



## PATIENT & CAREGIVER EDUCATION

# Plantar Fasciitis

This information explains the causes, diagnosis, and treatment of plantar fasciitis.

## About Plantar Fasciitis

Plantar fasciitis is one of the most common causes of heel pain. It is when the ligament (band of tough tissue) that connects your heel bone to the ball of your foot becomes swollen and irritated. This ligament is called the plantar fascia (see Figure 1). The plantar fascia also supports the arch of your foot.

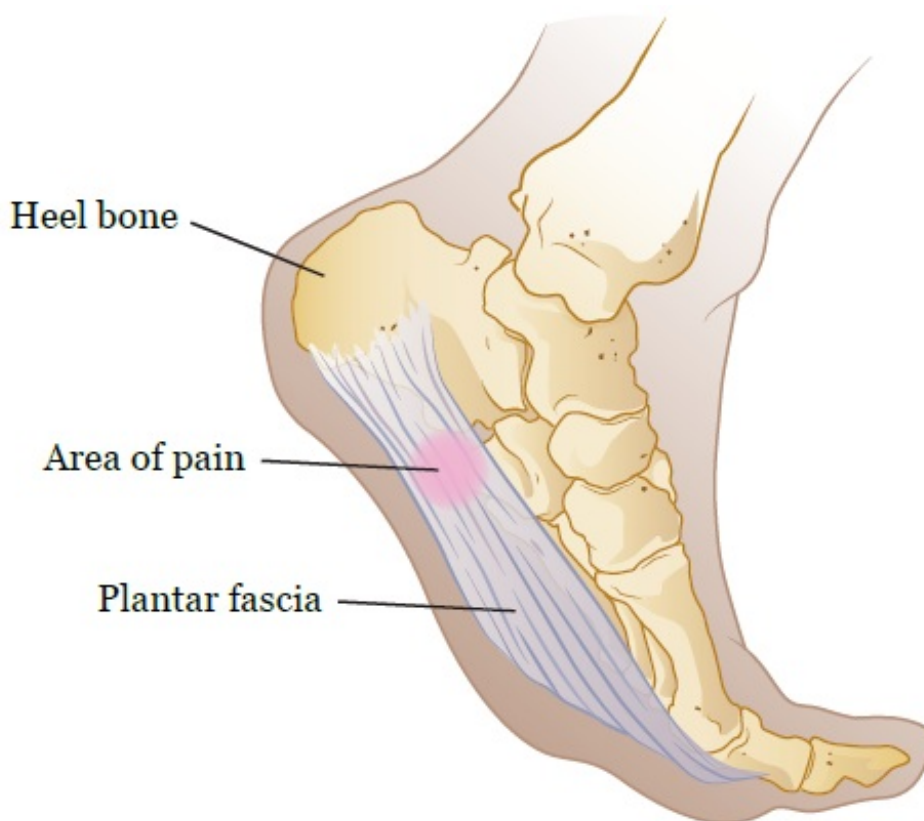


Figure 1. Plantar fascia

# Signs of Plantar Fasciitis

Plantar fasciitis usually feels like a burning, stabbing, or aching pain in the heel of your foot. Sometimes, the pain may go up to the front of your foot but goes away after a few minutes when the tissue warms up.

Most people with plantar fasciitis feel pain when they step out of bed in the morning. You may also feel pain after long periods of standing, physical activity, or at the end of the day.

## Causes of Plantar Fasciitis

Your plantar fascia acts like a rubber band that stretches with every step that you take. When you strain or hurt this ligament, it can tear or become weak, painful, and swollen.

Some of the causes of plantar fasciitis include:

- Having tight calf muscles or Achilles tendons (tough tissue that connects the calf muscles to the heel bone).
- Walking, standing, or running for long periods of time, especially on hard surfaces.
- Wearing shoes that don't fit well.
- Wearing shoes that don't have enough support.
- Having weak tissues in your feet due to aging
- Having flat feet, high arches, or an irregular way of walking (gait).
- Being overweight.

- Pregnancy or hormonal changes. Hormones can cause ligaments and tissues to become more flexible than normal.

## Diagnosing Plantar Fasciitis

Your doctor can diagnose plantar fasciitis after a physical exam. They will check your feet and watch you as you stand and walk. Sometimes an x-ray or lab test may be done to rule out other problems.

