

# Achilles tendinosis

A SORE AND PAINFUL ACHILLES CAN BE THE BANE OF MANY MIDDLE AND LONG-DISTANCE ATHLETES. CHARTERED PHYSIOTHERAPIST **DANIEL LAWRENCE** OUTLINES HOW TO PREVENT AND CURE IT

**T**HE Achilles tendons are the largest tendons in your body with an individual ability to repeatedly withstand stretching forces of more than 15 times your own bodyweight. They are approximately 15cm long and made up of a tough fibrous material called "collagen", which is arranged in a fibrous spiral to produce a strong, yet elastic tendon capable of storing and releasing energy to help propel you forward and reduce the reliance on muscle contractions. It originates from your two calf muscles called the "soleus" and "gastrocnemius" and attaches to the back of the heel bone (calcaneum) and is clearly visible at the back of the ankle.

It is estimated that one in 10 runners have suffered from Achilles tendon pain and it has been suggested that an increase in sedentary lifestyles may be a contributing factor.

The most common cause of this pain is Achilles tendinosis. It is sometimes known as "tendonitis", but don't get too concerned

about the two terms used. It is generally agreed that tendinosis is a more suitable term, but some older texts and practitioners still label it as tendonitis. The fact is it doesn't really matter, because if you do suffer from the condition what you really want to know is how to treat it quickly!

## Symptoms

The main symptoms of Achilles tendinosis are most noticeable when you take your first few steps in the morning. A marked increase in stiffness and pain following a night in bed is characteristic of this condition. A visual and palpable thickening of the tendon just above your heel is also common. It is important to understand the behaviour of the injury and appreciate that, although it may feel better when you run, you will probably suffer more the day after a run when the tendon is inflamed and it stiffens up. It is better to try to avoid the vicious cycle of over-exertion to reduce the pain and stiffness.

## Self help

The correct early management is essential. Choosing to ignore minor symptoms can significantly lengthen your injury recovery time. If you have recently resumed running or increased your training by more than 10 per cent, it is advisable to respond quickly to any minor aches and pains from your Achilles area. Consider a temporary reduction in running volume of about 50 per cent for one week before reassessing your symptoms. You could also consider continuing your training volume with non-weight bearing cross-training, such as swimming or cycling. It is also important to perform regular stretching of your lower limb musculature during this relative rest period.

One of the most proven rehabilitation exercises for this condition is eccentric strengthening of the Achilles tendon and adjoining calf muscles. Eccentric refers to a controlled lengthening of the muscle and in this case is achieved by standing on tip toes and slowly lowering your heels to the ground (picture 1). As a guide, begin with three sets of eight on a flat surface twice a day. It is important that you focus on the lowering phase and assist yourself when rising back on to your toes. This exercise can be progressed by standing with your heels out over a step to increase the range of movement.



Begin with your calf muscle in a stretched position as shown – alternatively, you may find it easier to lie on your front. Stick the base of the tape just under your heel and continue to peel off the backing paper until you reach the split in the tape, then stretch it by about 60 per cent before sticking it on to the skin. The remaining tape strips need to wrap up and around the calf muscles with only a very light stretch. Finally, smooth over the tape with clean dry hands to secure the tape into position

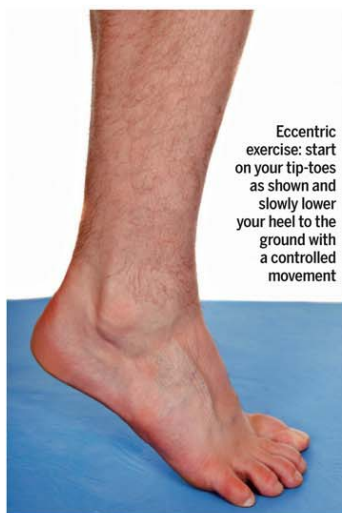
## Footwear

Many Achilles tendon injuries can be attributed to overly soft training shoes that adversely let the heel sink down relative to the foot and unnaturally stretch the tendon. Having said this, some flat shoes have been shown to aggravate the condition and may require additional heel cushioning to raise the heel and relieve tendon stretch. Reviewing your footwear is an important part of curing and preventing this condition.

Many of the world's top athletes are now using kinesiology tape to help speed up their recovery from various injuries. There are many advantages to using this tape, which comes in either vibrant or subtle colours and can be easily applied and remain in place for three to five days. An application technique is shown above.

## Advice

Early treatment and diagnosis is important and I would recommend seeing a sports injury specialist as soon as possible, if your symptoms persist past a few days.



**Eccentric exercise: start on your tip-toes as shown and slowly lower your heel to the ground with a controlled movement**