

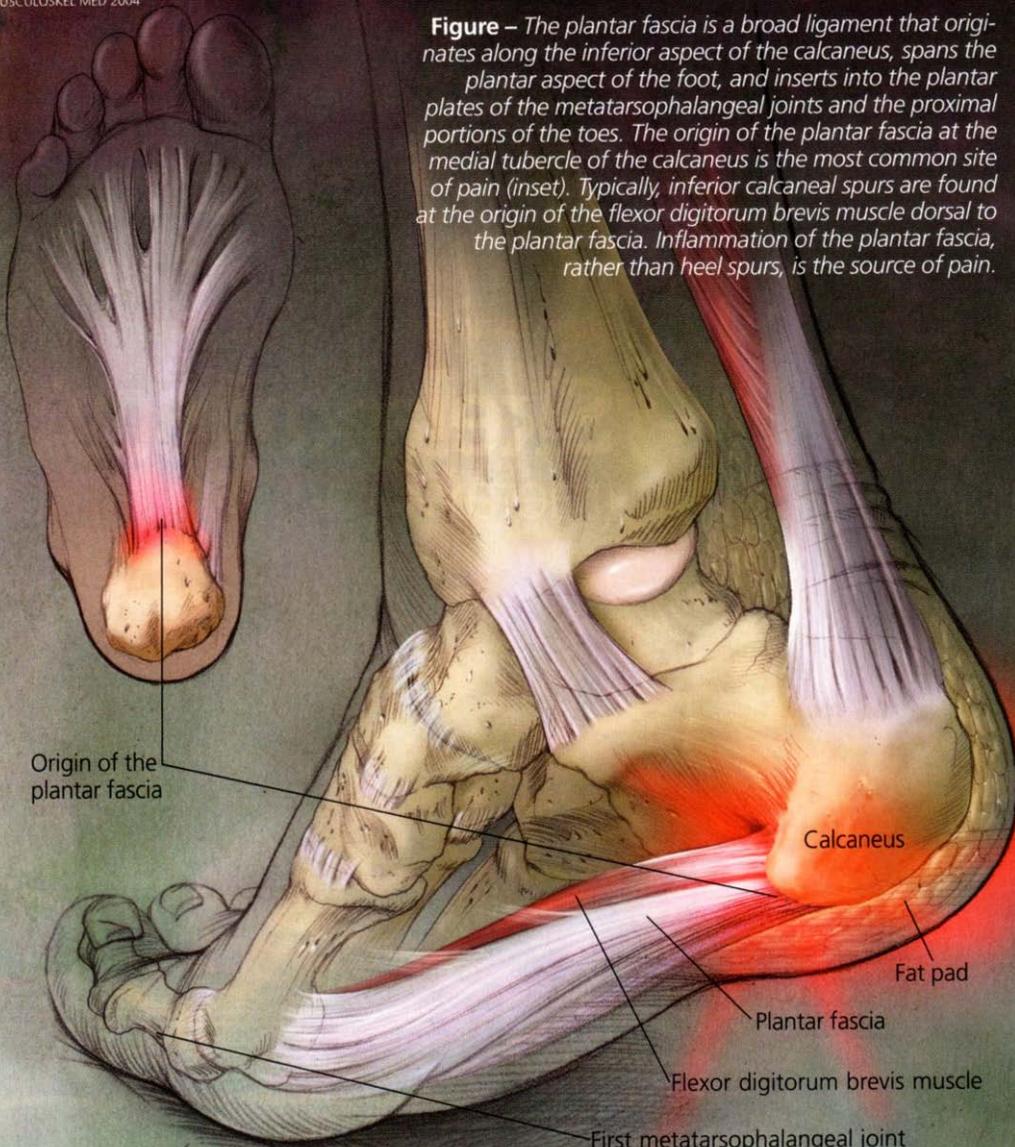
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Plantar Fasciitis Summary Treatment Sheet

