

Plantar Faciitis

“Pain with your first steps of a morning?”

The plantar fascia is a thickened fibrous aponeurosis originating from the calcaneus running toward the five metatarsal heads and splitting into five bands of sheath for each digit. Generally, it is split into three parts; medial, central and lateral bands. The central band is most commonly involved in this condition even though it is the thickest and strongest section.

In a normal working foot, the plantar fascia functions in the windlass mechanism of the foot, becoming taught with extension of the great toe during the toe off phase of the gait cycle. This provides stability during both static and dynamic movements, as well as shock absorption. Injury to the plantar fascia is usually due to an underlying biomechanical insufficiency that overloads the tissue causing micro tears. Most commonly this cause is a dropped medial longitudinal arch, or “flat feet”. This stretches the plantar fascia at rest increasing the stress to the tissue once a force is applied to it. This force is 2-3 times your body weight during walking/running, hence it is easy to see how small insufficiencies can quickly build into acute pain.



The most common symptom for this condition is sharp pain during the first steps of a morning, which eases as you continue to walk. This is because overnight your fascia tightens up and becomes very stiff, so that by the time you come to walk and stretch the fascia, it doesn't react well to it. Of an afternoon or evening the pain often returns due to overuse and inflammation of the fascia. This cycle repeats itself often worsening over days, weeks and months. Pain will usually be felt on the underside of the heel and into the medial arch of your foot.

Differential diagnosis of plantar fasciitis is primarily related to heel spurs, which can co-occur with this condition. However, many heel spurs are asymptomatic in the general population, whereas plantar fasciitis is commonly symptomatic. Diagnosis can be confirmed by an ultrasound scan confirming a thickening of the plantar fascia. An X-Ray can also be used to confirm or decline the incidence of a heel spur.