

Plantar Fasciitis

Setting the pace for healthy feet

Leg, foot and ankle injuries are common to soccer players of all abilities and are impacted by many factors, including training technique, foot wear and playing surface. Plantar fasciitis, or inflammation of tissue on the bottom of the foot, is a common condition affecting performance and a player's season.

What is plantar fasciitis?

Plantar fasciitis is an inflammation of the plantar fascia, the thick, fibrous tissue that runs the length of the sole of the foot. The fascia stretches little, if at all. When placed under too much stress, it can tear or become inflamed. Over time, the tension on the fascia can tug on the membrane around the heel bone. In some people, this prompts the body to grow more bone, forming a painful bone spur on the heel. Plantar fasciitis is sometimes called heel spur syndrome. Bone spurs on the heel are a result, not the cause, of the problem.

What causes plantar fasciitis?

This is most often an overuse (repetitive stress) injury. It afflicts those who use their feet to a great extent for running, such as in soccer practice or in a game, or prolonged standing. It also affects people who wear improper shoes, such as high heels or shoes that don't have a back, such as clogs. If not treated, the injury will get worse until it becomes disabling.

Those at greatest risk for this injury include:

- Those who have either highly arched or flat feet.
- Those who are overweight.
- Those who have feet that pronate (turn in), causing the arch to collapse too much with each step.
- Those who have tight calf muscles and a tight Achilles tendon (both place extra stress on the fascia).
- Those who do too much too soon. Soccer players who avoid pre-season training are at risk.

What are the symptoms?

A classic symptom is pain in the forward part of the heel. The pain may feel like a bruise from a stone. There may also be pain in the arch of the foot. Pain is often most severe with the first steps after getting out of bed or after prolonged sitting. This may be due to the tearing of scar tissue that begins to form during periods of rest. If you have pain, see a doctor. It is important to know if the problem is plantar fasciitis or something more serious.

How is it treated?

Follow these steps to treat plantar fasciitis:

- **First thing in the morning:** Before getting out of bed, point your toes toward the ceiling and make circles with your feet. This will lightly stretch and warm your calf muscles.
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Use proper footwear. Never go barefoot and avoid shoes without a back. Women should avoid high heels. Wear high-quality soccer shoes. If appropriate, fit your shoes with orthotics (shoe inserts) that lift the heel and support the arch. This helps to shift your weight forward, taking pressure off the heel. A doctor or physical therapist will tell you if you need orthotics.

- **Take medicine for pain.** Use an anti-inflammatory pain medicine, like ibuprofen (Advil) or aspirin, regularly.
- **Ice the painful area for 15 to 20 minutes several times a day.**
- **Reduce your activity level.** Modify your soccer workouts and explore other fitness options that help get you off of your feet.
- **Stretch the fascia.** Put a golf ball under the base of your big toe. Gently roll the foot forward over the ball and back again. Then, move the golf ball to the base of the second toe and repeat. Do this for each toe, using enough pressure to feel a little tenderness.
- **Strengthen the muscles of the foot.** Pick up marbles or golf balls with your toes. Or grab a towel with your toes, pull and release. Repeat three times.
- **Before and after any activity, stretch your calf muscles and Achilles tendon.** Try the stretches below.

Wall stretching:

Lean forward against the wall, keeping one knee straight while you bend the other knee. The painful foot should be farther away from the wall. As you bend forward, you can feel the stretch in your heel cord and the arch of your foot. Keep your heel on the ground. **Hold the stretch for 10 seconds**, relax, straighten up and then **stretch again**.

Seated stretching:

Sit in a chair and place one foot over the opposite knee. Grasp the outer side of the foot and pull up gently. Do this one to three times daily.

Stair stretching:

With one heel hanging over the edge of the step, support your weight on the front of the foot. Press downward with your heel. (Be sure not to over-stretch or force the tendon and tissue.) Do this one to three times daily.

If all else fails, surgery to release the fascia is an option. An orthopedic or foot and ankle surgeon will give you local anesthesia. He or she will then snip away part of the fascia where it is being pulled. You do not have to stay in the hospital overnight. Heel spur surgery is not recommended. It does not solve the problem and is unlikely to relieve your pain.

How can I prevent plantar fasciitis in the future?

One of the best ways prevent plantar fasciitis is to walk regularly. Take full strides to stretch the muscles and other tissues. Try to cover 1-1/2 miles in 15 to 20 minutes, three times a week. Other exercises to try are swimming, pool running and cycling to give your lower body muscles, joints and ligaments a needed break. Be sure to wear shoes that provide proper support throughout the day. When returning to play, do so slowly to avoid irritation.

Minnesota Sports Medicine (MSM) is a network of sports and orthopedic physicians who treat athletes at medical clinics throughout the Twin Cities metro area. To locate a sports medicine physician or for more information about MSM, call 612-273-4800 or visit www.mnsportsmed.org.