Plantar Fasciitis

Have you ever gotten out of bed and had heel pain that made it difficult for you to get going in the morning. If the answer is yes, chances are you have a condition known as Plantar Fasciitis. Millions of Americans suffer from Plantar Fasciitis each year and many of these people continue to suffer because their condition is not treated properly or they do nothing at all. Plantar Fasciitis is the inflammation of the thin layer of tough tissue that supports the arch of the foot, or Plantar Fascia. Repeated microscopic tears of this lining near the heel generally initiate the pain. Many times people assume that "heel spurs" are the cause of their heel pain. This assumption is not always accurate as often times these tiny outgrowths of bone are not the culprit.

Generally, x-rays or other diagnostic testing are not necessary to diagnose Plantar Fasciitis. Symptoms that indicate PF as the diagnosis include heel pain that is worse upon getting out of bed in the morning, or pain that is at its worst when initiating an activity but improves as the body warms up. The heel pain will sometimes worsen when standing for long periods of time and in severe cases the pain may worsen at the end of the day.

The cause of PF is often a combination of factors. Tightness in the foot and calf, weakness of the foot and ankle, repeated stress on the arch, improper athletic training, and abnormal foot posture are all causes of PF. Shoes that do not fit and overuse problems in which a person attempts to return to their prior level of fitness too quickly can also injure the plantar fascia. Those at increased risk of developing PF are people with flat feet, low arches, or extremely high arches.

Here are some helpful hints in preventing and treating Plantar Fasciitis:

1. Stretch the calves on a regular basis
2. Strengthen the foot and ankle. (Towel curl marble pick-ups)
3. Buy shoes that fit! Good shoes should have good toe box room and arch support.
4. Runners should change their should change their shoes on a regular basis as running shoes lose their shock absorption capabilities quickly
5. Custom orthotics are often necessary as shoes generally do not have adequate arch support for someone with this condition. (Superfeet AD—We here at 1st Choice Physical Therapy offer Superfeet custom fitted orthotics. We personally will fit you with the orthotics that suit your needs.
6. Don't put off seeking professional treatment thinking the symptoms will go away. Complete resolution may take 6-18 months if treatment is delayed. See your local MD or physical therapist if symptoms do not resolve in a week or less.

Ankle Exercises

Why Use Balance Exercises?

Using balance exercises with improve overall strength and stability of the joints. Within the joint are a series of nerve cells collectively known as proprioceptors. These allow your the nervous system to help you maintain balance during various activities and forms of movement. When you injure these cells such as in a sprain, you must reprogram them to recognize the position of the joint in space. Proprioception is the bodies ability to know where your body or body part is in space ("position sense"). For instance, if you close your eyes and move your arm around, you stimulate the proprioceptors in the shoulder and your brain knows where your arm is in space, even though you can't see it.

What Happens When Proprioceptors are Damaged?

If your these proprioceptive cells were damaged, they would not be able to send the proper signal to the brain. It would them be impossible to know if your arm was in front of you or behind you—without looking. The Longevity of use of the shoulder is in jeopardy if the proprioceptors are not re-trained or reprogramed properly. Permanent proprioceptive loss is possible and shows up as "weak ankles" or joints that are continuously re-injured. This functional instability can impair performance and increase the risk of reinjury.

Home Balance Exercises for The Lower Extremity

1. **Stretches For the Ankle**

- **Calf Stretch:**
  Stand arm's length from a wall and lean forward on your hands. You can increase the stretch by placing a rolled up towel under the front of your foot. Keep your heels flat on the floor. Stretch forward until you feel the stretch in the back of the knee. Hold for 30 seconds. Repeat 3 times 2-3 times per day.
- Bend both knees (like in a skiing position) and then lean toward the wall bending at the ankles. You can increase the stretch by placing a rolled up towel under the front of your foot. Hold for 30 seconds. Repeat 3 times 2-3 times per day.

