



### What is it?

Medial epicondylitis, commonly known as golfer's elbow, is a painful condition involving the muscles that originate from the bone on the inside (medial) part of the elbow (medial epicondyle). (Figure 1).

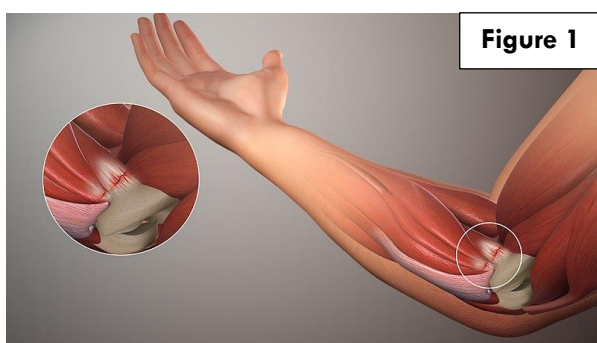


Figure 1

The muscles involved in this condition, the pronator teres (PT) rotate the forearm such that the palm faces downwards; the flexor carpi radialis (FCR), palmaris longus (PL) and the flexor carpi ulnaris (FCU) that flex (bend forward) the wrist (Figure 2).

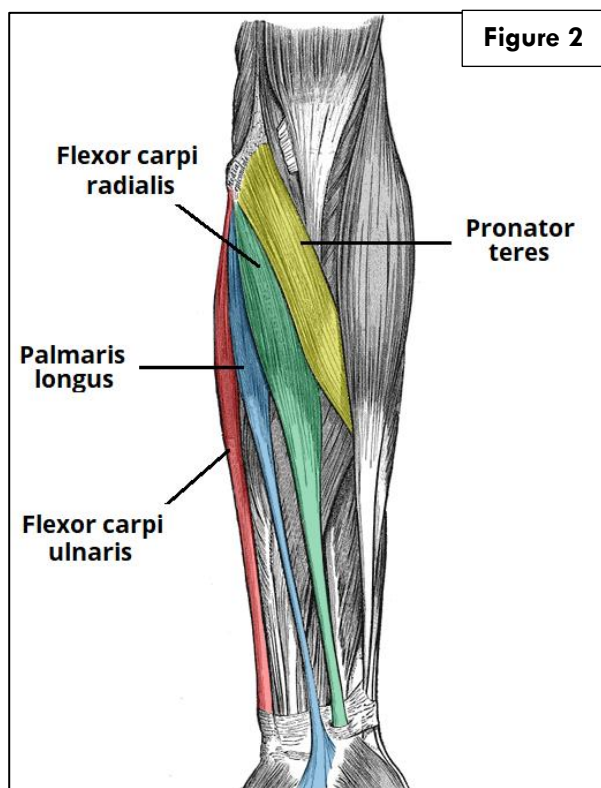


Figure 2

### What causes it?

Overuse or repetitive motions lead to microtrauma to the origins of these muscles at the medial epicondyle. This leads to degeneration of the muscle origin, 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 forceful turning of the forearm (pronation), wrist flexion and gripping, and/or grasping. This is commonly associated with sports like golf, racquet sports, football, baseball, weight-lifting, and archery, in addition to occupational exposures requiring repetitive motions of the hand, wrist, elbow, or forearm. Although usually associated with a chronic overuse type of phenomenon, occasionally a single sudden traumatic episode can cause avulsion of the flexor pronator muscle origin and lead to this condition.

### Who gets it?

Patients are typically middle-aged (fourth to fifth decades) and the dominant arm is usually involved. An exception is young throwing athletes who may experience medial-sided elbow pain.

### Signs and symptoms

Pain is the primary reason for patients to seek medical evaluation. The pain is located over the inner aspect of the elbow, over the bone region known as the medial epicondyle. This area becomes tender to touch. Pain is also produced by any activity which places stress on the muscle, 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.



## How is it Diagnosed

Similar symptoms can also be observed in conditions like ulnar nerve neuritis, elbow synovitis or arthritis, and injury to the ligaments on the medial side of the elbow (medial collateral ligament). Ligamentous deficiency (MCL insufficiency). Typically, the diagnosis is made on clinical grounds. X-rays can reveal calcification adjacent to the medial epicondyle and are useful in ruling out alternative causes of elbow pain. Ultrasound examination can reveal areas of muscle degeneration while MRI scans may be useful to rule out other conditions, such as MCL insufficiency or intraarticular pathologic conditions such as osteochondral defects.

## Treatment

**Conservative (non-surgical):** Three phases of treatment have been proposed for medial epicondylitis.

### Phase I (Symptom control)

- **Activity Limitation:** Initially, the activity causing the condition should be limited. Limiting the aggravating activity, not total rest, is recommended.
- **Medication:** Anti-inflammatory medications may help alleviate the pain.
- **Brace:** An elbow brace, a band worn over the muscle of the forearm, just below the elbow, can reduce the tension on the muscle and allow it to heal.
- **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.

### Phase II (Rehabilitation)

- **Physical Therapy:** It may be helpful, providing stretching and/or strengthening exercises. Modalities such as ultrasound or heat treatments may be helpful. A program of isometric exercises and stretching is initiated, followed by resistive exercises and sports or work hardening.

### Phase III (Maintenance)

- **Activity Modification:** This involves equipment and technique modification for sports or work and continued conditioning to prevent recurrence. Modifying grips or techniques, such as use of a different size racket and/or use of a modified grip may relieve the problem.

## 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 and anchoring the muscles. Subsequently, the patient is protected from forced flexion and pronation of the wrist for 4 to 6 weeks with a removable splint.

## 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.