# **INJURY INFORMATION, PREVENTION, & TREATMENT**



# **ACHILLES TENDONITIS**

## **DESCRIPTION:**

Inflammation of the tendon that connects the two major calf muscles, the gastrocnemius and soleus, to the back of the heel bone. During running, the Achilles tendon can receive tensile loads over eight times the body weight. With too much stress, the tendon tightens and is forced to overwork. This causes it to become inflamed and irritated (tendonitis), and, over time, this repetitive stress can lead to degenerative changes at the tissue level. These changes will produce a covering of scar tissue, which is less flexible than the tendon. If ignored, degenerative changes may lead to a rupture of the Achilles tendon.

#### **SIGNS AND SYMPTOMS:**

- Dull or sharp pain anywhere along the back of the tendon, but usually close to the heel. This localized pain is usually associated with decreased motion, swelling, and weakness during activity.
- Redness or heat over the painful area may be felt along with a nodule (lumpy build-up of scar tissue) that can be felt on the tendon.
- A cracking or creaking sensation may also be noted with ankle movement.

#### CAUSES:

- This is typically an overuse injury that is caused by tight or fatigued calf muscles.
- Poor stretching, rapidly increasing distance, over-training, excessive hill running or speed work all of which stress the Achilles more than other types of running.
- Pain may also cause people to change their mechanics, possibly by taking shorter steps, which also feeds into the problem.
- Overpronation (excessively flat feet) can cause a "whipping" of the tendon from heel strike to push off, which can cause excessive irritation.
- Inadequate footwear can be a significant problem. It is very important to be fit with the correct shoe for your body weight, foot type, and foot function.

## TREATMENT:

- The first thing to do is rest. Stop running for several days or weeks depending on the pain level. Runners typically do not want to hear this, but this can lead to something more serious if ignored (rupture).
- Ice pack 15 to 20 minutes several times a day, or ice cup massage 6 to 8 minutes over the affected area. Try to ice after activities.
- Use a heel lift for the first two-three weeks but not longer since this can further encourage shortening of the calf muscle.
- Anti-inflammatory medication like Ibuprofen or Naproxen.

## TREATMENT (CONT'D):

- Gentle pain free stretching of the calf muscles, (longer holds of 30 seconds to minute) with the knee bent and with the knee straight.
- When pain free, strengthening of the calf muscles may help prevent recurrence.

### IF CONSERVATIVE TREATMENT FAILS:

Consult a medical professional – (possibilities include: Physical Therapist, General Practitioner, Orthopaedic Physician).

- Bracing may be needed for immobilization.
- Your physician may want to order physical therapy and a stronger prescription anti-inflammatory.
- A biomechanical evaluation and a custom foot orthotic may be necessary.



#### PREVENTION:

- Stretching of the gastrocnemius (keep knee straight) and soleus (keep knee bent) muscles. Hold each stretch for 30 seconds to a minute, repeat stretches 5-6 times.
- Remember to stretch well before and after running.
  Strengthening of foot and calf muscles (eg, heel raises),
  proper shoes, and orthotics to correct biomechanical
  problems, will all be helpful.
- A sensible gradually progressed training program with incorporated rest days is very important.
- Finally, avoid too much excessive hill training and speed work. Listen to your body!!

