

## PLANTAR FASCIITIS

Plantar Fasciitis is one of the most common causes of foot pain. In Americans it accounts for 15% of all foot pathologies. It is most commonly defined as an overuse syndrome where micro tearing and inflammation develop at the origin of the plantar fascia.

The plantar fascia (PF) is a thick fibrous connective tissue band that originates on the anteromedial inferior portion of the calcaneus. It inserts into the plantar plates of the metatarsophalangeal (MTP) joints at the base of proximal phalanx and flexor tendon sheaths of each toe. Extension of the MTP joints during the gait cycle causes the fascia to become taut thus causing the foot to supinate and become a rigid lever for efficient propulsion.

Breakdown of the PF is often a result of excessive pronation or excessive time in pronation



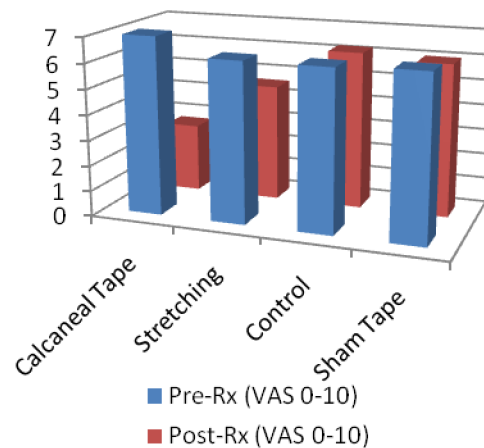
during the gait cycle. This can be from many causes. Two of the most common we see in the clinic are congenital pronated foot posture and individuals who have poor control of the hip abductors and external rotators. Use of modalities without first correcting the biomechanical fault is of little benefit. Since we need adaptation time to rehabilitate mechanical issues, we also need a short-term management strategy to increase comfort and decrease load on the tissue.

The Low Dye tape job decreases forces on the plantar fascia resulting in an immediate and positive impact on pain and function. This is a difficult tape job to self administer thus the simpler tape job in this next study provides an interesting alternate strategy.

## A Randomized Controlled Trial of Calcaneal Taping, Sham Taping, and Plantar Fascia Stretching for the Short-Term management of Plantar Heel Pain

41 subjects who completed the study were divided into 4 groups; calcaneal taping, stretching, no treatment (control) and sham taping. The taping group was re-taped one time during the middle of the week studied. The Visual Analogue Scale and a patient specific functional scale were used to record change.

### Pain Level Pre and Post Intervention



This study shows that, during a one week period, calcaneal taping is superior to stretching or control for pain control. This taping technique differs from the norm in that it controls pronation of the medial longitudinal arch by pulling the calcaneus into supination (inversion or varus). Calcaneal taping is relatively easy to teach, thus providing the patient a strategy for pain relief while rehabilitating causative or contributing factors.

#### Reference:

Hyland M, Webber-Gaffney A, Cohen L, Lichtman S. Randomized Controlled Trial of Calcaneal Taping, Sham Taping, and Plantar Fascia Stretching for the Short-term Management of Plantar Heel Pain. J Orthop Sports Phys Ther 2006;36(6):364-371