

## Plantar Fasciitis: Anatomy, Causes and Diagnosis

Yi Li\*

Department of Exercise Biology and Physiotherapy, University of Tartu, Estonia

### Commentary

Plantar fasciitis is the result of collagen degeneration of the plantar fascia root, calcaneal tuberosity of the heel and surrounding perifascial structures. With the exception of a diagnosis containing the "itis" component, this condition is characterized by the absence of inflammatory cells. There are many different sources of pain in the plantar heel other than the plantar fascia so the term "Plantar Heel Pain" works best to include a broader perspective when discussing related pathology. Over time, the pain of plantar fasciitis may gradually increase. The pain can be either dull or severe. Some people feel a burning sensation in the lower extremities of the foot that extends from the heel. The pain is usually most intense in the morning when you take your first steps in bed, or when you are sitting or lying down for a while. Climbing stairs can be very difficult because of the stiffness of the heel. After prolonged work, the pain may increase due to increased irritability or inflammation. People with plantar fasciitis do not usually experience pain during exercise, but rather after quitting. This consists of white connective tissue arranged in length from the periosteum of the central calcaneal tubercle, where it is thin but extends to the thick central part. The thick middle part of the plantar fascia then extends to five groups around the flexible tendons as it passes through all 5 metatarsal heads. Plantar fascia pain may be localized and may involve a large medial band. It interacts with the Achilles tendon paratenon, inner foot muscles, skin, and subcutaneous tissue. This is usually an excessive injury caused mainly by repetitive strain causing small tears of plantar fascia but may be due to trauma or many other causes. Factors affecting plantar heel pain - Loss of ankle talocrural joint, deep or upper posterior compartment, Excessive flexion of the feet, weight-bearing activities such as long standing, running, diabetes, Gastrocnemius weakness, Tendoachilles and

internal muscles. Patients may experience local point sensitivity near the antero-medial calcaneum, pain in the early stages, or after training. The clinical examination will take into account the patient's medical history, physical activity, symptoms of foot pain, and more. Any activity that can increase the extension of the plantar fascia, such as walking barefoot without arch support, climbing stairs, or walking on the toes can cause pain. High-strength training can help to quickly reduce pain and improve performance. Stretching involves the patient crossing the affected leg over the contralateral leg and using the fingers across the base of the toes to apply pressure to the toe extension until stretching may be felt near the plantar fascia. Achilles tendon extension can be performed in a standing position with the affected leg placed behind the contralateral leg with the toes pointed. The front knee was bent, keeping the back knee straight and the heel low. Foot orthoses produce short-term functional benefits and may produce a slight reduction in pain in people with plantar fasciitis, but they do not have long-term beneficial effects compared to the sham device whether customized or pre-made. Systematic reviews suggest that the use of insoles may be effective, which may be a useful treatment but pre-built or custom insoles appear to be more effective in reducing pain and improving performance than sham or other models of shelf insoles.

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\*Corresponding author: Yi Li, Department of Exercise Biology and Physiotherapy, University of Tartu, Estonia; E-mail: yili@163.com

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