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Heel Pain

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As the spring sports seasons start, overuse injuries will be on the increase. One of the most common overuse foot conditions is Plantar Fasciitis. Plantar Fasciitis is an inflammation of a strong ligament on the bottom of the foot known as the plantar fascia. This tough ligament has a strong attachment to the bottom of the heel bone or calcaneus. Causes of plantar fasciitis include but are not limited to: 1) a dramatic change in activity level over a short period of time, 2) an increase in weight due to a period of inactivity 3) doing athletic activities in ill fitted shoes, 4) pronation or flattening of the arch with standing or walking.

Symptoms of Plantar Fasciitis include heel pain upon rising in the morning or heel pain when initiating an activity. After warming up, the pain generally subsides. Soreness often returns after completion of the activity. There is usually no swelling or bruising. Pain is localized to the bottom of the heel and to a lesser extent into the arch. X-rays may show the development of a heel spur on the bottom of the foot. (figure 1)

There are many treatments for Plantar Fasciitis. Arch stretching before activity is helpful to reduce the tightness of the ligament. Another helpful activity is to roll a tennis ball or can of soup on the arch of the foot before getting up to walk. Icing to heel after activity is important to reduce a post activity inflammation. Orthotics or shoe insoles are very beneficial in situations where Plantar Fasciitis is accompanied by a flat foot or low arch. (figure 2) Other medical treatment would include taping (figure 3), non-steroidal anti-inflammatory medication, corticosteroid injections, physical therapy modalities and in severe instances, immobilization.

Heel pain in adolescents is almost never associated with Plantar Fasciitis but more often associated with growth plate irritation. Sever's Disease or Calcaneal Apophysitis is a condition that affects boys between 10-13 and girls between ages 9-12. The child will have pain in the heel commonly after the activity. A typical scenario would be a child with heel pain during the day that gets a little better with activity and then becomes very sore after a period of rest. Swelling or bruising is not common. The condition is diagnosed by age, activity level, clinical symptoms, and x-rays. X-rays will demonstrate sclerosis of the growth plate and fragmentation. The condition is self-limiting and is relieved by rest.



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Other treatment options include icing, anti-inflammatory medication, orthotics, and use of heel cups. The most important thing to note regarding Sever's Disease is that there is no long term damage done from the condition although it is difficult to watch a child limp from heel pain. In severe cases that do not respond with rest, immobilization in a walking boot for 2-4 weeks is helpful.

Dr. Lee Evans is a Board Certified Podiatrist that practices at Des Moines Orthopaedic Surgeons. For more information or to schedule an appointment please call 515-224-5123.



Figure 1 A heel spur is demonstrated on this lateral x-ray of the foot. Spur formation will occur from chronic traction of the plantar fascia on the heel bone.



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Figure 2 This photo demonstrates the effectiveness of orthotic therapy to correct a flat foot. The Left foot is an uncorrected flat foot. The right foot shows a corrected flat foot deformity with an orthotic.



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Figure 3A Demonstration of a taping technique for plantar fasciitis. This first photo shows an anchor strap that is placed first.



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Figure 3B This photo show the orientation of the plantar fascia rest straps as the run across the foot starting just in front of the heel and ending just behind the metatarsal pad.



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Figure 3C Finished photo of the complete plantar fascial taping, it is important to end with another anchor strap around the foot to keep the tape in place.