

RunSMART Plantar Fasciitis

These are general recommendations for runners and are only appropriate for those who are healthy and cleared to exercise by their doctor.

What is plantar fasciitis and how does the plantar fascia function?

Plantar fasciitis is the most common painful foot condition treated by health care providers, affecting nearly two million Americans each year. It is an inflammatory condition of the foot provoked by excessive wear to the fascia, which supports the arches of the foot, or by biomechanical faults.

The plantar aponeurosis/fascia is made of three bands attaching to the inside heel on the foot and extending toward the toes. When the toes are extended during walking, the fascia is stretched with each step. Inflammation develops when tears occur in the tissue.

What causes plantar fasciitis?

There are numerous issues that cause plantar fasciitis, including:

- overload and overuse from physical activity or exercise. Excessive running, jumping, or changes in level of activity can easily place repetitive or excessive stress on the tissue.
- arthritis.
- tight Achilles tendons or calf muscles.
- weight.
- frequently wearing high heeled shoes, boots or other shoes that lack proper support.
- standing for long periods of time, i.e., at work.
- hormonal changes with pregnancy.
- poor shoe fit or inadequate support or cushioning. While walking or exercising in improper shoes, weight distribution becomes impaired, significantly adding stress to the plantar fascia ligament.



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See other side for symptoms, diagnosis, treatment and alternate activity >

Symptoms of plantar fasciitis

Common symptoms include:

- sudden onset of pain under the heel with weight bearing after a period of no-weight bearing.
- pain with first steps in the morning or after a period of inactivity.
- an altered gait with severe pain.
- pain reduction with increased levels of activity such as walking or running, but pain worsens toward end of activity.
- sharp pain in heel.

Diagnosis of plantar fasciitis

Usually, a diagnosis can be made with a physical exam alone. A review of the runner's history and a screen for alternative causes of pain is considered. Tenderness, flexibility, muscle strength, foot position and special tests by a medical professional will assist in determining this diagnosis.

Treating plantar fasciitis

In most cases, plantar fasciitis does not require surgery or invasive procedures to stop pain and reverse damage. However, every person's body responds to plantar fasciitis treatment differently, and recovery times may vary.

Initial treatment may consist of:

- an ice massage to the area for five minutes. At home, roll a frozen bottle of water back and forth on the foot to assist with inflammation reduction and to relax the fascia.
- rest.
- avoiding potentially exacerbating activity.
- taking a course (five to seven days) of non-steroidal anti-inflammatory drugs.
- wearing orthotics in your shoes to help with arch support and relax the fascia.
- strengthening as indicated per individual; also improving neuromuscular control to foot, ankle and lower leg.
- deep massage to the fascia.
- plantar fascia and calf stretches. Sit on the floor with legs stretched out in front. Loop a towel around the top of the injured foot. Slowly pull the towel toward you, keeping body straight. Hold for 15 to 30 seconds, then relax. Repeat 10 times.
- professional shoe wear assessment to ensure that shoes have proper support.

If home treatments do not resolve the problem, specialty care by a podiatrist or physical therapist may be indicated.

Alternative activity to continue training

Options to maintain training without continued stress to the plantar fascia include swimming, pool running, walking or light jogging on soft surfaces and cycling. Avoid any exercise that places strains onto the plantar fascia; specifically, avoid excessive high impact running or jumping motions.