 2001;63:467-74, 477-8.

Zhang SP, Yip TP, & Li QS. *Acupuncture Treatment for Plantar Fasciitis: A Randomized Control Trial with Six Month Follow Up*. 2009: <http://ecam.oxfordjournals.org/cgi/reprint/nep186v1.pdf>