Education Resource Center

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The King of Foot Pain!

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Plantar Fasciitis and His Nasty Apprentice, the Heel Spur

PLANTAR FASCIITIS

Also known as "heel pain syndrome," plantar fasciitis is the most common cause of heel pain, resulting from a gradual degeneration of the plantar fascia or sudden trauma to the area. Patients may describe the sensation as a sharp stab or deep ache in the middle of the heel or along the arch that typically occurs during walking or standing. Often, pain occurs early in the morning, when patients are taking their first few steps out of bed or after other long periods of sitting/lying down/non-activity. As the foot naturally tightens at night, the fascia

may gain new tears in the morning, initiating a painful cycle. Appearing in one heel or both, the condition tends to be chronic and can be difficult to heal without a combination of aggressive, conservative treatments and total patient compliance.

The plantar fascia is the connective tissue that runs from the calcaneal tubercle (heel) to the base of the toes, with 5 slips of tissue that form a bridge to each toe. Conditions like calcaneal fat pad atrophy, calcaneal stress fracture, nerve entrapment and rheumatoid arthritis can exist alongside plantar fasciitis and may also cause pain.

Improper footwear, strenuous activity, even obesity can bring on plantar fasciitis. Over-pronation, high arches or flat feet and poor shock absorption in shoes can also put excessive stress on the foot's soft tissues. Plantar fasciitis is commonly seen in middle-aged patients, but the young can be affected as well. We see it often in those who place a great deal of stress on their feet like runners, athletes and soldiers.

Plantar fasciitis affects approximately 2 million people in the United States annually.

Treatment

In the office:

- **Adjust:** Chiropractic adjustments restore normal joint mechanics and reduce tension.
- **Stabilize:** functional orthotics reduce pain and position the foot for healing (use in all shoes for best results).
- **Rehabilitate:** progressive resistance exercises help heal injured joints and increase strength.

At home:

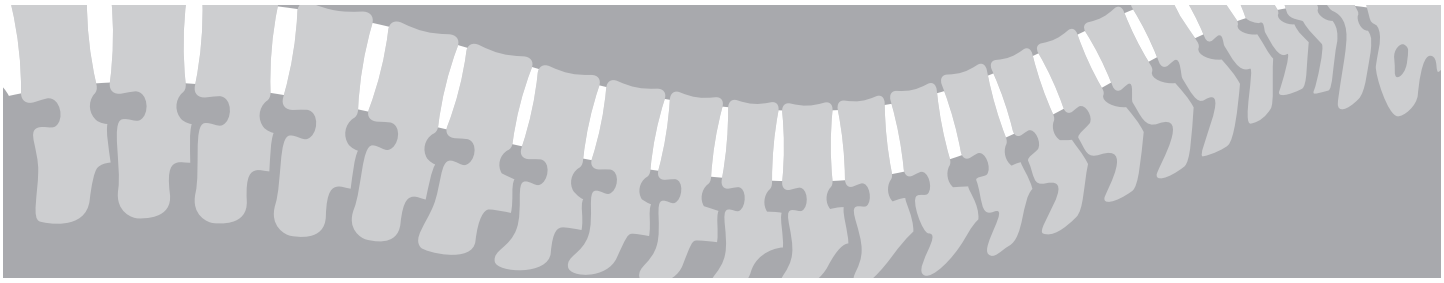
- At first sign of soreness, patients should apply ice and massage the area, perhaps by rolling a Foot Levelers' FootWheel™ beneath afflicted foot. The FootWheel is recommended, but a golf ball will also work.
- Advise running on soft surfaces, stretching of area before activity.

Prevention

Stretching before activity, maintaining a healthy weight and wearing supportive footwear all help with prevention. Functional orthotics are recommended to keep the foot in proper alignment and reduce stress on the plantar fascia.

Recovery

Recovery can be slow, with 90% patients of recovering in 6 to 9 months. A combination of therapies as described above is the most effective approach.



HEEL SPURS

A heel spur is a degenerative outgrowth of bone on the calcaneus. While the heel spur itself is often painless, the condition is commonly associated with Plantar Fasciitis.

When there is an increase in tensile stress on the fascia under the longitudinal arch, a low-grade inflammation develops at the point of attachment on the calcaneus.[1] If the increased stress and inflammation continues, calcium is deposited and a bony outcropping builds up.

Studies suggest that heel spurs themselves are not what causes pain; rather, spurs occur in 50–75% of heels afflicted with painful plantar fasciitis,[2] (though they have also been found in up to 63% of asymptomatic heels).[3] Patients may report a sharp pain in the heel, which may radiate to the bottom of the foot. Symptoms can interfere significantly with walking, especially with the first steps out of bed in the morning. Palpation of the foot will result in pain and tenderness with direct pressure over the medial tubercle of the calcaneus.[4]

Treatment

Surgery can be costly, risky and is rarely necessary. Recovery time—between 3 to 6 months or more to return to weightbearing activities[5]—can also be a deterrent.

Conservative treatment, on the other hand, is shown to be quite effective. The pain and irritation experienced by at least 90% of your patients will respond favorably to conservative measures.[6]

In the office:

- **Adjust:** foot adjustments for inferior navicular, fixated cuboid, posterior calcaneus and/or "dropped" metatarsal heads help reduce symptoms, they do not restore plantar aponeurosis laxity or the resultant excessive pronation.
- **Stabilize:** 3-arch supportive functional orthotics control pronation and protect against damaging heel shock and is essential to support the structural components of the feet when soft tissue components are unable to do so; depending on the patient, consider corrective support under the calcaneus ("varus" or medial wedge).
- **Rehabilitate:** a special cut out (a "divot") at the site of the insertion of the plantar fascia to reduce pressure at this point.

At home:

- Wear Foot Levelers orthotics in all shoes.
- Frequently stretch foot and calf.
- Icing the heel can help bring down swelling.
- The Foot Levelers Thera-Ciser® is often recommended for heel spurs because it can be used to strengthen the foot arch, which helps keep it posturally stable.
- Depending on patient's needs, weight loss, graduated athletic training schedule, better shoes for long-term may be helpful.

Conclusion

You can help your patients manage their heel spurs by taking the movement patterns of their foot and ankle into account. Individually designed functional orthotics can improve your patient's current symptoms and help prevent future difficulties and deterioration. Though there is no "cure" for heel spurs, specific foot adjustments, along with home stretching and weight loss can also be helpful to your patients.

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3. Jahss MH et al. Investigations into the fat pads of the sole of the foot. Foot & Ankle 1992; 13:233-242.
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5. Horn LM. Surgical intervention. In: Subotnick SI, ed. Sports Medicine for the Lower Extremity. New York: Churchill Livingstone 1989:472.
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