

Plantar Fasciitis

What is plantar fasciitis?

Plantar fasciitis is one of the most common causes of heel pain. It involves pain and inflammation of a thick band of tissue, called the plantar fascia that runs across the bottom of your foot and connects your heel bone to your toes.

Plantar fasciitis commonly causes stabbing pain that usually occurs with your very first steps in the morning. Once your foot limbers up, the pain of plantar fasciitis normally decreases, but it may return after long periods of standing or after getting up from a seated position.

Plantar fasciitis is particularly common in runners. In addition, people who are overweight and those who wear shoes with inadequate support are at risk of plantar fasciitis.



What are the symptoms of plantar fasciitis?

Plantar fasciitis typically causes a stabbing pain in the bottom of your foot 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 or getting up from a seated position.

What are the causes of plantar fasciitis?

Exactly what causes plantar fasciitis is not well understood. Under normal circumstances, your plantar fascia acts like a shock-absorbing bowstring, supporting the arch in your foot. If tension on that bowstring becomes too great, it can create small tears in the fascia. Repetitive stretching and tearing can cause the fascia to become irritated or inflamed.

Normally when you walk, your plantar fascia stretches as your foot strikes the

ground. If the plantar fascia is strained by the way you walk or by repeated stress, it can become weak, swollen and irritated (inflamed), and it can hurt when you stand or walk.



What are the risk factors of plantar fasciitis?

Factors that may increase your risk of developing plantar fasciitis include:

- **Age:** Most common between the ages of 40 and 60.
- **Certain types of exercise:** Activities that place a lot of stress on your heel and attached tissue — such as long-distance running, ballet dancing and dance aerobics can contribute to an earlier onset of plantar fasciitis.
- **Faulty foot mechanics:** Being flat-footed, having a high arch or even having an abnormal pattern of walking (walk with inward twist of foot – pronation) can adversely affect the way weight is distributed when you're standing and put added stress on the plantar fascia. Having tight Achilles tendons also can increase your risk of plantar fasciitis
- **Obesity:** Excess pounds put extra stress on your plantar fascia.
- **Occupations that keep you on your feet:** Factory workers, teachers, military staff and others who spend most of their work hours walking or standing on hard surfaces can damage their plantar fascia.
- **Habits:** Have habits or do activities that increase the stress on your feet, such as wearing shoes with poor cushioning, walking or running without being conditioned for these activities and changing your walking or running surface (for example, from grass to concrete)
- **Runners:** Some athletes especially runners are more likely to get plantar fasciitis because of :

- i) things that affect the way their feet strike the ground, such as not having enough flexibility in the foot and ankle, or having stronger muscles in one leg than in the other.
- ii) the repetitive nature of sports activities
- iii) improper training

Therefore if you are a runner, you increase your chance of developing plantar fasciitis if you:

- i) Abruptly change how hard or how long you run.
- ii) Run on steep hills
- iii) Wear running shoes that do not have a cushioned sole, lack of good arch support or are worn out



What are the complications of plantar fasciitis?

Ignoring plantar fasciitis may result in chronic heel pain that hinders your regular activities. If you change the way you walk to minimize plantar fasciitis pain, you might also develop foot, knee, hip or back problems.

How is plantar fasciitis diagnosed?

During the physical exam, your doctor checks for points of tenderness in your foot. The location of your pain can help determine its cause.

Imaging tests

Usually no tests are necessary. The diagnosis is made based on the history and physical examination. Occasionally your doctor may suggest an X-ray or magnetic resonance imaging (MRI) to make sure your 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. In the past, these bone spurs were often blamed for heel pain and removed surgically. But many people who have bone spurs on their heels have no heel pain.

How is plantar fasciitis treated?

The goals of treatment for plantar fasciitis are to:

- Relieve inflammation and pain in the heel.
- Allow small tears in the plantar fascia ligament to heal.
- Improve strength and flexibility and correct foot problems such as excessive pronation so that you don't stress the plantar fascia ligament.
- Allow you to go back to your normal activities.

Most people recover completely within a year. Out of 100 people with plantar fasciitis, about 95 are able to relieve their heel pain with nonsurgical treatments. Only about 5 out of 100 need surgery. Treatment that you start when you first notice symptoms is more successful and takes less time than treatment that is delayed.

