

**What is it?**

Lateral epicondylitis, commonly known as tennis elbow, is a painful condition involving the tendons that attach to the bone on the outside (lateral part of the elbow). Tendons anchor the muscle to bone. The muscle involved in this condition, the extensor carpi radialis brevis, helps to extend and stabilize the wrist (see Figure 1). With lateral epicondylitis, there is degeneration of the tendon's attachment, weakening the anchor site and placing greater stress on the area. This can then lead to pain associated with activities in which this muscle is active, such as lifting, gripping, and/or grasping. Sports such as tennis are commonly associated with this, but the problem can occur with many different types of activities, athletic and otherwise.

**What causes it?**

**Overuse** – The cause can be both non-work and work related. An activity that places stress on the tendon attachments, through stress on the extensor muscle-tendon unit, increases the strain on the tendon. These stresses can be from holding too large a racquet grip or from “repetitive” gripping and grasping activities, i.e. meat-cutting, plumbing, painting, weaving, etc.

**Trauma** – A direct blow to the elbow may result in swelling of the tendon that can lead to degeneration. A sudden extreme action, force, or activity could also injure the tendon.

**Who gets it?**

The most common age group that this condition affects is between 30 to 50 years old, but it may occur in younger and older age groups, and in both men and women.

**Signs and symptoms**

Pain is the primary reason for patients to seek medical evaluation. The pain is located over the outside aspect of the elbow, over the bone region known as the lateral epicondyle. This area becomes tender to touch. Pain is also produced by any activity which places stress on the tendon, such as gripping or lifting. With activity, the pain usually starts at the elbow and may travel down the forearm to the hand. Occasionally, any motion of the elbow can be painful.

**Treatment**

**Conservative**

**Activity modification** – Initially, the activity causing the condition should be limited. Limiting the aggravating activity, not total rest, is recommended. Modifying grips or techniques, such as use of a different size racket and/or use of 2-handed backhands in tennis, may relieve the problem.

**Medication** – anti-inflammatory medications may help alleviate the pain.

**Brace** – a tennis elbow brace, a band worn over the muscle of the forearm, just below the elbow, can reduce the tension on the tendon and allow it to heal.

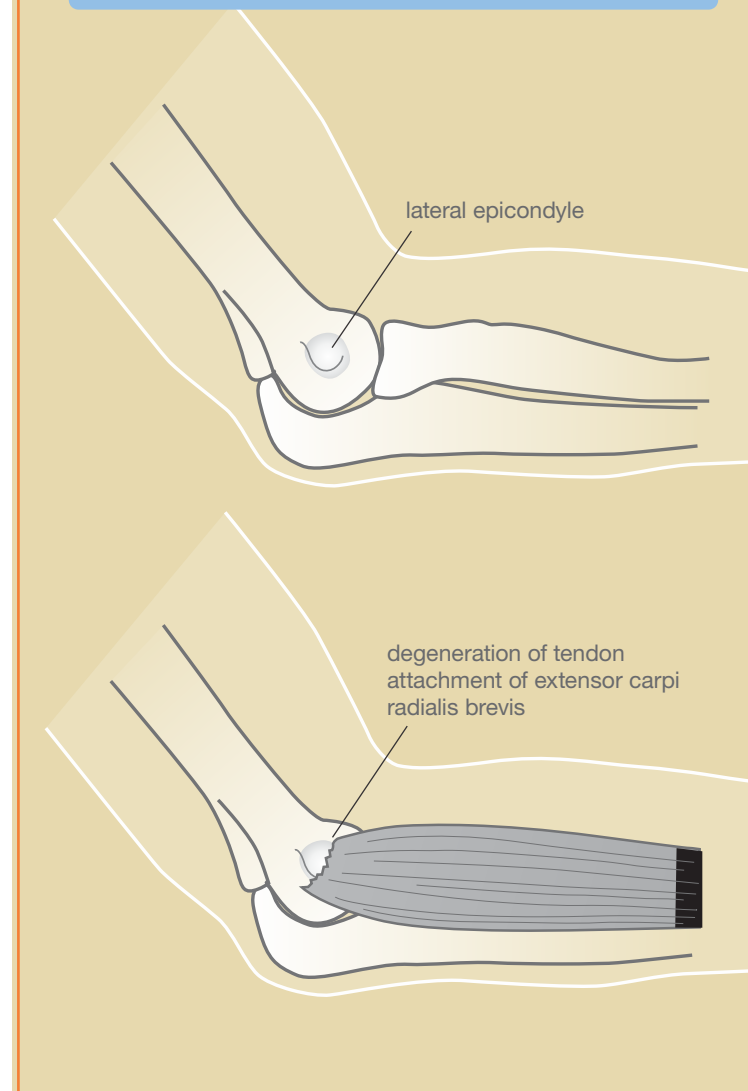
**Physical Therapy** - may be helpful, providing stretching and/or strengthening exercises. Modalities such as ultrasound or heat treatments may be helpful.

**Steroid injections** – A steroid is a strong anti-inflammatory medication that can be injected into the area. No more than (3 injections should) be given.

**Shockwave treatment** – A new type of treatment, available in the office setting, has shown some success in 50–60% of patients. This is a shock wave delivered to the affected area around the elbow, which can be used as a last resort prior to the consideration of surgery.

**Lateral Epicondylitis  
(Tennis Elbow)**

Figure 1: The muscle involved in this condition, the extensor carpi radialis brevis, helps to extend and stabilize the wrist



**Surgery**

Surgery is only considered when the pain is incapacitating and has not responded to conservative care, and symptoms have lasted more than six months. Surgery involves removing the diseased, degenerated tendon tissue. Two surgical approaches are available; traditional open and arthroscopy—a procedure performed with instruments inserted into the joint through small incisions. Both options are performed in the outpatient setting.

**Recovery**

Recovery from surgery includes physical therapy to regain motion of the arm. A strengthening program will be necessary in order to return to prior activities. Recovery can be expected to take 4–6 months.

