

Tennis Elbow

What is Tennis Elbow?



Acute Tennis Elbow is an injury to the muscles that extend the wrist and fingers. The site of injury is typically the lateral epicondyle, a bony bump on the outside of the elbow where these muscles attach. Tennis elbow is aggravated by gripping activities like carrying shopping, picking up a kettle and driving. There is often elbow stiffness in the morning.

Recent in depth research has shown that it is not only a localized elbow problem that contributes to the symptoms of Tennis elbow. The radial nerve which originates in the cervical spine (the neck) sensitises in this condition which can slow the healing of the injury and worsen the short and long term prognosis. By utilising techniques to not only treat the elbow but also the radial nerve the success of our treatment will be far greater than other management options.

What are Tennis Elbow Symptoms?

Typically the Tennis Elbow sufferer will experience pain when performing gripping tasks or resisted wrist/finger extension. Pain can also be present when the muscles are stretched. There will be tenderness directly over the bony epicondyle, and there may be trigger points in the wrist muscles. Some sufferers will also have neck stiffness and tenderness, as well as signs of nerve irritation. Most elbow movements will be pain-free, despite that being the area of pain.

Who Suffers Tennis Elbow?

Tennis Elbow occurs commonly in the community. It is present in 40% of all tennis players (hence it's name) and 15% of people working in repetitive manual trades. It can occur at any age, however, sufferers are generally between the ages of 35 and 50.

Predictably, the side affected is usually associated with handedness, but it can occur in the non-dominant arm. Males and Females are affected equally.

What Causes Acute Tennis Elbow?

Acute Tennis Elbow is caused by damaged muscle tissue at the point it anchors to the arm bone at the elbow. It occurs when more force is applied to an area than the normal healthy tissues can handle.

Common Tennis Elbow Causes include:

- Unaccustomed hand use. eg painting a fence, hammering, lots of typing.
- Excessive gripping or wringing activities
- Poor forearm muscle strength or tight muscles
- Poor technique (this could be a poor tennis shot)

In some cases such as Chronic Tennis Elbow, this can occur due to the soft tissues being in poor health, which are easily injured. Degeneration of the tendon follows the injury, which leads to swelling and elbow pain.

What Causes Chronic Tennis Elbow?

Chronic Tennis Elbow is associated with degenerative changes in the muscle tissues located at the epicondyle. Although for a long time this was thought to be related to inflammation from overuse, this is now known to be incorrect.

Chronic Tennis Elbow is NOT due to INFLAMMATION!

Testing of Chronic Tennis Elbow sufferers has shown **no evidence** of the chemicals normally associated with inflammation. Instead, there is an increase in chemicals associated with **pain transmission** in the nerves. This is coupled with changes in the blood supply, and changes in the coordination of the muscles when using the hand and wrist. You also see degenerative changes in the extensor tendon, where the tendon structure starts to break down.

There is also evidence that longstanding forearm muscle imbalances can distort your elbow joint position and result in chronic tennis elbow pain. This results in decreased ability to perform normal elbow activities and reducing elbow and grip strength.

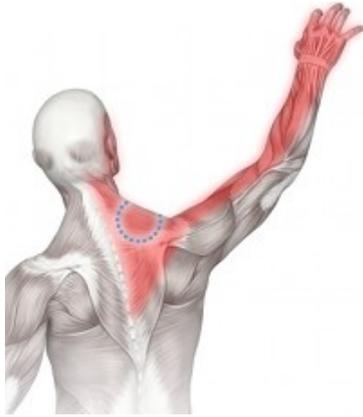
How is Tennis Elbow Diagnosed?

Your Tennis Elbow is clinically diagnosed by your physiotherapist or doctor. After listening to your injury history and using some confirmatory clinical tests a provisional diagnosis of tennis elbow can be made. An ultrasound scan or MRI are the best tests to identify any tendon tears or inflammation. X-rays are of little diagnostic benefit.

Referred Pain from your Neck can feel like Tennis Elbow

A significant percentage of tennis elbow sufferers may feel pain in the lateral elbow, but not actually be experiencing tennis elbow. There is a high incidence of lateral elbow pain that is **referred to your elbow** from a cervical spine (neck) injury.

The most common neck joint that refers to your lateral elbow is the joint between the 5th and 6th vertebra, which transmits pain signals along the radial nerve.



Your **radial nerve** may also have reduced neural mobility, which can cause symptoms similar to tennis elbow.

It is extremely important to have your neck and upper limb nerves assessed by an experienced physiotherapist to confirm or exclude any neck dysfunction or neural tension. Failure to do so, can result in a lack of symptom improvement and the development of chronic tennis elbow pain syndrome.

