

# Achilles Tendinopathy



## What is It?

Achilles tendinopathy is a term that encompasses both inflammation (**tendonitis**) and degeneration (**tendinosis**) of the thick tendon that connects the calf muscle to the heel.

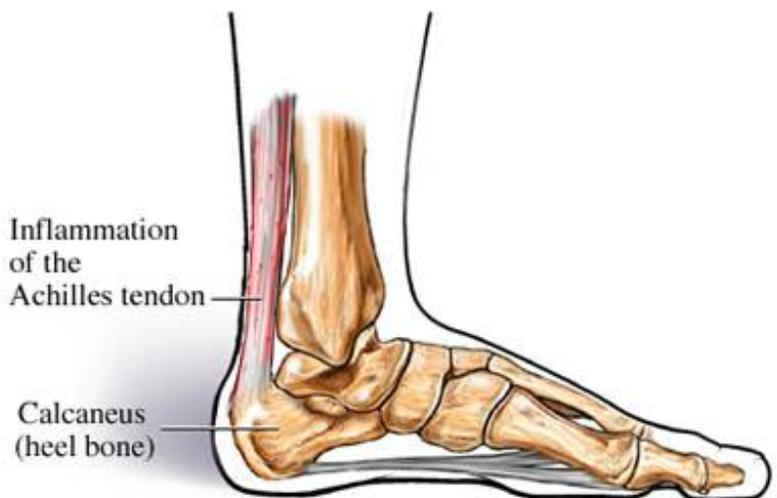
## What Causes this?

There are several contributing factors: Direct trauma. Repetitive loading of the tendon. Change in surface and gradient in which exercise is performed. Poor foot posture due to abnormal rotation of the foot and leg (**pronation**), which causes the arch of the foot to flatten and the leg to twist more than normal. Muscle weakness and/ or imbalance, reduced flexibility and joint stiffness. Incorrect or worn-out footwear.

## What are the signs & symptoms?

**Main Symptoms** - Pain at the back of the heel. Swelling may be present if the Achilles tendon is inflamed, or there may be some thickening and tightness of the tendon. Pain when standing on tip-toes. Pain may be present following all activities (including weight-bearing) or just strenuous activities.

**Other possible symptoms** – Pain may be worse when the foot is first put on the floor in the morning, but eases after a few steps.



## What will physiotherapy consist of?

If left untreated injuries to the Achilles tendon can become chronic, leading to degeneration. This will impair the ability of the ankle during daily activities, such as walking, work and sport. Physiotherapy may include:

**Massage** encompasses a variety of techniques and is given with sufficient pressure through the superficial tissue to reach the deep lying structures. It is used to increase blood flow, decrease swelling, reduce muscle spasm and promote normal tissue repair.

**Deep friction** is an aggressive massage technique. It is applied across the tissue fibres. Pressure is given as deeply as possible. This technique is initially painful but can cause a numbing effect. It can be used to break down scar tissue, restore normal movement and prepare the injured structure for mobilisation or manipulation.

**Mobilisation** is a manual technique where the joint and soft tissues are gently moved by the physiotherapist to restore normal range, lubricate joint surfaces, and relieve pain.

**Ultrasonic Therapy** transmits sound waves through the tissues stimulating the body's chemical reactions and therefore healing process, just as shaking a test tube in the laboratory speeds up a chemical reaction. It reduces tissue spasm, accelerates the healing process and results in pain relief.

**Interferential Therapy** introduces a small electrical current into the tissues and can be used at varying frequencies for differing treatment effects. E.g. pain relief, muscle or nerve stimulation, promoting blood flow and reducing swelling/inflammation.

### Other treatments that may be used

**Laser Therapy** emits beams of light into the tissues of the body, stimulating chemical reactions and having a similar effect to ultrasound though using light energy instead of sound energy.

**Acupuncture** is an oriental technique of introducing needles into the skin to increase or decrease energy flow to promote pain relief and healing.

**Injection Therapy** is a specialist procedure, which needs the consent of your G.P. A non-harmful steroid and local anaesthetic are injected directly into the injured structure. It has a dramatic effect on removing inflammation and promoting healing.

**Podiatry** involves an analysis of the foot mechanics and structure during walking or running and correction as appropriate. For Achilles tendinopathy this may include the use of a heel raise, or special orthotics to correct a pronated foot.

## What should the patient do to help their condition?

**Active Rest** – keep active but avoid activities that aggravate your condition i.e. any activity that places repetitive strain on your heel, such as running.

**Apply an ice pack** – for a maximum of 20 minutes. Do this in recent injuries where there is swelling and inflammation. A bag of frozen peas wrapped in a damp cloth works well because it moulds to the shape of the heel. Ensure that the skin does not change colour (the sign of an ice burn).

**Contrast bathing** - From 5 days post injury put the foot into a bucket of water as hot as you can withstand for 5 minutes followed by one with water as cold as you can withstand for 5 minutes repeat for approximately 20 – 30 minutes.

**Take ibuprofen/ analgesia** - according to the directions on the packet, up to the maximum daily dose. It is not suitable for people who have a history of stomach ulcers, or for some people with asthma. If in doubt, ask your pharmacist for advice.

