

## **PLANTAR FASCIITIS: A COMMON SOURCE OF HEEL PAIN**

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Do your first walking steps in the morning cause severe pain in your heel? Do you get heel pain when walking after a lengthy period of sitting or rest? Does your heel hurt after prolonged weight bearing or participating in recreational activities? Does your heel pain extend into the arch of your foot or does your arch constantly ache? If you answered yes to any of these questions, you may have plantar fasciitis, a common source of heel pain that can be quite disabling. Learn more about the causes, risk factors, prevention and treatment strategies related to plantar fasciitis.

Plantar fasciitis usually develops gradually, but it can come on suddenly and be severe. Sharp, knife-like pain in the inside part of the bottom of the heel is often characteristic. Pain and discomfort can also extend into the arch of the foot. Heel pain tends to be worse with the first few walking steps in the morning, and after extended periods of sitting, rest and inactivity. Pain and discomfort can also occur with prolonged weight bearing activities such as standing and walking. Heel and arch pain may not be present during exercise, but can be present after exercise. However, if plantar fasciitis becomes severe or chronic, heel and/or arch pain will be present with all weight bearing activities.



of pain.

Plantar fasciitis is caused by inflammation of the plantar fascia, which is the tendon-like soft-tissue along the bottom of the foot that connects your heel bone to your toes. Under normal circumstances, your plantar fascia acts like a shock-absorbing rubber band, supporting the arch of your foot. Excessive tension and repetitive stretching can create small tears in this soft-tissue fascia, causing it to become irritated or inflamed. Bone spurs may be found on x-rays; however, research has shown that these bone spurs are not the source of pain. It is the soft-tissue fascia that is the actual generator

There are several causes and risk factors associated with developing plantar fasciitis. Physical overload is a common trigger. This may occur with athletic activities such as running and tennis, occupational activities that require walking and standing on hard surfaces for prolonged periods, or everyday activities such as stair climbing or moving furniture and large appliances. Shoes that are thin soled, or lack arch support or the ability to absorb shock do not protect your feet. This makes the plantar fascia more susceptible to stretch and strain. Faulty foot mechanics may also contribute to the development of plantar fasciitis. Individuals who excessively pronate (roll feet inward), are flat-footed or have a high arch will also experience stretch and strain on their plantar fascia. Heel and arch pain tends to be more common in middle and older aged people. With aging, the arch of the foot begins to sag, putting stress on the plantar fascia. Being overweight is also a risk factor. Carrying extra pounds can break down the protective fatty tissue under the heel bone, causing heel pain and putting extra mechanical stress on the plantar fascia.

Preventative strategies that directly address the causes and risk factors associated with plantar fasciitis can be helpful. These may include reducing or

modifying exposure to physical overload, wearing supportive shoes with a good arch support and shock absorbency, and maintaining a healthy body weight. There are self-care strategies that can also be implemented. Application of ice over the area of pain for 15-20 minutes four to five times daily or ice massage with a paper cup of frozen water can help reduce pain and inflammation. Stretching the achilles tendon, calf muscles, and plantar fascia on the edge of a step can help keep these tissues flexible. Rolling a tennis ball or soup can from your heel and along the arch of your foot can help reduce pain and stimulate blood flow and healing to injured tissues. Gel or “donut pads” placed under the affected heel(s) in shoes may also provide relief.

Plantar fasciitis that does not respond to preventative and self-care strategies may require further treatment and intervention. Ultrasound and electrotherapy are commonly used therapies that are safe and helpful options. Their effectiveness is enhanced with appropriate myofascial release techniques and balance training. Recurrent and chronic heel pain usually requires biomechanical intervention. A custom made orthotic is a mechanical aid that is constructed to allow the heel to strike the ground in the correct manner by minimizing pronation, cushioning the heel and supporting the arch. This decreases the strain on the soft-tissue plantar fascia and provides the foot with optimal stability. It is important to establish an accurate diagnosis of plantar fasciitis. Other causes of heel pain may include stress fractures, achilles tendonitis/bursitis, arthritis, gout, nerve irritation or a cyst.

Ignoring plantar fasciitis may result in a chronic condition that can hinder occupational, recreational, and everyday activities. You may also develop secondary foot, knee, hip, and back problems because of the way plantar fasciitis changes your walking motion. If you are having difficulty with heel pain, a qualified health professional can determine the cause of your heel pain and prescribe appropriate therapy and intervention specific for your circumstance. For more information visit [www.nhwc.ca](http://www.nhwc.ca).

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