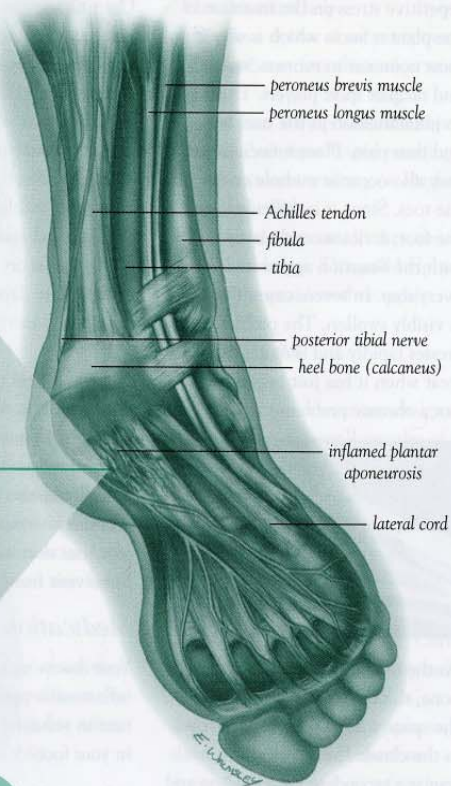


Plantar Fasciitis

Roche Back to Action Series



Injury Description

Plantar fasciitis is a common foot problem in sports participants. It starts as a dull intermittent pain in the heel which may progress to a sharp persistent pain. Classically, it is worse in the morning with the first few steps or at the beginning of sporting activity.

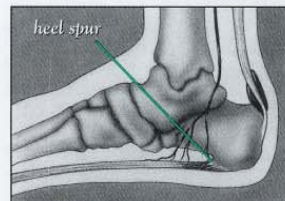
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Helping You Get Back to Action

The plantar fascia is a thick fibrous material on the bottom of the foot. It is attached to the heel bone (calcaneus) and fans forward toward the toes. It is responsible for maintaining the arch of the foot.

The problem usually occurs with repetitive stress on the insertion of the plantar fascia which is why it is most common in runners, walkers and racquet sport players. This leads to inflammation at the heel bone and thus pain. Plantar fascia injury may also occur at midsole or towards the toes. Since it is difficult to rest the foot, a vicious cycle is set up with the situation aggravated with every step. In severe cases, the heel is visibly swollen. The problem progresses rapidly and is much easier to treat when it has just begun and is not a chronic problem.



As the fascia is pulled away from the bone, the body reacts by filling in the space with new bone. This causes the classic "heel spur". This heel spur is a secondary x-ray finding and is usually not the problem, but a result of the problem.

Predisposing Factors

1. Flat pronated feet
2. High arched rigid feet
3. Overuse ("too much, too soon" syndrome)
4. Inappropriate, improper, or worn out shoes
5. Soft terrain (running on sand)

6. Inflexibility of Achilles tendon

7. Increasing age

Treatment

Modified Activity

Use pain as your guide. If your foot is too painful, weight-bearing sports can be temporarily replaced by swimming and/or cycling to maintain cardiovascular fitness. Weight training can be used to maintain leg strength. Often you can maintain your sport at a lower level by decreasing the amount of time doing your sport and/or doing it on alternate days only.

Ice

Icing your heel (using a bag of crushed ice, frozen peas, or an ice pack) for 15 minutes several times a day will reduce the inflammation. You should also ice your heel for 15 minutes after activity. Always protect your skin with a paper/tea towel to prevent frostbite.

Medication

Your doctor may prescribe anti-inflammatory pills. These are important in reducing the inflammation in your foot.

Physiotherapy

The initial objective of physiotherapy is to decrease the inflammation. The therapist will strengthen the small muscles of your feet as well as improve the flexibility of your fascia and Achilles tendon. This will support and put less stress on the weakened, inflamed plantar fascia.

Cortisone

A cortisone injection is usually quite beneficial if the above have not solved the problem. It is a local injection and it is very safe in this area.

...continued on other side

Surgery

Surgery is rarely required for plantar fasciitis or removal of a heel spur.

Sports

Plantar fasciitis can be aggravated by all weight-bearing sports. Repetitive foot landing, such as occurs in running and jogging, will aggravate the problem. When the problem is severe, the best sports are ones which are non weight-bearing (i.e., swimming, cycling). Go back into other sports slowly. If you have a lot of pain either during the activity or the following morning, you're doing too much.