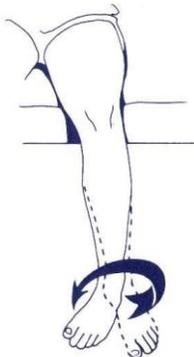
**Footwear** – Avoid wearing ankle boots, or using shoes with a heel tab that may rub the tendon. Shoes with a small heel should be worn i.e. trainers.

**Exercise/Postural programme** – comply with the prescribed exercise/postural programme. **Your physio will instruct you as to which of the exercises to begin with, when to add the others, as well as how to progress the exercises.**

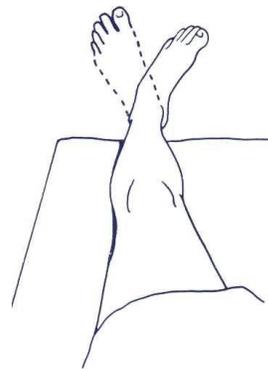
### 1. Foot pump up & down



### 2. Foot Circling



### 3. Foot pump in & out



### Exercises 1-3

Pump the foot in the 4 differing directions for approximately 30 seconds (begin with exercise 1 only and progress to others when instructed)

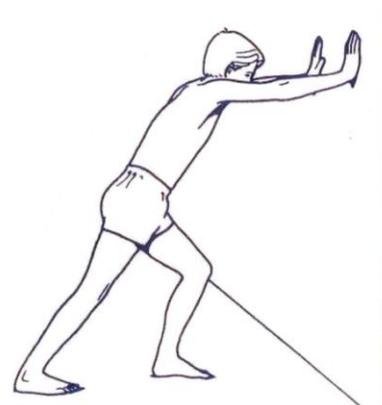
### Exercises 4-5

Stretch slowly into the desired direction and then hold for approximately 30 seconds, during this period the stretch should ease and you should keep going further into the stretch without jarring or bouncing.

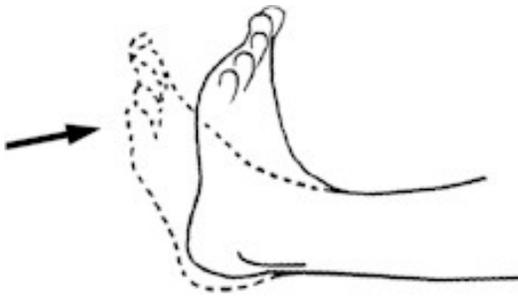
### 4. Soleus Stretch



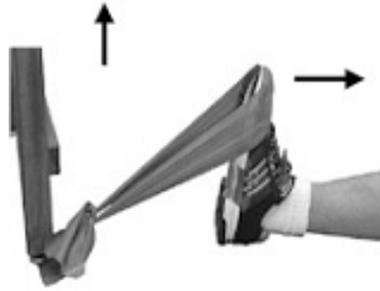
### 5. Gastrocnemius stretch



### 6. Ankle strengthening 1



### 7. Ankle strengthening 2



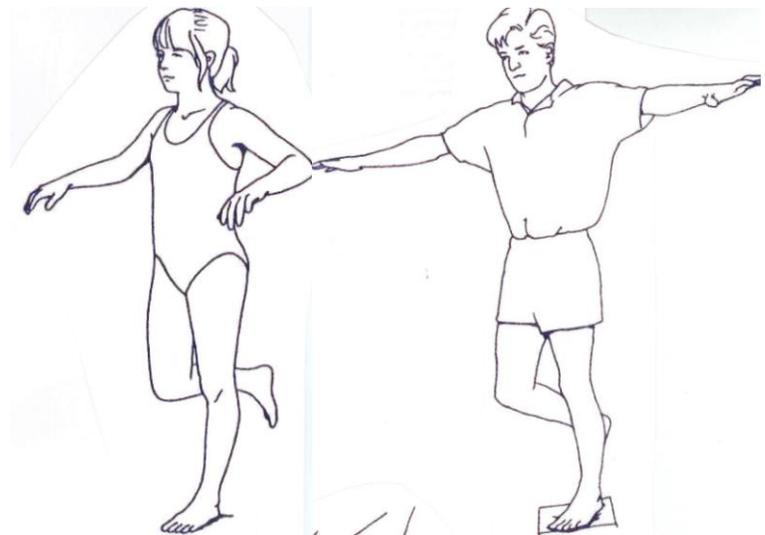
### 6-7. Ankle dorsi-flexion strengthening:

Sit on the floor with knees straight. Without moving your heel, pull your foot towards you. Hold for 10 seconds, repeat 8 times. As an advanced exercise this can be performed with a thera-band.

### 8. Calf strengthening



### 9. One legged balancing



**8. Calf strengthening** – Stand with two feet on the edge of a step so that the heels are over hanging. Lift one knee and use your hands for support. **Slowly** lower your standing heel downwards. When your heel can go no further place your other foot on the step, straighten your ankles and return to the starting position. Repeat 10 -15 times and do 2-3 times daily.

**8. Balancing** – Stand on one foot and try to balance for one minute. When able to do this try with the eyes closed, then on uneven surfaces and then going onto toes - Do 2-3 times daily

## What if physiotherapy does not help or resolve my condition?

It is very rare that physiotherapy does not resolve this condition, in these cases a cortisone injection may be appropriate and in very extreme cases surgery is a possible option. These options can be discussed with your therapist if appropriate.