

Tennis and Golfers Elbow (Tendinopathy/Enthesopathy)

What is it?

Tendons are tough bands of tissue that connect muscles to bones. There are several types and stages of tendon problems. Tendon problems at the elbow are quite common. 'Tennis elbow' also known as extensor tendinopathy refers to irritation of the tendons on the outside of the elbow. See figure 1. These muscles function to extend the fingers, hand and bend the wrist backwards. A tennis backhand is a classic example of use of these muscles and tendons.

'Golfer's elbow' also known as flexor tendinopathy refers to irritation of tendons on the inside of the elbow. See figure 2. These muscles function to bend the fingers, hand and bend the wrist forward. A tennis forehand is a classic example of use of these muscles and tendons.



Figure 1



Figure 2

What are the symptoms?

The primary sensation with elbow tendinopathy is pain felt on the elbow. Tennis elbow / extensor tendinopathy is felt on the outside of the elbow and golfer's elbow / flexor tendinopathy is felt on the inside of the elbow. Pain typically develops gradually. Initially, it may only be

painful following exercise. Along with pain, stiffness or tightness in the elbow and forearm region may also be experienced. Typically, these initial signs of tendinopathy are ignored, as they disappear quickly with use of the arm or applying heat i.e. a hot shower over the elbow and forearm region. However, as you continue to exercise, the tendinopathy progresses and the pain within the tendon becomes more intense

and more frequent. In the earlier stages, this pain during exercise may initially disappear as you warm up, only to return when you cool down. However, as you continue to exercise, the tendinopathy worsens and your pain may begin to be present for longer periods during exercise until it is present all of the time. This may interfere with your performance and even become debilitating.

How did I get it?

Elbow tendinopathy is a common injury associated with activities requiring repetitive use of the wrist and hand and results from overuse of the tendons on the outside of the forearm. The forearm musculature is a large muscle mass with high forces and high repetition inserting on a small area of bone. The junction of the tendon and bone become

irritated with all the stress, pulling becomes painful and eventually the tendon begins to break down. Repetitive uncontrolled use of the forearm muscles and therefore the forearm tendons can lead to microscopic tears within the tendons and degeneration of the tendons begins. Slow controlled movements are less likely to irritate the tendon and more likely to build

or strengthen the tissue. It is the reason that tennis players develop tendinopathy but bodybuilders do not. Slow strength training promotes tendon growth. This explains the initial paradox that strength training is used to repair an overuse injury. The body does not mount a very good inflammatory or healing response so this injury can take a very long time to heal.

Tennis and Golfers Elbow (Tendinopathy/Enthesopathy)

What should I do?

Elbow tendinopathy generally does not improve on its own if the cause is not addressed and you continue to exercise using these tendons. If you have or suspect you have elbow tendinopathy, you should consult your nearest sports medicine professional. In the meantime, you can begin initial treatment. This should consist of icing following exercise and regular gentle stretching of the forearm muscles. Icing should consist of crushed ice wrapped in a moist towel applied for 15—20 minutes or ice in a paper cup massaged over the outside of the elbow until the skin is numb.

If you have or suspect you have elbow tendinopathy you shouldn't

ignore the problem. Your pain may improve as you exercise however, the exercise you are doing may be compromising the healing process and causing further damage. This can lead to your injury getting worse such that your pain does not disappear after 'warm up' and you feel it throughout exercise. If this occurs, your recovery may be prolonged and it may take a number of weeks or months for you to return to exercise and sport.

Elbow tendinopathy does not produce any long-term effects, as long as it is properly diagnosed and appropriately treated. If not, it can lead to prolonged pain on the outside of the elbow and a prolonged layoff from exercise and sport.

What does rehab involve?

In recent years there has been a very significant shift in the treatment of tendinopathies. It is now recognised that there is not much inflammation in tendinopathy so anti-inflammatory medications and cortisone injections are not considered effective. Often tendinopathy will persist for a long time. In fact often a large tendon tear will heal quicker than the time taken to repair a tendinopathy. It seems as though the body does not recognise tendinopathy as an injury and makes no attempt to repair the tissue. For this reason treatments aimed at strengthening and or irritating the tissue are preferred.

Physical / exercise based therapy must always be the mainstay of treatment. Tendon function and strength must be preserved. Irritant

treatments including injections such as prolotherapy, PRP (Platelet Rich Plasma) and ABI (Autologous Blood Injections) and minimally invasive surgeries such as percutaneous tenotomy are increasingly popular. They essentially aim to injure the tissue to promote a healing response by the body.

Activity Modification:

Reducing provocative activities such as lifting (overhand for extension tendinopathy and underhand for flexor tendinopathy) is essential for recovery. For example someone who usually lifts underhand and has flexor tendinopathy may find it beneficial to adopt overhand lifting postures to give the flexor tendons a rest. The reverse would also be true for extensor tendinopathy

Pain Medication:

Pain medication tends not to be

How is a diagnosis made?

A diagnosis is made based on the history of the injury and examination of findings. While not normally needed, occasionally x-rays, Ultrasound Scan and / or an MRI are ordered to rule out other injuries.

particularly effective for elbow tendinopathy. A trial of anti-inflammatories or simple pain relief medication like paracetamol may however be worthwhile initially or if the symptoms are severe.

Physical therapy:

Exercise therapy in particular strengthening exercise should be the mainstay of treatment.

Unloading braces:

Unloading braces can help decrease pain. They may certainly help with symptoms although it is unlikely that they help speed up healing.

Splints:

Splints can be used for extreme cases where pain is unbearable.

GTN Patch:

GTN patches are a patch originally intended for heart disease and blood

Tennis and Golfers Elbow (Tendinopathy/Enthesopathy)

pressure. They have been shown to increase nitric oxide which is an important healing chemical. GTN patches are relatively cheap and are non-invasive. Their main side effect is headaches. The headaches are due to lower blood pressure and should only persist for the first 2 weeks. GTN patches may be worth considering if initial activity modification and exercise therapy has not improved the tendinopathy.

Cortisone injection:

An injection of cortisone, which is an anti-inflammatory steroid medication, may be given to relieve pain. Relief from a cortisone injection is usually highly effective but temporary in nature. Its effectiveness in controlling pain varies from many months to as little as a few weeks. There is some contention regarding how many times an injection can be repeated but generally it will be considered twice before pursuing surgical options. The injection can be painful and has an extremely

small risk of causing infection. One theoretical side effect of a cortisone injection is that it can weaken the tissue and result in a rupture. The risk of this is low, approximately 1/1000.

A cortisone injection is usually used in two groups of patients. The first group have milder symptoms or can alternate their duties so they can work around the pain. In this group an injection is performed when the pain has been present for a long period of time and an extensive trial of physical therapy has failed. The second group is patients with extreme symptoms or who for some reason cannot wait for physical therapy to become effective. This group usually receives an earlier injection but must also engage in physical therapy or the pain will just return when the injection wears off.

Irritant Injections:

While often quite painful, irritant injections such as PRP are increasingly popular. It acts to irritate the tissue and infiltrate growth

factors that promote healing. While cortisone works well in the short term, PRP works more slowly but long term outcomes have been shown to be better than cortisone.

Shock wave therapy:

Shockwave therapy can be considered. It may offer some benefit.

Surgery:

Surgery is rarely required and should be avoided in the vast majority of cases.



**Go online for more
information**

[www.sportsclinicnq.com.au/
patient-information](http://www.sportsclinicnq.com.au/patient-information)

Do you have a question? Email info@sportsclinicnq.com.au