



# Achilles Tendinopathy

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## What is the Achilles tendon ?

A tendon attaches muscles to bone. Your Achilles tendon is the biggest and strongest tendon in the body. It is found at the back of lower leg, just above the heel bone. It attaches your calf two muscle to the heel bone and help you go up onto tiptoes.

## What is the Achilles tendinopathy?

Degeneration (failed healing) Achilles tendon due to continuous overload without appropriate recovery.

## How common is Achilles tendinopathy ?

Achilles tendinopathy is relatively common soft tissue injury that can affect both athlete and non-athletes.

It is more common in people who take part in sports that mainly involve running such as football ,tennis and volleyball.



## What are risk factors for developing Achilles tendinopathy?

- 1. Age :** Most common from the age of 30 and above.
- 2. Gender:** It is more common in men .
- 3. Weight:** Higher body weight are at risk developing Achilles tendinopathy .

**4. Diabetes:** Increase risk of developing achillies tendinopathy.

**5.Tight and \or weak calf muscles.**

**6. Poor core stability around the hip \knee.**

**7. Common training errors.**

**8.Old or poor quality footwear.**

**9.Stiff joints in foot.**

**10.Steroid and fluoroquinolones.**

## Common symptoms associated with Achilles Tendinopathy:

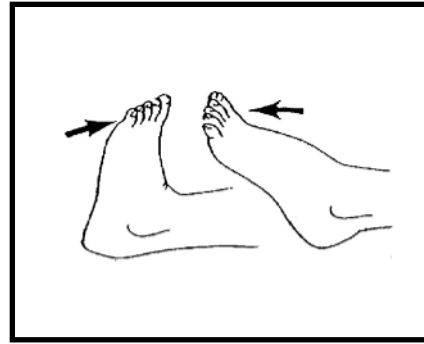
- ◆ Localized pain & tenderness over Achilles tendon.
- ◆ Swelling of the Achilles tendon
- ◆ Reduce in strength or performance
- ◆ Stiffness in the morning or after prolonged sitting
- ◆ Variable pain:
  - ⇒ pain settle during exercise or
  - ⇒ sever pain which stop them from doing their sport

## Physiotherapy Management :

- Range Of Motion & Mobilization Exercises
- Range of Motion & Stretching Exercises
- Eccentric Exercises Phase 1
  - (week 1 to 2 or longer if needed).
- Eccentric Exercises Phase 2
  - (week 2 to 5 or longer if needed).
- Eccentric Exercises Phase 3
  - (week 3 to 12 or longer if needed).

# Range Of Motion & Mobilization Exercises

## 1. Ankle pump



Move your foot up and down

**3 repetitions\day**

## 2.Calf Self-Mobilization Using a Massage Tool

- Use a massage tool such as : the Stick Self Roller Massager
- If this is painful, be sure to not exceed a mild to moderate amount of pain.
- Roll out the entire calf area , move slowly and spend extra time on the more painful areas.
- **Perform for 1-2 minutes per calf.**



## 3. Calf Mobilization Using the Foam Roller

- Place the involved calf/leg on the foam roller.
- Use your hands to lift your buttocks in the air.
- Roll your calf back and forth on the foam roll.
- To increase the pressure, place your opposite leg on top of the involved leg as you roll (as shown).



## 4. Plantar Fascia Mobilization using a Ball

- Tightness in the foot can cause altered mechanics in the ankle and leg.
- This area is often restricted in cases of Achilles tendinitis.
- Use a tennis, lacrosse or golf ball to mobilize the plantar fascia.
- The amount of pressure should not exceed a moderate amount of pain.
- Roll the ball back and forth on the bottom of your foot.
- Move slowly and spend extra time on the more painful areas. Be sure to mobilize the entire foot.
- **Perform for 2-3 minutes per foot.**



# Range of Motion & Stretching Exercises

## 1. Foot and Ankle Stretch with a Strap

- Place a strap (or belt) around the bottom of your foot.
- Pull your toes, foot, and ankle upward toward your shin until you feel a stretch in the bottom of your foot and/or your calf muscles.
- This stretch is best performed barefoot, but it can be performed with shoes on.
- **Perform 1-2 minutes on each leg, 2 or 3 times a day.**



## 2. Calf Stretch – Gastrocnemius Muscle

- While standing and leaning against a wall or counter, place one foot back behind you and bend the front knee until a gentle stretch is felt on the back of the lower leg. Maintain a good upright posture.
- Your back knee should be straight the entire time with your heel on the ground.
- **Hold for 30 seconds, and 3 repetitions per side.**



## 3. Calf Stretch – Soleus Muscle

- While standing and leaning against a wall or counter, place one foot back behind you and bend the front knee until a gentle stretch is felt on the back of the lower leg. Maintain a good upright posture.
- Your back knee should be bent the entire time with your heel on the ground.
- **Hold for 30 seconds, and 3 repetitions per side.**



## 4. Calf Stretch – Soleus & Achilles

- This exercise can be a little more aggressive and should be performed with caution initially.
- While standing, place your toes and the ball of your foot up against a wall or stair.
- Gently lean forward until you feel a stretch. You can try two different versions:
  - with a straight knee (as shown) or
  - gently bending your knee.
- Maintain a proper upright posture.
- Your heel remains on the ground.
- **Hold for 30 seconds, and 3 repetitions per side.**



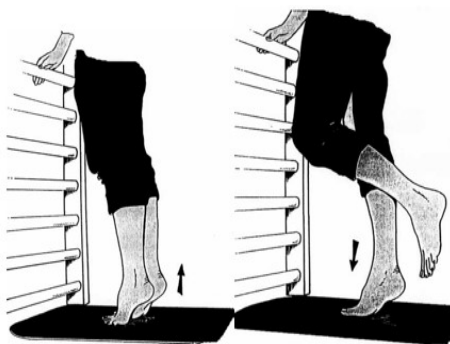
**Eccentric Exercises Phase 1 ( week 1 to 2 or longer if needed)**



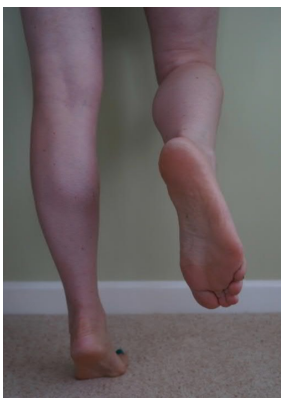
**Sitting toe raise**



**Two-legged toe-raise standing on the floor**



**Eccentric toe-raise standing on the floor**



**One -legged toe raise standing on the floor**

**Eccentric Exercises Phase 2 ( week 2 to 5 or longer if needed)**



**Sitting toe raise**



**Quick rebounding toe raise**



**Two-legged toe -raise standing on a step**



**Eccentric toe-raise standing on a step**



**One legged toe raise standing on a step**

**Eccentric Exercises Phase 3 ( week 3 to 12 or longer if needed)**



**One legged toe raise standing on a step (with weight )**



**Eccentric toe -raise standing on a step (with weight )**