

**PATIENT
EDUCATION**

Plantar Fasciitis, Achilles Tendinitis and Metatarsalgia

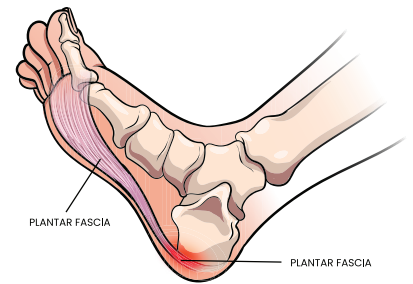
Understanding Your Pain

Tight Calf Muscles

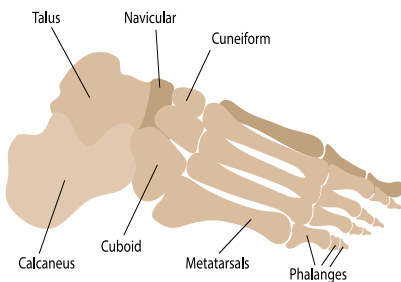
Tight calf muscles can result in pain and problems downstream in the foot and ankle without you realizing that your calf muscles are the culprit.

Plantar Fasciitis

The plantar fascia is a large ligament that runs on the bottom of your foot from your heel bone to your toes. When your calf muscles are tight, it allows this ligament to tighten. Then when you take a step, there is increased tension through the plantar fascia ligament. The increased tension across the plantar fascia ligament can cause inflammation and tiny micro-tears in the tissue, which result in pain and swelling.



Ball Of Foot Pain (Metatarsalgia)



The metatarsals are long bones that connect your toes to the middle part of your foot. With a normal gait, you put weight down on your heel and roll through to your toes. With tight calf muscles, you don't distribute your weight evenly across the bottom of your foot. You put increased pressure on the front part of your foot and this causes stress (and pain) at the end of the metatarsal bones under the ball of your foot.

This same increase in pressure can result in calluses under the ball of your foot also.

Achilles Tendinitis

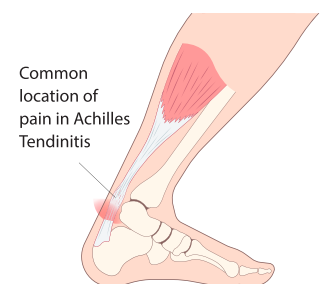
The Achilles tendon is a joining of two large muscles in your calf, and it comes down the back of your leg and inserts onto the back of your heel bone. If your calf muscles are tight, walking can put increased tension across the tendon in the area a few centimeters above the heel bone (the watershed area) and at the actual insertion of the tendon onto the heel bone.

The increased tension across the Achilles tendon can cause:

- Inflammation
- Tiny micro-tears in the tissue

Both of these will result in pain and swelling.

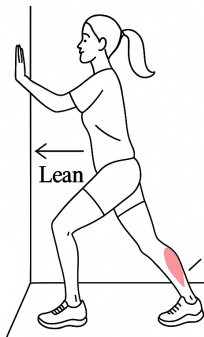
A consistent calf stretching program is an important part of treatment. Controlled exercises where the Achilles tendon is being lengthened while the calf muscle contracts have been shown to be very helpful in improving the symptoms associated with Achilles Tendinitis.



Stretches You Can Use

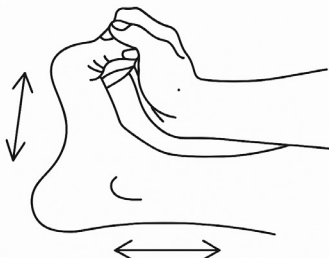
Standing Calf Stretch

1. Stand placing hands at eye level on wall. Turn involved back leg slightly inward as if pigeon-toed. Back leg should have straight knee and front leg bent knee. Lean forward, keeping backleg heel on the ground, so that you feel stretch in calf muscle of back leg.
2. Hold for 45 seconds, two to three times. Repeat four to six times per day.



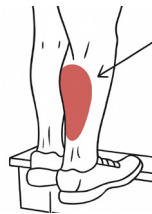
Toe Extension

1. Sit with involved leg crossed over uninvolvement leg. Grasp toes with one hand and bend toes & ankle upwards to stretch arch and calf muscle. With other hand, perform deep massage along arch of your foot.
2. Hold 10 seconds. Repeat for two-three minutes. Repeat two-4 sessions per day.



Calf Stretch On A Step

1. Stand with uninvolvement foot flat on a step. Place involved ball of foot on the edge of the step or stair.
2. Gently let heel lower on involved leg to feel a stretch in your calf and plantar fascia.
3. Hold for 45 seconds, two-three times. Repeat four-six times per day.



Towel Stretch

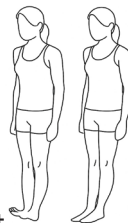
Effective at reducing morning pain if done before getting out of bed.

1. Sit with involved leg straight out in front of you. Place towel around foot and gently pull toward you, feeling calf muscle stretch.
2. Hold for 45 seconds, two-three times. Repeat four-six times per day.



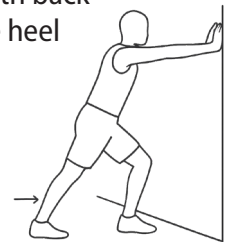
Toe Raises*

1. Stand in normal weight-bearing position. Rock back on your heels so that your toes come off the ground.
2. Hold this position for five seconds. Repeat exercise 10 times. Do three sets of 10 per day.



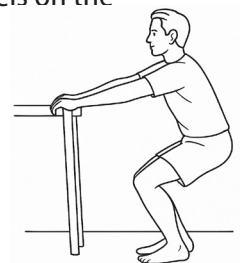
Standing Soleus Stretch

1. Stand placing hands at chest level on wall. With both knees slightly bent and involved leg back, gently lean into wall until you feel stretch in lower calf. Slightly toe in with back leg and keep the heel on the ground.
2. Hold for 45 seconds, two-three times. Repeat four-six times per day.



Leaning Squat Stretch

1. Lean forward onto countertop, spreading feet apart with one foot in front of other. Flex knees and squat down, keeping your heels on the ground as long as possible. Your heel cords and arches will stretch.
2. Hold for 10 seconds, relax and straighten up. Repeat 20 times.



Heel Raises*:

1. Standing balance yourself on both feet behind chair.
2. Rise on toes, hold for five secs. Repeat 10 times. Do three sets of 10.

