



## PATIENT & CAREGIVER EDUCATION

# Plantar Fasciitis

This information explains the causes, diagnosis, and treatment of plantar fasciitis (PLAN-tar fash-she-EYE-tis).

## About Plantar Fasciitis

Your plantar fascia is the ligament (band of tough tissue) that connects your heel bone to the ball of your foot (see Figure 1). Your plantar fascia acts like a rubber band that stretches with every step that you take. It also supports the arch of your foot.

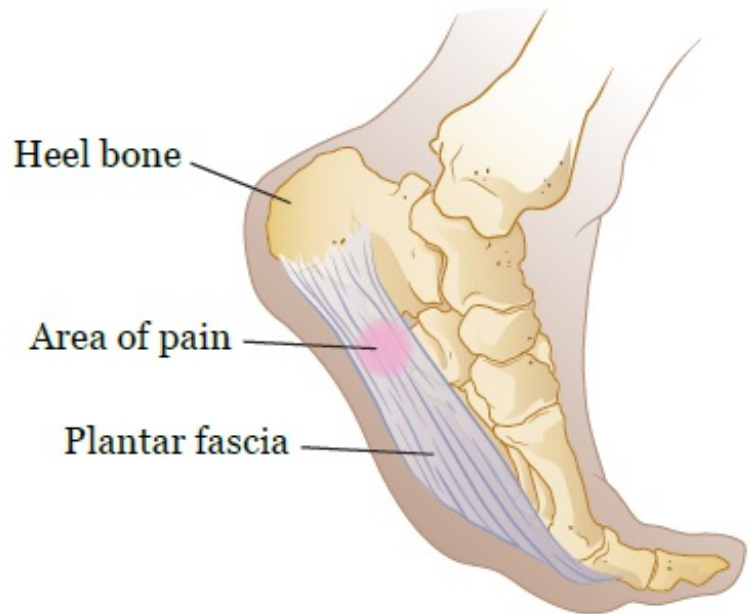


Figure 1. Plantar fascia

When you strain or hurt your plantar fascia, it can tear or become weak, painful, and swollen. This is called plantar fasciitis. It is one of the most common causes of

heel pain.

## **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 ball of your foot. 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**

Some causes of plantar fasciitis include:

- Having tight calf muscles or Achilles tendons (the tough tissue that connects your calf muscles to your 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 uneven 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 healthcare provider can diagnose plantar fasciitis with 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. Your healthcare provider will tell you which medication is best for you. You should always take medications as instructed by your healthcare provider.

The most common types of medications used are nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen (Advil<sup>®</sup> and Motrin<sup>®</sup>), naproxen sodium (Aleve<sup>®</sup>), and naproxen (Naprosyn<sup>®</sup>). NSAIDs should be taken with food. Talk with your healthcare provider before taking NSAIDs if you:

- Have a history of gastrointestinal (stomach and intestines), 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 *How To Check if a Medicine or Supplement Has Aspirin, Other NSAIDs, Vitamin E, or Fish Oil* ([www.mskcc.org/pe/check-med-supplement](http://www.mskcc.org/pe/check-med-supplement)).

Your healthcare provider may also suggest taping your arches or putting special aids in your shoes for extra support, such as heel cups, orthotics (such as a brace or splint), or arch supports. You may also need physical therapy.

If these treatments don't help, talk with your healthcare provider. They may suggest other treatments, such as corticosteroid injections (shots) 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**

You can do toe curls using a book or a towel. To do them using a book:

1. Place a book on the floor. 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

To do them 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**

You'll need a towel for this exercise. Make sure the towel is long enough to loop around your foot when you're sitting with your legs straight (see Figure 4).

1. 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. Then let go.
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 questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, 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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Plantar Fasciitis - Last updated on May 6, 2020

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