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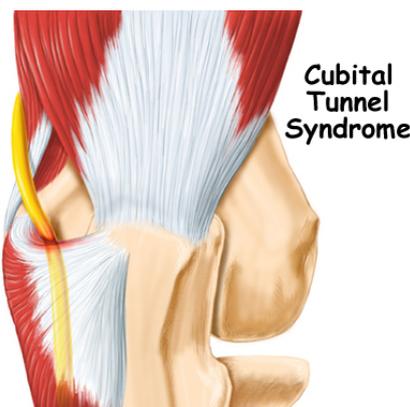
## Cubital Tunnel Syndrome

Cubital tunnel syndrome is a condition that affects the ulnar nerve where it crosses the inside edge of the elbow.

The symptoms are very similar to the pain that comes from hitting your funny bone. When you hit your funny bone, you are actually hitting the ulnar nerve on the inside of the elbow.

The nerve runs through a passage called the cubital tunnel. When this area becomes irritated from injury or pressure, it can lead to cubital tunnel syndrome.

### What is the cubital tunnel?



The ulnar nerve actually starts at the side of the neck, where the individual nerve roots leave the spine. The nerve roots exit through small openings between the vertebrae. These openings are called neural foramina.

The nerve roots join together to form three main nerves that travel down the arm to the hand. One of these nerves is the ulnar nerve.

The ulnar nerve passes through the **cubital tunnel** just behind the inside edge of the elbow. The tunnel is formed by muscle, ligament, and bone. You may be able to feel it if you straighten your arm out and rub the groove on the inside edge of your elbow.

The ulnar nerve passes through the cubital tunnel and winds its way down the forearm and into the hand. It supplies feeling to the little finger and half the ring finger. It works the muscle that pulls the thumb into the palm of the hand, and it controls the small muscles (intrinsic) of the hand.

### What causes cubital tunnel syndrome?

The ulnar nerve actually stretches several millimeters when the elbow is bent. Sometimes the nerve will shift or even snap over the bony **medial epicondyle**. (The medial epicondyle is the bony point on the inside edge of the elbow.) Over time, this can cause irritation. The nerve can be irritated from leaning on the elbow while you sit at a desk or from using the elbow rest during a long drive or while running machinery. The ulnar nerve can also be damaged from a blow to the cubital tunnel. Nerve may get irritated from osteoarthritis elbow.

### What does cubital tunnel syndrome feel like?

Numbness on the inside of the hand and in the ring and little fingers is an early sign of cubital tunnel syndrome.

The numbness may develop into pain.

The numbness is often felt when the elbows are bent for long periods, such as when talking on the

phone or while sleeping.

The hand and thumb may also become clumsy as the muscles become affected.

## How will my doctor know I have cubital tunnel syndrome?

Detailed medical history.

Asked about your work and home activities and any past injuries

Your doctor will then do a physical exam.

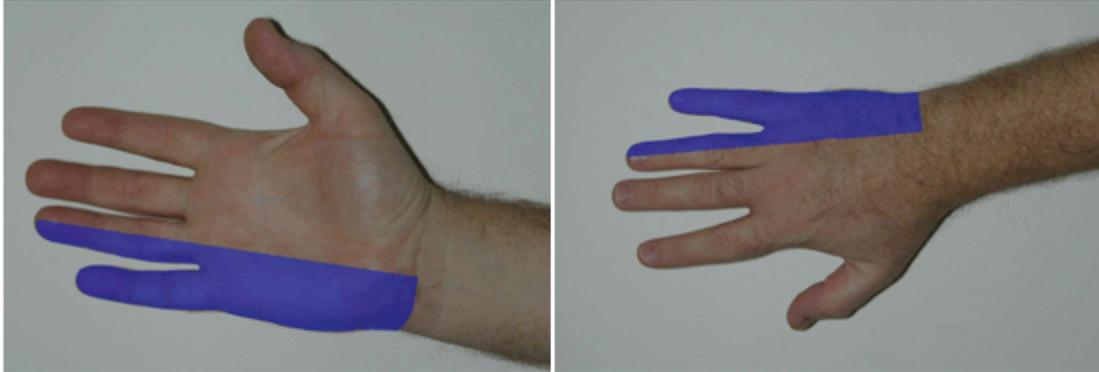


Figure 2. The ulnar nerve gives sensation to the small and half of the ring fingers on both the palm and back side of the hand.

Tapping or bumping the nerve in the cubital tunnel will cause an electric shock sensation down to the little finger. This is called Tinel's sign.

The nerve conduction velocity (NCV) test. The NCV test measures the speed of the impulses traveling along the nerve. Impulses are slowed when the nerve is compressed or constricted.

## Nonsurgical Treatment

### Rest with a splint

Anti-inflammatory medications may help control the symptoms.

If necessary, work with your supervisor to modify your job activities.

If symptoms are worse at night, a plastic arm splint

Wear splint with the pad in the bend of the elbow to keep the elbow straight while you sleep. You can also wear the elbow pad during the day to protect the nerve from the direct pressure



## Surgery

The goal of surgery is to release the pressure on the ulnar nerve where it passes through the cubital tunnel.

### Ulnar Nerve Transposition

One method is called **ulnar nerve transposition**. In this procedure, the surgeon forms a completely new tunnel from the flexor muscles of the forearm. The ulnar nerve is then moved (transposed) out of the cubital tunnel and placed in the new tunnel.

Cubital tunnel surgery is often done as a day surgery case. This means you won't have to stay in the hospital overnight. Surgery can be done using a general anesthetic, which puts you to sleep, or a regional anesthetic.

**Ulnar nerve decompression**

Is minimal surgery. Day surgery, Does not require splinting. Recently been reported as effective as ulnar nerve transposition. Even when failed, transposition can still be performed.

**What can I expect after treatment?**

Treatments start out with range-of-motion exercises and gradually work into active stretching and strengthening.

Therapy goes slower after ulnar nerve transposition surgery. You could require therapy for three months. This is because the flexor muscles had to be sewn together to form the new tunnel. Your elbow will be placed in a splint and wrapped in bulky dressing, and your elbow will be immobilized for three weeks.

When the splint is removed, therapy will begin with passive movements. In passive exercises, your elbow is moved, but your muscles stay relaxed. Your therapist gently moves your arm and gradually stretches your wrist and elbow. You may be taught how to do passive exercises at home.

Active therapy starts six weeks after surgery. You begin to use your own muscle power in active range-of-motion exercises. Light isometric strengthening exercises are started.