## Treatment for Plantar Fasciitis

Although plantar fasciitis usually goes away without causing any long-term problems, it can last from 6 to 18 months.

You may need to take medication to reduce pain and swelling. The most common types of medications used are nonsteroidal anti-inflammatory drugs (NSAIDs). NSAIDs should be taken with food. Examples of NSAIDs are:

- Ibuprofen (Advil<sup>®</sup> and Motrin<sup>®</sup>)
- Naproxen sodium (Aleve<sup>®</sup>)
- Naproxen (Naprosyn<sup>®</sup>)

Talk with your doctor before taking NSAIDs if you:

- Have a history of gastrointestinal, liver, or kidney disease.
- Have a history of bleeding disorders.
- Are taking aspirin or any medication that prevents your blood from clotting.

- Are taking corticosteroids.

For more information, read our resource *Common Medications Containing Aspirin and Other Nonsteroidal Anti-inflammatory Drugs (NSAIDs)*

([www.mskcc.org/pe/common\\_meds](http://www.mskcc.org/pe/common_meds)).

Your doctor will tell you which medication is best for you. Always take medications as instructed by your doctor.

Your doctor may also suggest taping your arches or putting special devices in your shoes for extra support, such as heel cups, orthotics, or arch supports. You may also need physical therapy.

If these treatments don't help, talk with your doctor. They may suggest other treatments, such as corticosteroid injections or surgery.

## **How to Relieve Plantar Fasciitis Pain**

Here are some ways you can relieve your plantar fasciitis pain yourself:

- Place an ice pack wrapped in a towel on your heels. This will help reduce swelling and discomfort. Do this 4 to 6 times a day for 10 minutes.
- Wear shoes that support your feet. Avoid wearing open-back shoes, sandals, high heels, flip flops, and walking barefoot.
- Take time to rest when exercising. Avoid standing, running,

or walking for long periods of time.

- Rest your feet. Try to limit activities that put pressure on the heels and balls of your feet, such as running, jumping, and walking.

## **Exercises to relieve plantar fasciitis pain**

There are also some exercises you can do to help manage pain caused by plantar fasciitis.

### **Toe curls**

Using a book:

1. Place a book on the floor and stand on top of it.
2. Curl your toes around the edge of the book (see Figure 2). Then, straighten your toes.
3. Repeat this for 2 minutes, 2 times a day.



Figure 2. Toe curls using a book

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Using a towel:

1. Place a towel on the floor and stand on top of it.
2. Grip the towel under your toes, and release (see Figure 3).

3. Repeat this for 1 to 2 minutes, 2 times a day.



Figure 3. Toe curls using a towel

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## Foot stretches

1. Get a towel and sit on the floor with your legs straight out in front of you.
2. Loop the towel around your foot, keeping your leg straight out in front of you.
3. Using the towel, pull the top part of your foot towards you (see Figure 4). You should feel stretching in your calf muscle.
4. Hold this position for 10 to 30 seconds and release.
5. Repeat this exercise 5 times in each session. Do 2 sessions a day.

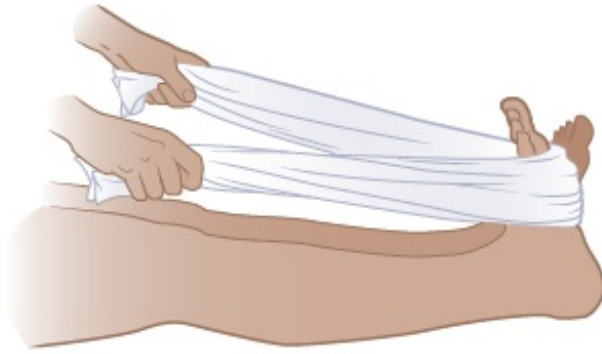


Figure 4. Foot stretches

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## Ankle circles

1. Sit down in a chair and place your leg on a leg rest or on another chair.
2. Rotate your right ankle clockwise (to the right) 8 to 12 times (see Figure 5).
3. Switch directions and rotate your ankle counter-clockwise (to the left) 8 to 12 times.
4. Repeat this exercise with your left ankle.



Figure 5. Ankle circles

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If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit [www.mskcc.org/pe](http://www.mskcc.org/pe) to search our virtual library.

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