2. **Passive Exercises for the Ankle**

- **Ankle Circles:**
  Sit on the floor or in a chair. Remove shoes and socks. Moving only your ankle, draw circles. Repeat 10 to 20 times.
- **Drawing The Alphabet:** Sit on the floor or in a chair. Remove shoes and socks. Moving only your ankle, draw the alphabet on the floor. Do the entire alphabet 1-2 times. It is key to actually think of the letter being made. This is the reprograming of the proprioceptors.

3. **Balance Exercises To Stabilize the Ankle**

Physical Therapists have used balance or "wobble" board training incorporating proprioceptive exercise into their rehabilitation programs. These exercises are specifically designed to increase activation of the nerve cells and therefore affect the central nervous system pathway to the brain, causing heightened function. .

- **Balance/Wobble Boards**
  The use of balance board is the most common form of proprioceptive training, and they are easy to use. They are used to rehabilitate ankle and knee injuries. The balance boards offer improved joint stability and reduced re-injury rates. The reason that the balance boards work is because you are re-training the nerve cells to recognize the position of the ankle or knee. Using the balance boards over and over again grind out new neurological pathways from the injured joint to the brain. The benefits you get from using these types of exercises can give you the best chances of remaining injury free. You can minimize the chances of chronic long term injury.

  A wobble board is a circular or oval piece of wood place on top of a round ball. The wood should be about three-quarters of an inch thick and two feet around. The ball should be about the size of a softball. Set the wobble board on the ball near a counter or a table. Hold onto the counter and balance on the board with your feet about shoulder width apart. Begin moving, at first very slowly: see-saw and pivot as feels good. Go very slowly and safely at first building to more aggressive activity in a few weeks.

- **Postural challenge** -can be applied to the individual by an exercise partner. The partner challenges the stability while standing on one leg. Gently touching the person in one direction and then the other. They will have to react and use their proprioceptors to respond to the position change. This can be progressed by standing on a folded up pillow causing increased difficulty in balance.

- **Mini Trampoline Exercises** -Stand on one foot working towards two minutes without falling, then switch to the other ankle. When you can stand for two minutes without falling add a new twist by tossing a volleyball sized ball into the air and catching it while standing on one foot. This helps your balance or proprioception react more quickly to the changes in body position due to throwing and catching the ball. Perform this once daily for 60 days. You can usually find mini trampolines at K-Mart, Target or Sears for under $20.00.

4. **Resistive Exercises to Strengthen the Ankle**

Ankle Eversion: place the loop of the band around one foot. Leveraging the rest of the band around the other foot to add resistance with outward ankle movements. Perform a motion of out and up making a crescent movement to the outside of each ankle. Hold at the end range for 8 seconds and slowly return to starting position.

Perform 3 sets of 10-15 repititions.

- **Ankle Inversion:** place the loop of the band around one foot. Leveraging the rest of the band around the edge of a table to add resistance with inward ankle movements. Perform a motion of down and in making a crescent movement to the inside of each ankle. Hold at the end range for 8 seconds and slowly return to starting position. Perform 3 sets of 10-15 repititions.

- **Heel Raises**: Stand with the balls of your feet and your toes on a thick book (i.e. phone book or off of a sturdy staircase step). Hold onto a support. Lower your heels to the floor slowly. Raise yourself slowly as far as you can. Hold for 8 seconds. Perform 3 sets of 15.

- **Toe Raises:** While standing, lift your toes off the ground. Hold onto a support. Lower your toes to the floor slowly. Raise your toes slowly as far as you can. Hold for 8 seconds. Perform 3 sets of 15. This can be performed in conjunction with heel raises in an alternating format. Be sure no to rock. This is a slow and controlled exercise.

- **Toe Scrunch:** Place a towel on the floor near your chair. Sit down, placing the toes of one foot on the towel. Use your toes to scrunch up the cloth. Keep your heels flat on the floor. Perform at 1 minute increments 2-3 times. This is great for the arch of your foot for strength and support.

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Author: Wade M. Rinehart, B.Sc., MPT
Master Physical Therapist
Licensed Practicing Physical Therapist