



## Achilles Tendon Stretching

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Achilles tendon stretching is important for a wide variety of people. We feel that your specific problem is due to, or aggravated by, calf and Achilles tendon tightness or shortening. Actually, this particular stretch would be good for everyone to do, with or without foot problems.

There are a variety of treatments for the problems that tight Achilles tendons may cause, a few of which you may have already tried. These would include physical therapy, rest, and non-steroidal anti-inflammatory medicines. While these treatments may help the symptoms, none correct the actual cause at hand and, therefore, are usually not long-lasting.

We believe that a major cause of many foot and ankle problems is due in part to tight calves and Achilles tendons. The calf muscle and Achilles tendon are a continuous structure on the back of the leg. As people age, tightness (contracture) is almost inevitable. There are several reasons this occurs, including:

1. Decreased daily activity. As we become more sedentary, we have less daily stretch of the calf muscles and Achilles tendons.
2. Age-related decrease in the elasticity of the Achilles tendon.
3. Higher-heeled shoes, which put the Achilles tendon in a shortened position.

Our treatment is aimed at solving the primary problem of an Achilles tendon contracture with calf and Achilles tendon stretching. In turn we hope your problem, which is due to or aggravated by Achilles contractures, will improve or resolve completely.

Achilles tendon stretching is the treatment of choice and will generally obtain satisfactory relief in more than 90% of the patients. Some patients may require as little as three weeks to see improvement while others may need upwards of 5-6 months to break through a long-standing Achilles contracture. The heel-stretching protocol is outlined below in detail.

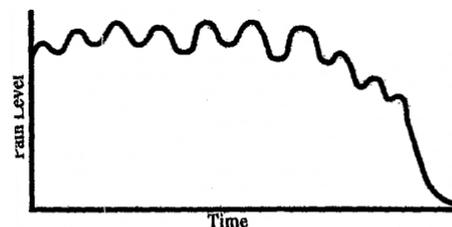
In the beginning, the amount you stretch will vary due to the pain or soreness of the calf muscles, heels, or other problems we are treating. This stretch will be done with both feet, therefore you may experience increased new pain in both heels, but this new pain will resolve as well. This stretching should be done three times per day; building up to three minutes of hang time for each session as detailed below. For the best consistency, do the stretching sessions like “sets” or in a cluster; do the first stretch session and take a break for 1-2 minutes then the next stretch session and so on. That way you are done for the day are less likely to miss sessions.

First, you will need a step to stand on with a wall for support. We've found that an aerobics step works well as it is about 8 inches tall and has a rounded edge. If you perform the stretching on stairs, please use the bottom stair and hold onto the railing for support. With your back against the wall and your knees straight, place the balls of your feet on the step (it is best to wear tennis shoes or rubber-soled shoes in order to gain better traction to secure your feet) and slowly relax your ankles, letting your heels go downward (see figure). It is OK for your toes to angle upward; you should not be gripping the step with your toes. If you are in the correct position you should feel a pulling or tightness in your upper calf muscle, just below the knee.

This should be tolerated until slight pain is felt. Please keep track of the amount of hang time until this happens, i.e. 30 seconds, 1 minute, etc., which will be your sign to stop for that session.

Do three sessions per day, gradually increasing the amount of hang time. You may need to stay at the same amount of hang time for a few days. As you become accustomed to that particular amount of hang time you will need to increase it gradually in the same manner until you reach the maximum of three minutes each session. This is a gradual process and although you may want to get right to three minutes of hang time it is not advisable to do so as you may cause yourself more pain. Be patient!

The majority of patients will experience new pain somewhere between 2-6 weeks after beginning the stretching program. This is definitely expected and is usually a minor increase in pain and should not be excruciating. If it becomes severe, please contact my office. If you continue the stretching program and work through this pain, it typically begins to resolve within a few weeks. As you progress with the stretching program, your response will have an up-and-down course (you will have some good days and bad days)—this is expected and normal. While not all patients' symptoms are relieved completely, usually a satisfactory result is obtained within one to four months. Once you have obtained satisfactory relief, we recommend that the stretching is continued forever.



**Typical pattern of recovery**

**Advancement schedule**

- Week I - 15 seconds 3 times/day
- Week II - 30 seconds 3 times/day
- Week III - 1 minute 3 times/day
- Week IV - 1 ½ minutes 3 times/day
- Week V - 2 minutes 3 times/day
- Week VI - 2 ½ minutes 3 times/day
- Week VII 3 minutes 3 times/day  
for life, never stop

## HEEL CORD STRETCHING - HOME PROGRAM

### 1. PROLONGED CALF (GASTROCNEMIUS) STRETCHING

Place the balls of your feet on the edge of a stair (or top of one edge, i.e. phonebook). If support is needed to maintain balance, place hands on wall (or on handrails).

Maintain both legs in straightened position, and allow the heels to lower towards the ground.

Begin by holding this position for 1 minute and gradually increase to 5 minutes. DO NOT BOUNCE and keep body in straight line.



### 2. PROLONGED SOLEUS AND POST TIBIALIS MUSCLE STRETCHING

Place yourself in the position of the diagram to the left. However, this time both knees should remain bent as you allow your heels to lower to the ground.

Begin by holding the position for 1 minute; gradually increase to 5 minutes.

DO NOT BOUNCE, and keep body in straight line.

### 3. PROGRESSION OF PROLONGED STRETCHING

To progress above exercises, maintain one foot forward on step while other foot is being stretched (ball of one foot on the edge). To increase force of stretching on one leg, place more of your bodyweight on this leg. Hold 1 minute and gradually increase to 5 minutes.