International Journal of Physical Education, Health and Social Science (IJPEHSS)
www.ijpehss.org
Peer Reviewed, Indexed and UGC Approved Journal (48531)

ISSN: 2278 – 716X
Vol. 5, Issue 1 and 2, 2016
Impact Factor 3.75

HEEL PAIN IN ATHLETES

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ABSTRACT
Heel pain is most often caused by plantar fasciitis, a condition that is sometimes also called heel spur syndrome when there is a Calcium deposit on the underside of the heel bone. It may also relate to a number of other causes such as stress fractures, tendonitis, arthritis nerve irritation, or rarely, a cyst. Since there are several potential causes, it is important to have heel pain properly diagnosed. An Orthopaedic surgeon or doctor who is rehabilitation expert is able to distinguish between all the possibilities and determine the underlying source of heel pain.
Keywords: Plantar Fasciitis, Foot Mechanics, Obesity and Stretching Exercises

INTRODUCTION
Plantar Fasciitis is one of the most common cause of heel pain. It involves pain and inflammation of a thick band of tissue, called the plantar fascia, which runs across the bottom of the foot and connects the hell bone to the toes. In this condition, the band of tissue first becomes irritated and then inflamed, resulting in heel pain.
Under normal circumstances, the plantar fascia acts like a shock- absorbing brow-string, supporting the arch in the foot. If tension on that bowstring becomes too great, it can create small cause the fascia to become irritated or inflamed.
Factors that may increase the risks of developing plantar fasciitis to become include:

- Age: Plantar fasciitis is most common between the ages of 40 and 60.
- Foot Mechanics: The most common cause of plantar fasciitis related to faulty structure of the foot. Being flat-footed, having a high arch or even having an abnormal pattern of walking can adversely affect the way weight is distributed when a person is standing and puts added stress on the plantar fascia.
- Obesity: Excess weight puts an extra load on the plantar fascia.
- Occupation that keep people on their feet: Police men, washer men, factory workers, school teachers, surgeon and other who spend most of their work hours walking or standing on hard surfaces can damage their plantar fascia.
- Using wrong kind of activities: Wearing shoes with inadequate support on hard, flat surface puts abnormal strain on the plantar fascia and can also lead to plantar fasciitis. This is particularly evident when one's job requires long hours on the feet. High heels can also impose strain on the foot.
- Certain types of activities: Activities that place a lot of stress on the heel and attached tissue – such as long distance running, ballet dancing and dance aerobics can contribute to an earlier onset of plantar fasciitis.
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SYMPTOMS
Plantar fasciitis typically cause a stabbing pain in the bottom of the feet near the heel. The pain is usually worst with the first few steps after awakening. Although it can also be triggered by long periods of standing and getting up from a seated position. After a few minutes of walking the pain decrease, since walking stretches the fascia. For some people the pain subsides but returns after spending long periods of time on their feet.
The way we walk to minimize plantar fasciitis pain, we might also develop foot, knee, hip or back pain. The pain may also occur in the arch of the foot. It tends to run on and increase over a period of months.
Ignoring plantar fasciitis may result in chronic heel pain that hinders our regular activities.

DIAGNOSIS
Usually no tests are necessary. The diagnosis is made based on the history and physical examination of the foot. Throughout this process, the doctor rules out all the possible causes for heel pain other than plantar fasciitis.

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Occasionally doctor may suggest an X-ray on magnetic resonance imaging (MRI) to make sure pain isn't being caused by another problem, such as a stress fracture or a pinched nerve.
Sometimes an X-ray shows a spur of bone projecting forward from the heel bone. These are rarely a source of pain. In the past, these bone spurs were often blamed for heel pain and surgically removed. But many people who have bone spurs on their heels have no heel pain.

TREATMENT

Most people who have plantar fasciitis recover with conservative treatment in just a few months. Treatment of plantar fasciitis begins with first-line strategies, which can begin at home.

- Stretching exercises: Simple home exercise can stretch plantar fascia, Achilles tendon and calf muscles. Exercise that stretch out the calf muscle help ease pain and assist with recovery.
- Avoid going barefoot: Don't walk barefoot, especially on hard surface. When we walk barefoot, we put undue strain and stress on plantar fascia.
- Shoe modification: Wear shoes that have good arch support, can absorb shock and carry a slight heel. Such footwear reduce stress on the plantar fascia. Avoid high heels.
- Don't wear worn-out athletic shoes, replace old athletic shoes before they stop supporting and cushioning feet. Runners should buy new shoes after about 900 km of use.
- Apply Ice: Hold a cloth-covered ice pack over the area of pain for 15 to 20 minutes three or four times a day after activity. Or try ice massage. Freeze a water-filled paper cup and roll it over the size of discomfort about five to seven times. Regular ice massage can help reduce pain and inflammation. Do not apply ice directly to the skin.
- Limit activities: Cut down on extended physical activities to give heel a rest.
- Change sport: Try a low-impact sport, such as swimming or bicycling, instead of walking or jogging.
- Maintain a healthy weight

SUGGESTED EXERCISES

- Achilles tendon and plantar fascia stretch: first thing in the morning, loop a towel, a piece of elastic or a tubiric around the ball of foot and keeling knee straight, pull toes toward nose, holding for 30 second. Repeat 3 times each foot.
- Wall push-ups or stretches for Achilles tendon: the Achilles tendon comes from the muscles at the back thing and calf muscles. These exercises need to be performed first with the knee straight and then with the knee bent in order to stretch both parts of the Achilles tendon. Twice a day do the following wall push-ups or stretches: (a) face the wall, put both hands on the wall at shoulder height and stagger the feet (one feet in front of the t=other). The front foot should be approximately 30 cm (12 inches) form the wall. With the front knee and the back knee straight, lean into the stretch (i.e. towards the wall) until a tightening is felt in the calf of the back by bring the back foot forward a little so that the back knee is slightly bent. Repeat the push- ups 10 times.
- Stair stretches for Achilles tendon and plantar fascia: holding the stair rail for support, with lefts slightly apart, position the feet so that both heels are off the end of the step. Lower the heels, keeping the knees straight, until a tightening is felt in the calf. Hold this position for 20-60 seconds and bring the heels back to neutral. Repeat 6 times at least twice a day.
- Dynamic stretches for plantar fascia: this involves the arch of the foot over a rolling pin, a drinks can or a tennis ball etc. while either standing (holding the back of a chair for support) or sitting. Allow the foot and ankle to move in all directions over the object. This can be done for a few minutes until there is some discomfort. Repeat this exercise at least twice a day. The discomfort can be relieved by rolling the foot on a cook drinks from the fridge.

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