

## Education

### Plantar Fasciitis

What is plantar fasciitis?

Plantar fasciitis is a painful inflammation of the bottom of the foot between the ball of the foot and the heel.

How does it occur?

There are several possible causes of plantar fasciitis, including:

- wearing high heels
- gaining weight
- increased walking, standing, or stair-climbing.

If you wear high-heeled shoes, including western-style boots, for long periods of time, the tough, tendonlike tissue of the bottom of your foot can become shorter. This layer of tissue is called fascia. Pain occurs when you stretch fascia that has shortened. This painful stretching might happen, for example, when you walk barefoot after getting out of bed in the morning.

If you gain weight, you might be more likely to have plantar fasciitis, especially if you walk a lot or stand in shoes with poor heel cushioning. Normally there is a pad of fatty tissue under your heel bone. Weight gain might break down this fat pad and cause heel pain.

Runners may get plantar fasciitis when they change their workout and increase their mileage or frequency of workouts. It can also occur with a change in exercise surface or terrain, or if your shoes are worn out and don't provide enough cushion for your heels.

If the arches of your foot are abnormally high or low, you are more likely to develop plantar fasciitis than if your arches are normal.

What are the symptoms?

The main symptom of plantar fasciitis is heel pain when you walk. You may also feel pain when you stand and possibly even when you are resting. This pain typically occurs first thing in the morning after you get out of bed, when your foot is placed flat on the floor. The pain occurs because you are stretching the plantar fascia. The pain usually lessens with more walking, but you may have it again after periods of rest.

You may feel no pain when you are sleeping because the position of your feet during rest allows the fascia to shorten and relax.

How is it diagnosed?

Your health care provider will ask about your symptoms. He or she will ask if the bottom of your heel is tender and if you have pain when you stretch the bottom of your foot. An x-ray of your heel may be done.

How is it treated?

- Give your painful heel lots of rest. You may need to stay completely off your foot for several days when the pain is severe.
- Your health care provider may recommend or prescribe anti-inflammatory medicines, such as aspirin or ibuprofen. These drugs decrease pain and inflammation. Resting your heel on an ice pack for a few minutes several times a day can also help.
- Try to cushion your foot. You can do this by wearing athletic shoes, even at work, for awhile. Heel cushions can also be used. The cushions should be worn in both shoes. They are most helpful if you are overweight or an older adult.
- Your provider may recommend special arch supports or inserts for your shoes called orthotics, either custom-made or off the shelf. These supports can be particularly helpful if you have flat feet or high arches.
- If your heel pain is not relieved by the treatments described above, your provider may recommend physical therapy.

The goals of physical therapy are to stretch the plantar fascia and to strengthen the lower leg muscles, which stabilize the ankle and heel. Sometimes physical therapists recommend athletic taping to support the bottom of the foot. A splint may be fitted to the calf of your leg and foot, to be worn at night to keep your foot stretched during sleep. Another possible treatment is a shot of cortisone in the heel. Surgery is rarely needed.

How long will the effects last?

You may find that the pain is sometimes worse and sometimes better over time. If you get treatment soon after you notice the pain, the symptoms should stop after several weeks. If, however, you have had plantar fasciitis for a long time, it may take many weeks to months for the pain to go away.

When can I return to my normal activities?

Everyone recovers from an injury at a different rate. Return to your activities will be determined by how soon your foot recovers, not by how many days or weeks it has been since your injury has occurred. In general, the longer you have symptoms before you start treatment, the longer it will take to get better. The goal of rehabilitation is to return you to your normal activities as soon as is safely possible. If you return too soon you may worsen your injury.

You may safely return to your activities when, starting from the top of the list and progressing to the end, each of the following is true:

- You have full range of motion in the injured foot compared with the uninjured foot.
- You have full strength of the injured foot compared with the uninjured foot.
- You can walk straight ahead without significant pain or limping.

How can I prevent plantar fasciitis?

The best way to prevent plantar fasciitis is to wear shoes that are well made and fit your feet. This is especially important when you exercise or walk a lot or stand for a long time on hard surfaces. Get new athletic shoes before your old shoes stop supporting and cushioning your feet.

You should also:

- Avoid repeated jarring to the heel.
- Keep a healthy weight.
- Do your leg and foot stretching exercises regularly.

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Plantar fascia

Heel bone

**Bottom of Foot**