Tennis Elbow Treatment

Physiotherapy has been shown to be effective in the short and long-term management of tennis elbow.

Physiotherapy aims to achieve a:

- Reduction of elbow pain.
- Encouraging tissue repair.
- Restoration of normal joint range of motion and function.
- Restoration of normal muscle length, strength and movement patterns.
- Normalisation of your upper limb nerves.
- Normalisation of neck function.

There are many ways to achieve these and, following a thorough assessment of your elbow, arm and neck, your physiotherapist will discuss the best strategy for you to use based on your symptoms and your lifestyle. Results are typically measured through patient feedback and measurement of pain-free grip strength.

Physiotherapy treatment can include gentle mobilisation of your neck and elbow joints, electrotherapy, elbow kinesio taping, muscle stretches, neural mobilisations, massage and strengthening.



In some instances a tennis elbow brace may be beneficial. Your physiotherapist will discuss what treatment options are most suitable for you.

When Should You Use a Tennis Elbow Brace?

A tennis elbow brace can be very effective from the moment you put it on. In these instances, the brace will dissipate the stressful gripping forces away from your injured structures.



However, a tennis elbow brace does not work in 100% of cases. In our experience, we recommend that you seek physiotherapy assistance in these cases. In stubborn cases, you have a very high likelihood of referred symptoms from your neck.

Only a thorough examination of your neck, shoulder, elbow and upper limb nerve structures will confirm your diagnosis and direct which treatment options will assist you the quickest.

What is Your Tennis Elbow Prognosis?

Untreated Tennis Elbows can last anywhere from 6 months to 2 years. You are also prone to recurrence. Studies have shown physiotherapy to be the most effective way of managing Tennis Elbow when compared to steroid injections or giving of advice alone.

In a recent study, when given a 6 week course of physiotherapy comprising of 8 treatment sessions, most patients show significant improvement after 3 weeks, increasing to a 60% or

greater recovery after 6 weeks of treatment. This improvement is shown to continue to around a 90% improvement at 12 months, even without further treatment.

By comparison, provision of advice only resulted in a recovery of 60% or greater being delayed a further 6 weeks, to three months. Over longer periods of time, patients given good advice did recover, and by 6 months had achieved similar gains to the treatment groups. This was maintained over time and continued to improve.

Cortisone injections resulted in very good initial improvements with almost 80% reduction in symptoms after 3 to 6 weeks. BUT (and it's a big one) patients who received cortisone injections showed an increase in pain after 6 weeks, and by 3 months had fallen well below both the physio treatment groups AND the advice only groups in terms of their recovery. This deterioration was followed by delayed healing, resulting in the cortisone injected group having almost 30% more pain after 12 months than if they had followed advice alone.

For this reason, researchers do not recommend cortisone injections as a stand alone treatment for Tennis Elbow.

Further research is currently being undertaken to assess the effectiveness of cortisone injections combined with physiotherapy management to see if the initial early gains can be better maintained.

Common Treatments for Tennis Elbow

Dry Needling
Eccentric Strengthening
Sport-Specific Exercises
Soft Tissue Massage
Brace or Support
Extra Corporeal Shockwave Therapy
Joint Mobilisation Techniques for the elbow
Joint mobilisation and exercise for the neck
Supportive Strapping and Taping
Nerve mobilisation and exercises
Physiotherapy Instrument Mobilisation (PIM)

Your physiotherapist at Corrimal Physiotherapy will assess if you have any of the below factors that can contribute to developing tennis elbow;

- muscle weakness
- muscle tightness (neck, shoulder, arm)
- joint tightness (wrist, elbow, neck, upper back)
- neck or upper back injury
- nerve injury
- poor posture
- poor sporting technique or inappropriate activity

1. Stretches?

Stretching is not currently recommended for Tennis Elbow and other tendonopathies as it can cause compression within the tendon which may encourage further tendon degeneration. Although it might seem the most natural thing to do and may give temporary ease, in the long term it doesn't help.

2. Eccentric extensor strength

- assisted wrist extension - with weight in affected hand, use other hand to assist lifting weight up, then release to let affected hand control the movement down



3. Concentric extensor strength

- unassisted wrist extension – as above, but use affected hand to lift weight up and lower slowly

4. Medial Glide Elbow (Mulligan)

- Standing with upper arm against wall so elbow is level with door opening
- Holding grip object in hand, push the forearm laterally and hold
- Perform 10 pain-free grips

For more advice about tennis elbow, please ask the experienced physiotherapists at Corrimal Physiotherapy. Please contact our office at Corrimal Physiotherapy on 02 42855016 and give the receptionist your contact details. One of our expert balance physiotherapists will call you back to discuss how to manage your dizziness.