



What is Cubital Tunnel Syndrome?

Cubitus is Latin for elbow. The cubital tunnel is a passageway between the bony prominence of the inside of the elbow (medial epicondyle) and the tip of the elbow (olecranon). The ulnar nerve travels through this passageway. The ulnar nerve runs towards the back of the elbow so the more the elbow bends, the more stretched the nerve becomes.

The ulnar nerve supplies feeling to 1.5 fingers and power to the small coordinating muscles of the hand, such as the two muscles that bend the ring and small finger and one that bends the wrist.

What are the causes?

The ulnar nerve can be injured by direct pressure or stretching. The nerve is just under the skin where we lean on the elbow, so it can be compressed easily. Some of the common causes include:

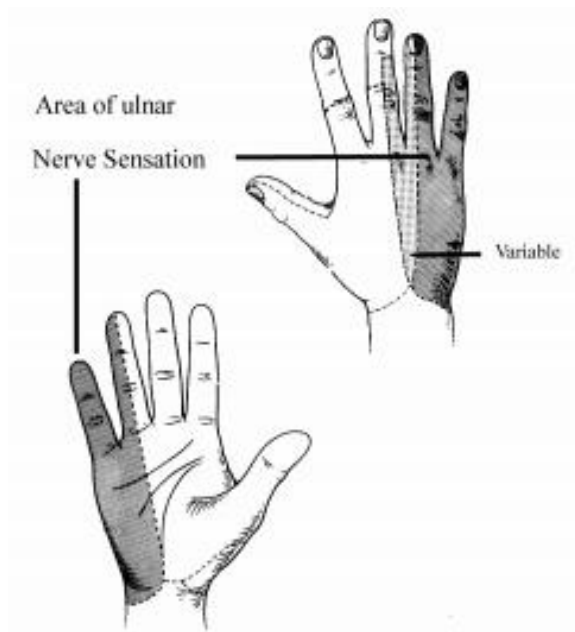
- **Leaning on the elbow** for many years causes swelling of the nerve in its tunnel (chronic compression).
- **Sleeping posture** with the elbow very bent for many years (chronic stretching).
- **Nerve subluxation** 10-15% of people have an unstable nerve – it moves in and out of the tunnel 'subluxing' over the epicondyle as the elbow bends. This causes swelling and injury to the nerve.
- **Sports or work** that involves prolonged bending of the elbow or repeated bending and straightening the elbow (chronic stretching).
- **Fractures of the elbow** may cause deformity which stretches the nerve or narrows the tunnel.
- **Elbow arthritis** – The elbow joint forms the floor of the cubital tunnel, so arthritis or swelling of the joint can narrow the tunnel, compressing the ulnar nerve.
- **Tumours, ganglion cysts or extra muscles passing across the nerve** (anconeus epitrochlearis) are less common causes of nerve compression.
- **Diabetes** is a risk factors for cubital tunnel syndrome.

What are the signs & symptoms?

- Numbness and tingling of the small and ring finger
- Aching/tingling along the inner aspect of the forearm and elbow
- Loss of dexterity/clumsiness
- Wasting and weakness of the small muscles of the hand
- Clawing of the ring and small finger (inability to straighten these fingers)

How is it diagnosed?

In most cases the diagnosis can be made by a thorough history and examination. An ultrasound or MRI scan may be arranged to confirm the diagnosis. Unless the compression is severe, nerve conduction tests are usually negative and not helpful.





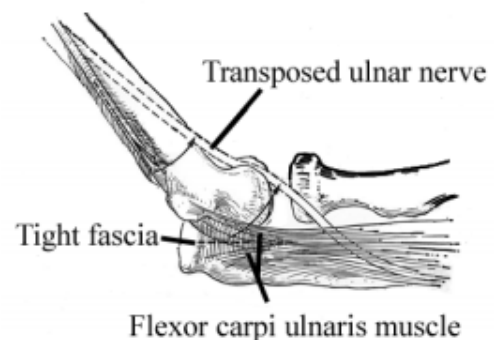
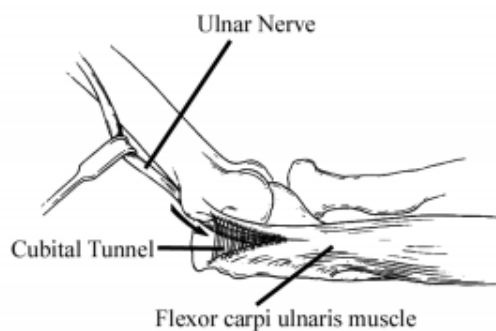
How is it treated?

Mild Symptoms: Most people will be able to stop the symptoms with these simple measures:

- Avoid resting on the elbow.
- Avoid sleeping with the elbow bent more than 90 degrees.
- Avoid prolonged or repeated elbow flexion.
- Nerve gliding exercises
- An elbow pad – this is a soft, neoprene sleeve made to fit your arm. It has a built-in pad that can be positioned over the nerve during the day and in front of the elbow at night to prevent the elbow bending.
- Steroid injection under ultrasound guidance may also help.

Moderate to Severe Symptoms

Surgery is usually recommended for these patients. The surgery is to relieve the nerve compression by opening (releasing) the nerve from the cubital tunnel and moving (transposing) the nerve to the front of the elbow, so it is no longer being stretched each time the elbow is bent. A “shelf” made from the fibrous tissue overlying muscle at the elbow is created to prevent the nerve moving behind the elbow. This is a day surgery performed under a general anaesthetic.



What about recovery?

At surgery: The arm is immobilised in a bandage from the hand to above the elbow for 2 days only. There is a light fibreglass splint (half-cast) under the dressing that keeps the elbow bent at 90 degrees.

2 days: You will see the hand therapist who will remove the outer bandages and splint, replacing them with a light elasticised bandage. You will also be given an exercise program.

2 weeks: Each end of the dissolving stitch will be trimmed; the wound can now be washed, and your exercises upgraded. Most people will drive from 2 weeks.

8 weeks: You will be reviewed by the surgeon to check your progress. You should be comfortable doing all your daily activities.

3-4 months: Depending on the severity of the nerve compression, it may take weeks to months for the nerve to recover. The swelling around the elbow may take 3-4 months to fully settle. In severe cases complete recovery of feeling and strength may not be possible.

Risks

- **Infection (1%)**
- **Ulnar nerve injury (1 in 1000)** which could leave some permanent numbness or muscle weakness;
- **Small area of forearm numbness (2-3%)** - small skin nerves cross the surgery site. All care is taken to protect these small branches but occasionally a minor nerve branch can be injured, leaving a small patch of numbness on the inner forearm.