

# Achilles Tendonitis

(Non-insertional Achilles Tendonitis)

## What is Achilles Tendonitis?

- The Achilles tendon is the largest tendon in the body.
- Walking and running create large repetitive forces (>3x body weight) that are transmitted by the Achilles tendon with each step
- Repetitive overloading of the Achilles tendon creates microscopic injury to the tendon that can lead to tendonitis
- When tendonitis develops pain and inflammation of the tendon can occur
- Irritation to the lining that surrounds the tendon may also cause symptoms

## Symptoms of Achilles Tendonitis

- Pain and swelling in the tendon are the main symptoms
- The primary area of discomfort is usually in the thick portion of the Achilles tendon, rather than where it attaches to the heel bone (Figure 1)
- An increase in activity level prior to the onset of Achilles tendonitis symptoms is often reported (ex. new sport, or new training program)
- Achilles tendonitis can occur at any age, but is more common with patients in their 30s, 40s, and 50s as tendons and muscles stiffen with age
- A tight/stiff calf muscles, or the use of a shoe with a negative heel (more stretch on the Achilles) will tend to lead to the onset of symptoms.
- The use of certain medications (ex. fluoroquinolone antibiotics) increase the likelihood of developing Achilles tendonitis

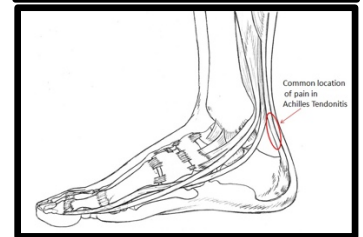
## Treatment of Achilles Tendonitis

Achilles tendinitis can be treated without surgery in the VAST majority of cases. Conservative treatment can be viewed as having three phases:

- Phase 1: Settle the pain with rest and immobilization (typically 1-3 weeks).
- Phase 2: Gradually increase activity levels back to normal (~4-10 weeks)
- Phase 3: Maintenance phase (indefinitely)

Treatment elements for Achilles tendonitis include:

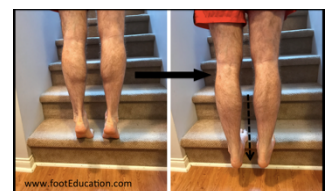
- Relative rest to protect the tendon
  - Activity modification
  - Cast boot (Walker boot) or cast for severe symptoms (Phase 1)
- Heel lift to help off-load the tendon
- Comfort shoe (stiff sole, rocker contour)
- Daily calf stretching with the knee straight (Figure 2)
- Physical therapy or coordinated rehabilitation program (3-12 weeks)
  - Stretching the lower extremity muscles, especially the calf muscle
  - Strengthening lower extremity muscles
    - Eccentric loading exercises added gradually (Figure 3)
  - Soft-tissue mobilization and massage
- A gradual increase in activities (back off activities if symptoms recur)
- Weight Loss if patient is overweight
- Anti-inflammatory medication (NSAIDs) --used judiciously



**Figure 1:** Location of pain and swelling in Achilles Tendonitis



**Figure 2:** Calf stretching (knee straight)



**Figure 3:** Eccentric Calf Stretching