# Achilles Tendinitis / Tendinosus / Enthesopathy

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Achilles tendon problems are not uncommon in patients over 35 years old and in athletes. The tendon may be affected in a zone between 3 and 6 centimeters from its attachment to the heel (Achilles tendinitis or Achilles tendinosis), or it may be affected right where it attaches to the heel (Achilles enthesopathy).

Patients with these Achilles disorders will often complain of aching, burning, or tearing pains along the Achilles or at its attachment to the heel. The pain can range from mild to very severe and disabling. The pain is most noticeable in two circumstances: 1) with the first steps after sleeping or sitting for a while (called post-static pain), and 2) with exercise or standing/walking for a period of time.

Although these Achilles disorders can occur with an isolated injury, they can also be caused by a gradually progressive overload of the Achilles tendon or its attachment to bone. The cause of the chronic overload is usually a combination of factors that can put excess stress on the tendon. These factors can include: overweight, tight calf muscle, prolonged time standing or walking on the feet, excessively stiff or flat footwear, and sports overload.

The result of the injury is an inflammation of the Achilles tendon at the location of the injury. The injury and inflammation often worsen by continued unprotected activity. In some cases, a degeneration of the tendon can occur at the site of the injured tendon, resulting in a tender lump in the tendon (tendinosis). In other cases where the Achilles attachment to bone is involved, a heel spur might be observed where the tendon anchors to bone. In many cases, the tendon may be more predisposed to progressing on to a complete rupture.

Treatment of Achilles tendon problems must be comprehensive and continuous until the pain has been resolved at least 3 months. In other words, multiple simultaneous treatments work more effectively than trying one thing, then trying another. The condition takes time to resolve – sometimes 3-12 months, so perseverance with the treatments is a must. The rule of thumb applied here is that one must continue the treatments until the pain has been resolved for 3 months.

**What can I do for myself?**

You should use as many of these treatments as possible concurrently:

- q Wear shoes with a heel ½" to 1" higher than the ball of the forefoot and are somewhat flexible through the ball of the foot.
- q Add a heel lift in your shoe. (You may also use arch support inserts or orthoses, such as Superfeet orthotics - which can be purchased at The Depot Store next to the Department of Foot and Ankle Surgery.)
- q Avoid standing or walking barefoot. Avoid flat footwear like slippers or sandals. Avoid stiff shoes.
- q Perform calf stretching exercises for 30-60 seconds on each leg at least two times per day. (Stand an arm's length away from the wall, facing the wall. Lean into the wall, stepping forward with one leg, leaving the other leg planted back. The leg remaining back is the one being stretched. The leg being stretched should have the knee straight (locked) and the toes pointed straight at the wall. Stretch forward until tightness is felt in the calf. Hold this position without bouncing for a count of 30-60 seconds. Repeat the stretch for the opposite leg.)
- q Perform eccentric calf rehab exercises. (Stand with the ball of your foot on a stair and your heel hanging off. Balance on one foot at a time in this fashion while holding onto the rail. Slowly lower your heel as low as it will drop down, then slowly raise your heel up as high as you can lift it. Repeat this exercise slowly for several repetitions. Perform this every other day, gradually increasing the number of repetitions over time as tolerated.)
- q Lose weight.
- q Modify your activities. (Decrease the time that you stand, walk, or engage in exercise that put a load your feet. Convert impact exercise to non-impact exercise –elliptical trainer exercise, swimming, and pool running are acceptable alternatives.)
- q Use a night splint each night while you sleep. (This brace keeps your Achilles tendon stretched while you sleep by holding your foot at 90 degrees to your leg. You can purchase a Dorsiwedge night splint at the The Depot Store next to the Department of Foot and Ankle Surgery.)
- q Use ice on the painful area for 15-20 minutes, at least 2-3 times per day. (Option A - Fill a styrofoam or paper cup with water and freeze it. Peel back the leading edge of the cup before application. Massage the affected area for 15-20 minutes. Option B –Rest the affected area on an ice pack for 15-20 minutes. CAUTION: AVOID USING ICE WITH CIRCULATION OR SENSATION PROBLEMS.)
- q Use an oral anti-inflammatory medication. (We recommend over-the-counter ibuprofen. Take three 200mg tablets, three times per day with food – breakfast, lunch, and dinner. To obtain the proper anti-inflammatory effect, you must maintain this dosing pattern for at least 10 days. Discontinue the medication if any side effects are noted, including, but not limited to: stomach upset, rash, swelling, or change in stool color. IF YOU TAKE ANY OF THE FOLLOWING MEDICATIONS, DO NOT TAKE IBUPROFEN: COUMADIN, PLAVIX, OR OTHER PRESCRIPTION OR OVER-THE-COUNTER ORAL ANTI-INFLAMMATORY MEDIACTIONS. IF YOU HAVE ANY OF THE FOLLOWING HEALTH CONDITIONS, DO NOT TAKE IBUPROFEN: KIDNEY DISEASE OR IMPAIRMENT, STOMACH OR DUODENAL ULCER, DIABETES MELLITUS, BLEEDING DISORDER.)
- q See your doctor when you have failed to respond to the above regimen after three months of application.

**What can my doctor add?**

- q Prescribe physical therapy. (Ultrasound and interferential electric current therapy can be useful methods of reducing inflammation.)
- q Teach you how to tape your Achilles tendon.
- q Refer you for custom-made foot orthotics. (Custom foot orthoses are not a covered benefit of the Kaiser Health Plan. However, custom foot orthoses are available at the Department of Foot and Ankle Surgery on a fee for service basis.)
- q Put you in a cast. (A cast is applied from below the knee to the toes typically for 6 or more weeks. The patient is encouraged to use crutches and not put weight on the foot while the cast is on.)
- q Perform surgery. (There are a variety of surgical procedures that may be applicable in the surgical management of your problem. Although the natures of these procedures differ, there are some generalizations that can be made about surgery for your problem: The anesthesia is usually general or spinal. A below-knee cast is utilized for 6 or more weeks. Weight bearing is usually not allowed for 6 or more weeks. Recovery takes 4-12 months. The success rate is about 70%. About 25% are better, but still have some problems. About 5% are no better or worse. Risks include, but are not limited to: infection, nerve injury or entrapment, prolonged recovery, incomplete relief of pain, no relief of pain, worsened pain, recurrent pain, calf atrophy or weakness, limping, and hammertoe development.)