Pathology:	Plantar fasciitis results from chronic irritation of the plantar fascia connective tissue in the sole of the foot. A periostitis may result. This fascia helps to maintain the longitudinal arch of the foot and lessens the impact of walking and running.
History:	The patient may have a history of being overweight or show evidence of periods of increased activity on their feet. Runners, especially with inadequate footwear, and those standing for long periods of time are more likely to be affected. During pregnancy, the extra weight carried by the mother will lead to increased foot stress. Note: over 40% of plantar fasciitis cases will progress to a calcaneal heel spur
Assessment:	Painful passive dorsiflexion of the toes and pain when standing on the tips of toes. Most patients report that the pain is most severe in the morning after waking, while placing weight onto the affected foot. The pain diminishes as the patient moves around and increases circulation to the region, but later returns as more tensile stress is applied to the fascia.
Bolstering/ Patient comfort:	Ensure that all muscles are relaxed during treatment.
Heat/Cold Therapy:	Ice (and rest) is appropriate in the acute stage and also when the goal is to desensitize the area for deeper treatment. In chronic, less painful stages heat may be useful.
General Massage:	Massage of all muscles from above the knee (gastrocnemius) to the intrinsic muscles of the foot is important. The fascia of the calf and achilles tendon actually blends with and travels under the heel into the arch of the foot. Releasing this fascia will actually lessen the stress placed on the plantar fascia.
Specific Massage:	<p>Friction massage is most appropriate to break up adhesions that develop in the fascia and that limit pliability. Apply friction in multiple directions, with a myofascial release approach in mind. Holding pressure with a thumb over the "heel spur" area while knuckling the sole down and towards the toes (patient prone) will allow deeper work that is better tolerated by the patient. Also, increasing the joint mobility that was lost due to immobility and pain is important for full recovery. Mild traction to the tibiotalar and subtalar joints speeds recovery as well.</p> <p>An especially effective stroke is to initially flatten the sole of the foot with the palm as the thumb or fingers deeply strip in multiple passes from the heel to the toes. This can be very painful. Explain the rationale to the patient and reassure them that the pain is only temporary.</p>
Evaluate / Treat TrPs:	Eliminate trigger points in the posterior leg (gastrocs/soleus/tibialis), lateral leg (peroneals) and the anterolateral leg (tibialis anterior). This will provide increased range of motion and allow normal muscle lengthening.
Stretching Exercises/ Range of Motion:	It is important to focus on stretching of the posterior calf muscles (triceps surae) This can be passive (towel stretch) or active (leaning into wall) but must be stressed.

Strengthening:	Strengthening of the intrinsic foot musculature is important.
Stress Reduction:	As needed
Patient Education:	Evaluate the type of footwear worn by the patient. Look for an adequate arch and/or recommend the use of orthotics. Self-treatment including ice and friction massage can be taught to the patient.
Ergonomic factors:	A “strassberg sock” is a device that has been shown to be extremely effective in holding the ankle in slight dorsiflexion at night. This applies tension to the fascia and limits its shortening while sleeping. (prescription necessary)
Medical Referral	It is appropriate to co-treat the patient with a doctor and/or to receive medical approval. Other more serious conditions may be overlooked and tears of the fascia must be ruled out
Useful Web Links:	http://heelspurs.com/index.html http://www.emedicine.com/emerg/topic429.htm

Figure – The plantar fascia is a broad ligament that originates along the inferior aspect of the calcaneus, spans the plantar aspect of the foot, and inserts into the plantar plates of the metatarsophalangeal joints and the proximal portions of the toes. The origin of the plantar fascia at the medial tubercle of the calcaneus is the most common site of pain (inset). Typically, inferior calcaneal spurs are found at the origin of the flexor digitorum brevis muscle dorsal to the plantar fascia. Inflammation of the plantar fascia, rather than heel spurs, is the source of pain.



Origin of the
plantar fascia

Calcaneus

Fat pad

Plantar fascia

Flexor digitorum brevis muscle

First metatarsophalangeal joint

