

# ACHILLES TENDON PAIN

Your Achilles tendon is a thick, fibrous band that connects the calf muscles (specifically the gastrocnemius, soleus and plantaris muscles) at the back of your leg to the back of the heel bone (calcaneus).

Every time you walk, run or point your foot downwards, you actively engage your Achilles. While walking can see your Achilles tendon taking on forces of over three times your body weight, running can see it taking on up to ten times your body weight. With this in mind, it's not surprising that the tendon is vulnerable to being overused and injured – and remains one of the most common sporting injuries that we see and treat.



## INJURY TO THE ACHILLES TENDON

When the Achilles tendon is injured, you'll likely feel pain and tenderness at the back of the heel. There may also be some stiffness, swelling, difficulty bearing weight on the injured foot, going up onto your tiptoes and more. Achilles injuries can be classified into three main categories:

### 1. ACHILLES TENDINITIS

When your body launches an inflammatory response after your Achilles injury, and you feel noticeable swelling at the back of your heel, this is known as Achilles tendinitis. This usually occurs following an acute injury, with symptoms coming on suddenly. There is likely no underlying and ongoing damage to the tendon fibres, with the micro-tears to the tendon occurring directly as a result of the overloading on that day. Only at this stage, with the presence of swelling, can care like taking anti-inflammatories or using ice can have some beneficial effect in reducing pain.

### 2. ACHILLES TENDINOSIS

Tendinosis, on the other hand, refers to damage that has been building or continuing for some time (chronically). With the tendon and its collagen degenerating over some time, the tendon fibres change at the cellular level, may scar and become stiff, and the tendon weakens, making it more vulnerable to pain and injury. This is often seen when a tendon is strained and continues to be overused without ever having the chance to heal. The symptoms of this injury usually come on more slowly and gradually, and swelling is notably absent.

### 3. ACHILLES TENDINOPATHY

Tendinopathy is either used to describe any problem with the Achilles tendon, or often to describe the degeneration of the Achilles tendon over time and no inflammatory response, without specifying the nature of the cause of the injury. It's not uncommon to see cases of Achilles tendinopathy that have lasted years, with patients noting the pain during running sports like basketball, with the pain coming and going depending on the activity and no inflammation developing.

As the Achilles tendon has a poor blood supply along the length of the tendon and a good blood supply is essential for effective healing and repair, this means that there is a tendency for the tendon to progress into the degenerative state as opposed to staying 'inflamed'.

## WHAT CAUSES ACHILLES PAIN?

As we mentioned above, it may be from a sudden overuse, or from degeneration over time. Acutely speaking, large amounts of force and strain on the tendon overload it, causing the tendon fibres to become damaged and sustain micro-tears. At its worst, partial tears or even complete ruptures may result.

Many activities can strain the Achilles tendon as the tendon is used for every step we take. Common causes include:

- Increasing training intensity
- Increasing hill running duration
- Unsupportive footwear with low set heels
- Tight calf muscles
- Abnormal foot biomechanics that exacerbates the pull on the calves and Achilles
- Running/jumping sports such as basketball

One of the greatest causes of developing ongoing Achilles problems is ignoring early Achilles pain and continuing to exercise in the hopes that it will resolve. When pain occurs in the Achilles tendon, it's important that you stop the activity causing the pain.



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aim to continuously improve



do what we say, sometimes more, never less