Plantar Fasciitis

Plantar fasciitis is inflammation of the thick tissue on the bottom of the foot. This tissue is called the plantar fascia. It connects the heel bone to the toes and creates the arch of the foot.

Causes, incidence, and risk factors
Plantar fasciitis occurs when the thick band of tissue on the bottom of the foot is overstretched or overused. This can be painful and make walking more difficult.

You are more likely to get plantar fasciitis if you have:
- Foot arch problems (both flat feet and high arches)
- Long-distance running, especially running downhill or on uneven surfaces
- Sudden weight gain or obesity
- Tight Achilles tendon (the tendon connecting the calf muscles to the heel)
- Shoes with poor arch support or soft soles

Plantar fasciitis is seen in both men and women. However, it most often affects active men ages 40 - 70. It is one of the most common orthopedic complaints relating to the foot. Plantar fasciitis is commonly thought of as being caused by a heel spur, but research has found that this is not the case. On x-ray, heel spurs are seen in people with and without plantar fasciitis.

Symptoms
The most common complaint is pain and stiffness in the bottom of the heel. The heel pain may be dull or sharp. The bottom of the foot may also ache or burn.

The pain is usually worse:
- In the morning when you take your first steps
- After standing or sitting for a while
- When climbing stairs
- After intense activity

The pain may develop slowly over time, or suddenly after intense activity.
**Signs and tests**
The health care provider will perform a physical exam. This may show:
- Tenderness on the bottom of your foot
- Flat feet or high arches
- Mild foot swelling or redness
- Stiffness or tightness of the arch in the bottom of your foot.

X-rays may be taken to rule out other problems.

**Treatment**
Your health care provider will usually first recommend:
- **Acetaminophen** (Tylenol) or **ibuprofen** (Advil, Motrin) to reduce pain and inflammation
- Heel and foot stretching exercises
- Night splints to wear while sleeping to stretch the foot
- Resting as much as possible for at least a week
- Wearing shoes with good support and cushions

Other steps to relieve pain include:
- Apply ice to the painful area. Do this at least twice a day for 10 - 15 minutes, more often in the first couple of days.
- Try wearing a heel cup, felt pads in the heel area, or shoe inserts.
- Use night splints to stretch the injured fascia and allow it to heal.

If these treatments do not work, your health care provider may recommend:
- Wearing a boot cast, which looks like a ski boot, for 3-6 weeks. It can be removed for bathing.
- Custom-made shoe inserts (orthotics)
- Steroid shots or injections into the heel

Sometimes, foot surgery is needed.

**Expectations (prognosis)**
Nonsurgical treatments almost always improve the pain. Treatment can last from several months to 2 years before symptoms get better. Most patients feel better in 9 months. Some people need surgery to relieve the pain.

**Complications**
Pain may continue despite treatment. Some people may need surgery. Surgery has its own risks. Talk to your doctor about the risks of surgery.

**Calling your health care provider**
Contact your health care provider if you have symptoms of plantar fasciitis.

**Prevention:** Making sure your ankle, Achilles tendon, and calf muscles are flexible can help prevent plantar fasciitis.
TREATMENT - STRETCHING, ICING, ORTHOTICS

Each stretch should be for at least 30 seconds per leg, done multiple times throughout the day. For example; 30 seconds stretch for 5 repetitions per leg done at least 3 times per day.
Plantar Stretch

This stretch has been around for a long time. Unfortunately I have not seen or heard much about it from runners who suffer from plantar fasciitis. From a standing or push up position go to a kneeling position. Try to keep your toes extended as much as possible. Slowly sit back on your heels depending on your degree of tenderness. If you don’t feel uncomfortable because of the pressure that is placed on your knees so go ahead and roll a towel up and place it in between your calves and hamstrings to reduce the pressure off your knees. You can use foam cushions or a pillow too, it doesn’t matter. I recommend holding this stretch 2-3 times for 30 seconds. Eventually I would expect you to be able to hold it for 2 sets of 1 minute each.

Cross the leg of the foot you will be stretching. Place your toes on your wrist and extend your fingers over your forefoot. Really focus on getting a good stretch throughout your arch. Hold this stretch for 30 seconds 3-5 times. This static stretch will help relax over used muscles. The image in the last photo is an example of a proprioceptive neuromuscular facilitation PNF stretch. I like PNF because you really get a better stretch with this exercise. So how do you do it? Start with the middle photo. After about 10-15 seconds of holding this stretch you’re going to try and force your toes down. For 5 seconds try to force your toes down. There should be no movement. After 5 seconds apply a little more resistance.
Towel Grab Exercise

Start with any type of towel. Foot is flat on the floor. Curl your toes and pull the towel towards you until your toes reach the end of the towel. Try this exercise 2-3 times on each foot. Focus on using all of your toes as your toes grab the towel and not just your great toe/big toe.
Plantar Fasciitis Stretches
Six top stretches to help relieve heel pain

1. Soleus Stretch:
With both knees apart and your toes facing forward, lean into the wall until you feel the stretch in your lower calf. Hold for 30 seconds and repeat 3 times.

2. Step Stretch:
Stand with your toes on a step and your heels off the edge. Slowly lower your heels down, hold for 15 seconds, and then lift your heels to their starting position. You can either do both feet at the same time, or one foot at a time. Repeat five times.

3. Roll Stretch:
Using a Mini Thera-Roll, roll it back and forth from your toes to your heels. This is great for a long day on your feet or to help relieve stiffness or swelling.

4. Plantar Fascia Massage:
Using two fingers, apply small circular friction to any tight knots or lumps in the plantar fascia. The pressure should be deep, but not so much that you tighten up with pain.

5. Elastic Strap Stretch:
Sit on the floor with your legs straight in front of you. Take a stretch strap and place it around your toes. Gently pull the strap towards you. Hold for 15 to 30 seconds, then release. Repeat 3 times.

6. Toe Stretch:
Place just toes up on the wall with the ball of the foot and heel on the ground. Lean into the wall slowly until the stretch is felt. Hold for 30 seconds and repeat 3 times.