

Informational Guide to Plantar Fasciitis

Introduction

Fascia is tough connective tissue that is found surrounding muscles, bones and joints throughout the body helping to provide support and protection to surrounding structures. The plantar fascia is a thick band of tissue that, along with other ligaments and muscles, acts to support the arch of the foot. This strong, dense structure starts from the inside front edge of the heel bone (calcaneus) and travels to the ball of the foot attaching to the bases of each toe.

As the foot contacts the ground during the walking cycle, the arch of the foot flattens due to the weight of our bodies against gravity. This flattening causes the plantar fascia to stretch and place stress on its origin at the calcaneus.

After repeated stress, the plantar fascia may become inflamed (plantar fasciitis), and a bone spur may result at the fascia's heel attachment.

Symptoms

Typically the pain associated with plantar fasciitis occurs with the first few weight-bearing steps of the morning. While sleeping, the foot is placed with the toes pointing downward. This prolonged, relaxed position will shorten the thick fascial tissues until morning. When the foot is placed on the floor, the plantar fascia is then stretched with the load of the body's weight against gravity. Pain is usually felt at the bottom, inside portion of the calcaneus where the plantar fascia is attached.

Diagnosis

Your physician may order an X-ray to rule-out possible stress fractures or spurs at the calcaneus that may also give the same type of heel pain found with plantar fasciitis. Various types of lab work may also be performed to rule-out any other disease processes that may cause pain in the heel. Typically, however, the diagnosis of plantar fasciitis is done by taking a detailed history of symptoms and activity loss as a result of pain, as well as a physical examination of the area.

Treatment

There are a variety of conservative, nonsurgical treatment options for plantar fasciitis – many of which can be addressed in physical therapy.

General stretching to the plantar fascia, as well as the two calf muscles that attach to the calcaneus, can be performed to lengthen the tissues that will tighten as the foot is in a relaxed downward position. This may decrease the amount of pain felt in the morning, especially if done prior to standing up.

A number of night splints can be found that are designed to mimic the foot's position during standing. By maintaining a stretch on the plantar fascia at night, the tissues will not get the chance to shorten.

As a means of helping to support the foot's arch, orthotics or a heel cup may be inserted into the shoe. This will limit the amount of stress placed on the plantar fascia during the walking cycle.

Anti-inflammatory medication may be prescribed to help reduce the amount of inflammation at the affected tissues.

Rehabilitation

Rehabilitation for plantar fasciitis is typically done in physical therapy. Therapists will take a history of how and when the symptoms started, perform a detailed physical examination of the affected tissues, and initiate a home program designed for self-management and future prevention.

As a means of releasing any adhesions that may be present, the therapist will use manual techniques such as soft-tissue and cross-friction massage to the plantar fascial tissues. Treatments such as ultrasound, cold/ice packs, and steroid anti-inflammatories patches may also be indicated. Gait analysis will be performed to assess for other related needs. A night splint and/or custom orthotics may also be fitted for home use as seen necessary by the therapist.

More Information...

For more information please contact any of our three clinics in Roseville, Spring Lake Park, or Blaine where a knowledgeable therapist will be happy to assist you with your recovery needs.