

Plantar Fasciitis

Introduction Plantar Fasciitis is a condition that is sometimes called a heel spur. This condition causes pain on the bottom of the heel when putting weight on the foot. There are probably many underlying causes of heel pain, and some physicians feel that it is probably more accurate to simply make a diagnosis of heel pain rather than try and define an absolute cause in every instance of heel pain.

Anatomy The Plantar Fascia is a structure that runs from the front of the heel bone (calcaneus) to the ball of the foot. This dense strip of tissue helps to support the longitudinal arch of the foot, by acting similar to the string on a bow.



As you can imagine, when the foot is on the ground a tremendous amount of force is concentrated on the plantar fascia. This can lead to stress on the plantar fascia where it attaches to the calcaneus. Small tears of the tendon can result and are repaired by the body.



As this process of injury and repair repeats itself over and over again, a bone spur forms as the body's response to try and firmly attach the fascia to the bone. This appears on an X-ray of the foot as a heel spur.

Causes Heel pain probably comes from several causes. In some cases the heel spur can be so big it causes pain itself, but this is probably

rare. The chronic inflammation of the fascia itself may be the source of pain in many cases. (This condition is probably most accurately called plantar fasciitis). As we age, the very important fat pad that makes up the fleshy portion of the heel becomes thinner and degenerates. This can lead to inadequate padding on the heel and chronic pain in this area - another source of heel pain. Some foot surgeons feel that the small nerves that travel under the plantar fascia on their way to the forefoot are also irritated and may contribute to the pain. In many cases, the actual source of the painful heel will never be clearly defined without doubt.

Symptoms The symptoms of plantar fasciitis include pain in the center of the heel with weight bearing. This is usually most pronounced in the morning when the foot is first placed on the floor.

Diagnosis The diagnosis of plantar fasciitis is generally made on the history and physical examination. There are several conditions which can cause heel pain and plantar fasciitis must be distinguished from these conditions. An X-ray may be ordered to rule out a stress fracture of the calcaneus, and to see if a bone spur is present that is large enough to actually cause problems. Laboratory investigation may be necessary in some cases to rule out a systemic illness causing the heel pain, such as rheumatoid arthritis, Reiter's Syndrome, or Ankylosing Spondylitis. These are diseases which affect the entire body, but may show up at first as pain in the heel.

Treatment The treatment of heel pain/plantar fasciitis usually begins with adjustments to the footwear to try and reduce symptoms. Recently, a series of exercises have been proposed by the American Orthopaedic Foot and Ankle Society to help treat the problem. Supporting the arch with a well fitted arch support, or orthotic, may help reduce the pressure on the plantar fascia. A special type of insert into the shoe called a heel cup, can reduce the pressure on the sore area and add padding to a heel that has lost some of the fat pad through degeneration. Anti-inflammatory medications are sometimes used to decrease the inflammation in the fascia and reduce your pain. An injection of cortisone into the area of the fascia is effective. Cortisone should be used sparingly due to the fact that this medication may contribute to the process of degeneration of the fat pad, actually making the problem worse.

Surgery is a last resort in the treatment of heel pain/plantar fasciitis. There have been many procedures described over the last 100 years to try and cure heel pain. Most procedures that are

commonly used today focus on several areas:

Remove the bone spur(if present)

Release the plantar fascia

Release pressure on the small nerves in the area

Usually the procedure is done through a small incision on the side of the foot.

Surgery usually involves identifying the area where the plantar fascia attaches to the heel and releasing the fascia partially from the bone. If a small spur is present this is removed. The small nerves that travel under the plantar fascia are identified and released from anything that seems to be causing pressure on the nerves.

This surgery can usually be done as an outpatient. The surgery can be done using a general anesthetic (where you are put to sleep) or some type of regional anesthetic. A regional anesthetic is a type of anesthesia where the nerves going to only a portion of the body are blocked. Injection of medications similar to novocaine are used to block the nerves for several hours. This type of anesthesia could be a spinal block (where the lower half of the body is asleep) or a foot block (where only the foot is asleep).