Medications

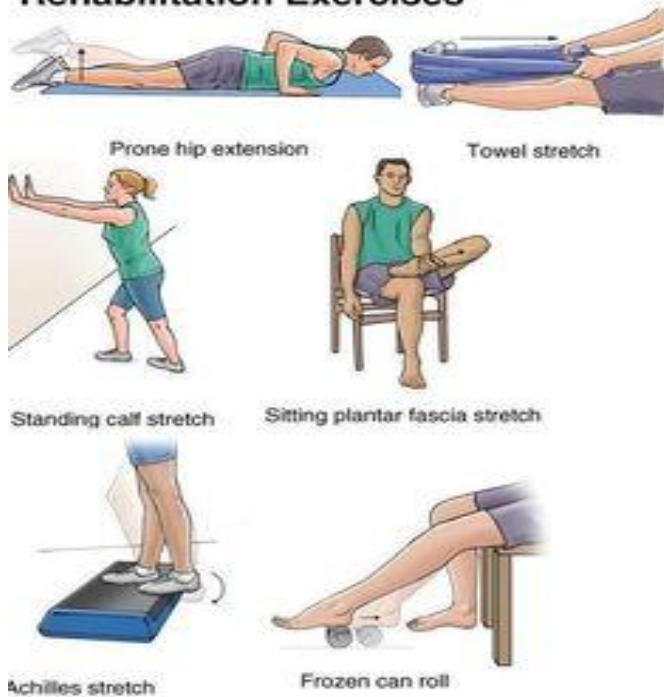
Doctors usually will give Non-steroidal anti inflammatory drugs (NSAIDs) such as Arcoxia, Celebrex, Voltaren and Ponstan to ease the pain and inflammation associated with plantar fasciitis. They work very well to reduce the pain & inflammation especially in combination with resting the affected foot.

Therapies

Stretching and strengthening exercises or use of specialized devices may provide symptom relief. These include:

- **Physiotherapy:** A physiotherapist can instruct you in a series of exercises to stretch the plantar fascia and Achilles tendon and to strengthen lower leg muscles, which stabilize your ankle and heel. They may also teach you to apply athletic taping to support the bottom of your foot.

Plantar Fasciitis Rehabilitation Exercises



- **Night splints:** Your doctor or physiotherapist may recommend wearing a splint that stretches your calf and the arch of your foot while you sleep. This holds the plantar fascia and Achilles tendon in a lengthened position overnight and facilitates stretching.



- **Orthotics:** Your doctor may prescribe off-the-shelf heel cups, cushions or

custom-fitted arch supports (orthotics) to help distribute pressure to your feet more evenly.



Surgical or other procedures

When more-conservative measures aren't working, your doctor might recommend:

- **Steroid shots:** Injecting a type of steroid medication into the tender area can provide temporary pain relief. Multiple injections aren't recommended because they can weaken your plantar fascia and possibly cause it to rupture, as well as shrink the fat pad covering your heel bone.
- **Extracorporeal shock wave therapy:** In this procedure, sound waves are directed at the area of heel pain to stimulate healing. It's usually used for chronic plantar fasciitis that hasn't responded to more-conservative treatments. This procedure may cause bruises, swelling, pain, numbness or tingling and has not been shown to be consistently effective.
- **Surgery:** Few people need surgery to detach the plantar fascia from the heel bone. It's generally an option only when the pain is severe and all else fails. Side effects include a weakening of the arch in your foot.

Lifestyle and home remedies

To reduce the pain of plantar fasciitis, try these self-care tips:

- **Maintain a healthy weight:** This minimizes the stress on your plantar fascia.
- **Choose supportive shoes:** Avoid high heels. Buy shoes with a low to

moderate heel, good arch support and shock absorbency. Don't go barefoot, especially on hard surfaces.

- **Don't wear worn-out athletic shoes:** Replace your old athletic shoes before they stop supporting and cushioning your feet. If you're a runner, buy new shoes after about 800 km of use.
- **Change your sport:** Try a low-impact sport, such as swimming or bicycling, instead of walking or jogging.
- **Apply ice:** Hold a cloth-covered ice pack over the area of pain for 15 to 20 minutes three or four times a day or after activity. Or try ice massage. Freeze a water-filled paper cup and roll it over the site of discomfort for about five to seven minutes. Regular ice massage can help reduce pain and inflammation.
- **Stretch your arches:** Simple home exercises can stretch your plantar fascia, Achilles tendon and calf muscles.

When do I see a Doctor for plantar fasciitis?

If you think you might have plantar fasciitis, see your doctor. The earlier a doctor diagnoses and treats your problem, the sooner you will have relief from pain.

See your doctor immediately if you have heel pain with fever, with redness or warmth in your heel, or with numbness or tingling in your heel.

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