Cubital Tunnel Syndrome
(Ulnar Nerve Entrapment)

Definition

Cubital tunnel syndrome is a set of symptoms caused by abnormal pressure on the ulnar nerve. The ulnar nerve passes through an area on the inside of the elbow, also called the cubital tunnel. Problems with this nerve can cause numbness and weakness in the hand, particularly the pinky and ring fingers.

The Hand

![Image of a hand showing the ulnar nerve](https://via.placeholder.com/150)

*Pressure on the ulnar nerve can cause problems in the pinky and ring fingers of the hand.*

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Causes

Cubital tunnel syndrome is caused by abnormal pressure of the ulnar nerve at the elbow. It may be the result of:
- Excess mechanical stress on the elbow from long periods of time with the elbow in a bent position or with pressure on the elbow
- Injury to the elbow, especially direct blow to the inside of the elbow
- Bleeding, inflammation, or fluid build-up near the nerve, elbow joint

In some, the cause may be unknown.

**Risk Factors**

Factors that may increase your chance of developing cubital tunnel syndrome include:

- Repetitive motion—common with people who have heavy labor occupations
- Leaning on or holding the elbow in a bent position for prolonged periods—common with heavy phone users, musicians, baseball players, or bicyclists
- Joint disorders, such as gout or arthritis
- Previous elbow injury
- Previous surgery on or around the ulnar nerve

**Symptoms**

Symptoms may be constant or only appear when the elbow is bent. Symptoms can vary but may include:

- Numbness or tingling in the pinky and ring fingers
- Muscle weakness resulting in a poor grip
- Poor finger coordination
- Pain in the elbow or forearm

Long-term problems with this nerve can lead to muscle wasting in the hand.

**Diagnosis**

You will be asked about your symptoms and medical history. A physical exam will be done. A diagnosis can usually be made based on your symptoms.

Your doctor may do further tests to assess any potential damage:

- **Nerve conduction tests** to assess how well nerves are passing electrical signals
- **Electromyography (EMG)** to assess electrical activity of your muscles
- An **x-ray** to look for anything pressing on the nerve

**Treatment**

In most cases, cubital tunnel syndrome will go away on its own when excess pressure on the elbow is removed. You and your doctor will assess daily activities and what may be causing the stress. Your doctor may also recommend:

- Ice to help relieve inflammation and pain
- A splint, brace, or padding to keep your elbow straight and relieve pressure
- Exercises and therapy to help maintain strength, range of motion, and flexibility
• Medication to relieve pain and swelling

If an illness or injury is the cause of your symptoms your doctor will recommend specific treatment for those.

**Surgery**

Surgery may be required in more severe cases or if other treatment methods fail. The goal of surgery is to relieve compression and restore the nerve function and muscle strength. Surgical options include:

• Cubital tunnel release—increases the size of the tunnel the nerve passes through
• Ulnar nerve anterior transportation—moves the nerve to a different position
• Medial epicondylectomy—removes part of the bony ridge that catches the nerve as it moves across the elbow joint

**Prevention**

To help reduce your chance of cubital tunnel syndrome:

• Avoid repetitive movements
• Periodically stretch out your arm and elbow
• Keep your muscles strong with strengthening exercises
• Use proper technique when playing sports
• Modify your home or work station to avoid prolonged bending of your elbow

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