

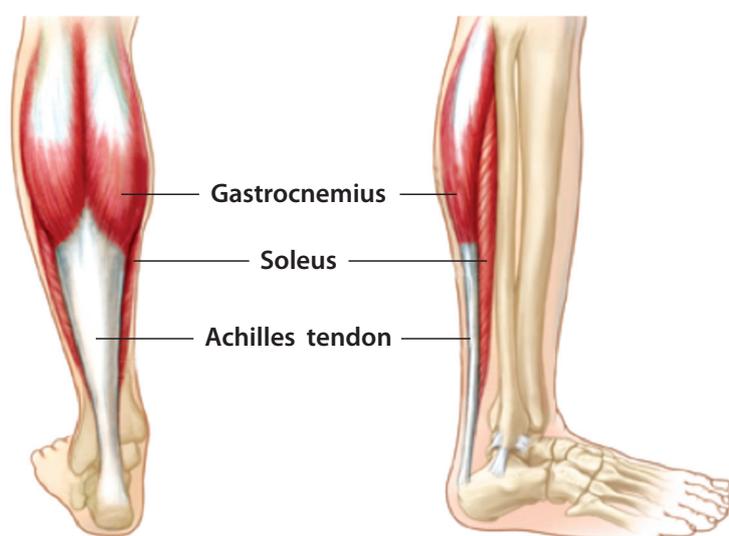
A faint, light-colored anatomical illustration of a human foot, showing the heel and the arch, positioned in the background of the page. The illustration is rendered in a style that looks like a cutout or a shadow of a real foot.

# Achilles Tendinopathy

Healthshare Information for Guided Patient Management

## Introduction

Healthshare is committed to improve your health and wellbeing. This information leaflet is produced by health professionals who are expert in managing musculoskeletal conditions. The information is based on the latest available evidence from research in the field. If you are not sure of any of the given information, please contact our physiotherapy helpline for further information.



## What is the Achilles tendon?

- A tendon is a tough band of tissue that connects a muscle or group of muscles to the bone.
- The Achilles tendon connects the calf muscles to the heel bone (Calcaneus). It is the largest tendon in the body.
- The Achilles tendon transfers the force produced by the calf muscles to the foot to propel the body forward during walking and running.
- It is often injured because of its poor blood supply and the high load placed on it.

## What is Achilles tendinopathy?

- Achilles tendinopathy is a term that describes tendon pathology.
- Although at first there may be inflammation (tendinitis), during the later stages there may be degeneration without inflammation.
- It can cause severe pain and swelling, usually in the area just above the heel where the blood supply is poor.
- Inflammation is typically short-lived but over time the condition usually progresses to a degeneration of the tendon known as Achilles tendinosis/tendinopathy.
- With Achilles tendinopathy, the tendon loses its organised structure and is likely to develop small tears, which the body continually tries to repair.
- If the repair process is slower than the injury process the tendon gets thicker and harder with calcium deposits forming, resulting in nodules.
- This chronic degeneration, with or without pain may result in rupture of the tendon. Achilles tendon rupture usually occurs at a point 4-5 cm above the heel bone due to the poor blood supply and reduced healing in this area.

## What causes Achilles tendinopathy?

- Achilles tendinopathy is usually caused by a sudden increase of repetitive activity or overuse involving the Achilles tendon.
- Running up hills causes the Achilles tendon to be stretched more than normal on every stride. This is fine for a while but means the tendon fatigues faster than normal.
- Poor foot alignment, such as over pronation can also place an increased strain on the Achilles tendon.
- Although Achilles tendinopathy affects people of all ages, increasing age does increase the risk of injury.
- This is due to the further reduction in blood supply to the already poorly supplied tendon as well as other age related factors.
- These disorders are also common within jobs involving stresses being placed on the ankles and feet.
- Athletes are at high risk for developing disorders of the Achilles tendon due to overuse.
- As the foot flattens on the floor the lower leg rotates inwards. This also twists the Achilles tendon placing extra stresses along the length of the tendon.
- Wearing high heels consistently may shorten the muscle and tendon. This will place abnormal strain on the Achilles tendon when changing to flat or running shoes.
- Achilles tendon rupture can also occur at any age but is more common in athletes involved in explosive movements.
- Leg length differences are also a common cause for increasing load on the Achilles tendon.