The following adjustments may help the problem.

Heel Pads

A heel pad of felt, sponge or ideally one of the newer shock-absorbing materials can help to absorb the shock as the heel lands and ease the pressure on the plantar fascia. Arch supports or heel cups can also help.

Shoes

It is possible for shoes to cause the problem. You may need different or new shoes. A knowledgeable salesperson can be invaluable.

Orthotics

This is one injury where custom foot orthotics prescribed by your doctor can be very beneficial. The orthotic takes the stress off the plantar fascia insertion and should be worn on a daily basis as well as with your sports until your problem is resolved.

Taping

Your therapist can tape your foot to maintain the arch and relieve some of the plantar fascial tension.

ALWAYS WARM UP WELL
BEFORE YOU PLAY.

Work Tips

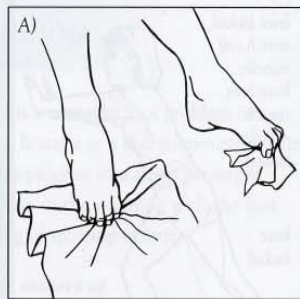
- Wear supportive and shock-absorbing footwear at all times. Soak your feet each night in a warm salt bath.
- Use lamb's wool, moleskin or foam pads on any pressure points. Insoles often help.
- See your doctor as soon as possible with any foot discomfort or injury.
- Vary your work positions and patterns. Avoid prolonged standing and excessive walking on hard or rough surfaces.
- Take some time to do the exercises listed below. This will help you treat the problem thoroughly.

Exercises

The following exercises are designed to strengthen the small muscles of the foot to help support the injured area. If performed regularly and properly, they will help prevent re-injury.

Towel Curls

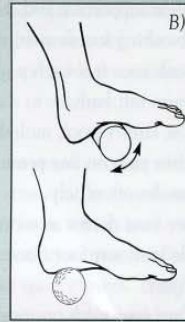
A) Place a towel on the floor. Curl the towel towards you by using only the toes of the injured foot. Resistance can be added by placing a weight on the end of the towel. A variation is to pick up a facial tissue with your toes.



Bottle Roll

B) A good way to work the fascia is a bottle roll. Roll a bottle or rolling pin fairly vigorously under

your arch. Concentrate on really controlling the bottle by almost grabbing it with your arch as you roll it back and forth. As your pain lessens, you can roll a golf ball directly under your heel.



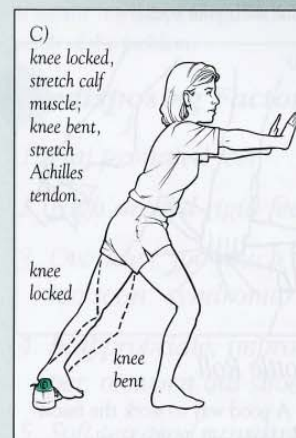
Stretches

Flexibility is an important part of injury treatment and prevention. For stretching to be effective, it must be done on a regular basis. Always stretch when you are warmed up.

It is important to stretch before and after activity. Stretching should not be painful. All stretches should be done in a slow static manner with NO bouncing. Hold stretches for at least 30-60 seconds and repeat several times. For difficult problems a therapist may have to assist you to improve your flexibility.

Wall Stretch

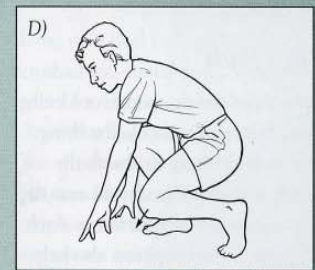
C) Lean against wall with your back knee locked. Place the toe of your sport shoe under your arch to help



maintain your alignment. Press forward until a stretch is felt in your calf muscle. Hold 30-60 seconds, then bend your knee towards the ground with your knee directly over your second toe. You should feel a stretch in your Achilles tendon. Hold 30-60 seconds. Repeat the above sequence several times.

Plantar Fascia Stretch

D) With the toes of your injured foot curled under your leg, slowly lower your knee to the ground. A stretch should be felt down the length of your plantar fascia. Hold 30-60 seconds and repeat several times. The stretch in the fascia can be increased by pushing slowly back through your toes. Discontinue this stretch if there is discomfort in your toes.



Patient information developed for
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