

Achilles Tendon

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Achilles Tendinopathy

Previously known as 'tendinitis', *tendinopathy* or *tendinosis* is a condition where there is injury & pain arising from a *tendon*. This is the structure which joins muscle to bone. The Achilles is one of the most common tendons in the body to become painful. This can occur for a variety of reasons, but generally it is because the tendon is forced to bear loads which are beyond its tolerable limits. The term tendinitis (in medicine '-itis' means inflammation) is no longer used. Research in the late 20th & early 21st century has shown that tendon pain occurs without any evidence of inflammation. The problem arises due to a breakdown of *collagen*, the main component of the tendon. It is more accurate to describe this process as 'wear-and-tear' rather than inflammation. Tendons are notoriously slow healers, and injuries often become chronic.

Tendons act like springs, storing and releasing energy. When they are healthy, they are strong and tough, and they do this very efficiently. Diseased tendon is weaker, as the strong collagen has been partially replaced by inferior collagen, and an excess of protein and other substances. Protein cells attract water and make the tendon swell. This extra fluid and 'broken-down' collagen results in a thicker but weaker tendon - one that doesn't stretch & recoil efficiently.

Tendinopathies are extremely common, particularly in recreational and elite sportspeople. They are more prevalent in young males than females, and the incidence increases with age, and in females over 40

years. Some medical conditions can contribute, including those related to unstable blood sugars, *inflammatory arthritis*, and in people being treated with particular types of drugs.

Achilles tendinopathy

There are two main types of Achilles tendinopathy:

1. *Mid-substance*. This is within the body of the tendon. The Achilles is one of the few places in the body where a mid-substance disease occurs. There will be either generalised tendon thickening (such as in the right Achilles, pictured), & / or a lump within the tendon (picture, left). This will be about the size of a



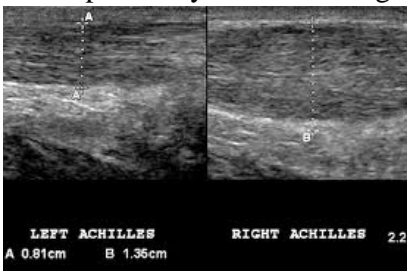
cherry, and is usually tender to touch. It will feel hard on the outside, but is weak on the inside.

2. *Insertional*. This occurs at the attachment to the heel bone (*calcaneus*). It is sometimes associated with 'bursitis', where fluid sacs that exist to reduce friction & pressure between tendon & bone, themselves become painful & swollen.



Treatment

Tendinopathy is a complex condition, and there are different types & stages of the disease. These require different types of treatment. It is important to consult a practitioner with a good understanding of the disorder, so that the most appropriate treatment will be prescribed. Sometimes this will be a period of rest & unloading, other times it will be exercise &



progressive loading. Even with the best treatment, healing may take several months.

Treatments may include:

1. Exercise. Of all the treatments used, research has shown strengthening to be the only consistently effective one. Complete rest does not help, and may worsen most types of tendinopathy. Just like too much or too little water will kill your plants, the right balance of exercise is the key to a good recovery. A relative degree of exercise is important, and an experienced therapist will work with you to find the right balance to help your tendon, both in the short and long term. The type of exercise will vary depending on whether you have acute or chronic, and mid-substance or insertional tendinopathy.



2. Activity modification. Certain activities make the problem worse, and might need to be modified. For instance, a runner may need to alter their speed and distance, the time of day they run, or their training surface. A short break from all running may be required.
3. Rehabilitation. Commonly, tendinopathies arise due to muscle imbalances, altered joint movement, and injuries in other parts of the body. It will be necessary to improve these factors to ensure proper recovery.
4. Massage. Tight & tense muscles can cause greater and more frequent stress on the tendon. Releasing tight areas in the involved muscle, as well as in surrounding muscles and fascia, will often reduce this stress.
5. Ice. This can reduce pain, and may help recovery in acute cases. Get advice on the best way to apply ice therapy.
6. Stretching. This does not always help a tendon problem, and in some cases (particularly with insertional tendinopathy) can make it worse. Check with your therapist before undertaking stretching.



7. Injection. There are many experimental substances being injected into tendons, but there is currently no clear evidence that any of these are of benefit. Trigger point dry needling, either to the tendon or muscle, seems to be at least as effective as



therapeutic injections. What is fairly evident from research is that 'cortisone', once regularly injected into tendons, is known to be of no benefit in the majority of cases. It may actually make the condition worse, & is sometimes associated with increased risk of tendon rupture.

8. Taping. Certain types of strapping or taping can be helpful, particularly when the person is returning to training or sport. *Kinesio taping* can help take some of the load away from the tendon.
9. Anti-inflammatories. These drugs do not help chronic tendinopathy, and may delay recovery. There is some evidence that certain types of anti-inflammatories may help acute tendinopathy. Speak to your therapist or sports doctor before starting a course of treatment.
10. Orthotics. These will be beneficial for some people with Achilles tendinopathy.



What not to do

Avoid:

1. Massage directly over the tendon.
2. Therapeutic ultrasound to the tendon. This increases protein accumulation, fluid build-up, and can delay recovery.
3. Corticosteroid injection. This can be harmful. If steroid injection is being contemplated, you should be consulting a foot & ankle or sports medicine specialist.
4. Pushing through pain. A small amount of short-lasting pain is sometimes acceptable with exercise. However if your pain is moderate to strong, and takes a while to settle, check with your therapist before continuing.

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