## What treatment can I receive?

Various treatment options may help including ice, compression, taping, deep friction massage and a gradual loading and strengthening exercise programme.

The treatment approach for Achilles tendinopathy depends on how long the injury has been present and the degree of damage to the tendon.

**In the early stages when there is sudden (acute) inflammation, the following options may be recommended:**

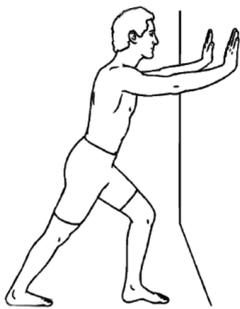
<b>Relative Rest</b>	Temporarily avoiding the activities that cause the pain is essential to allow healing of the tendon. Depending on the severity of the injury this may involve immobilisation through the use of a cast or removable walking boot to reduce the forces through the tendon
<b>Ice packs</b>	Apply ice packs to the affected area for 15 minutes, four times a day regularly. Avoid using the ice directly over the skin. It also may help to massage the tendon with ice for five minutes at a time, two to three times a day as this will help to reduce the pain.
<b>Medications</b>	Simple anti-inflammatory medication like ibuprofen may be helpful in reducing the pain and inflammation in the early stages of the condition. There is recent evidence suggesting it also helps to reduce the tendon swelling.
<b>Physiotherapy</b>	Physiotherapy plays a major role in managing Achilles tendinopathy. Treatment may include ice, taping, deep friction massage, and a gradual stretching and strengthening exercise programme.
<b>Podiatry</b>	Your physiotherapist may also refer you to a podiatrist if they think the foot alignment could be contributing to your injury.
<b>Injections</b>	Steroid injections must be avoided for Achilles tendinopathy, although these injections are widely used for other tendon problems.

## Do I need investigations?

- Achilles tendinopathy is diagnosed with regular, physical clinical examination.
- If there is a suspicion of tendon rupture, ultrasound or MRI may be helpful in confirming the diagnosis prior to surgery.

## What exercises should I do?

Please note this is a general exercise programme for Achilles tendinopathy and can be adjusted depending on the advice given by your health professional.



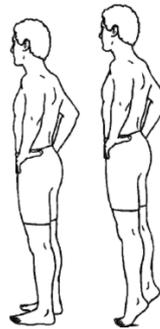
### Calf stretch 1 (Gastrocnemius)

Keep your hands on the wall and gently lean against the wall. Keep the back leg straight, with the heel on the floor and the foot pointing in a straight line to the wall.

Slowly lean into the wall until a stretch is felt in the middle to upper calf.

Hold this position for 20 seconds.

Repeat 5 times every 2 hours during the day.



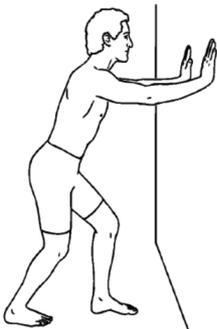
### Standing heel drop

Whilst standing, raise up onto your unaffected leg. Slowly come down with the weight on your affected leg.

Repeat 15 times. Take 3 minutes rest.

Repeat this sequence 3 times a day.

**WARNING: This exercise may be painful and should be carried out for 12 weeks regardless of the pain.**



### Calf stretch 2 (Soleus)

Keep your hands on the wall and gently lean against the wall.

Keep the back leg slightly bent, with the heel on the floor and the foot pointing in a straight line to the wall.

Lean into the wall until a stretch is felt in the lower calf keeping the knee bent.

Hold this position for 20 seconds.

Repeat 5 times every 2 hours during the day.



### Eccentric heel drop exercises

Stand with the balls of both feet on a step. Slowly raise up with the weight on your unaffected leg like in the previous exercise. Then slowly come down with your weight on the affected leg.

Repeat 15 times and take 3 minutes rest.

Repeat this sequence 3 times a day

**WARNING: This exercise may be painful and must be carried out for 12 weeks regardless of the pain.**