

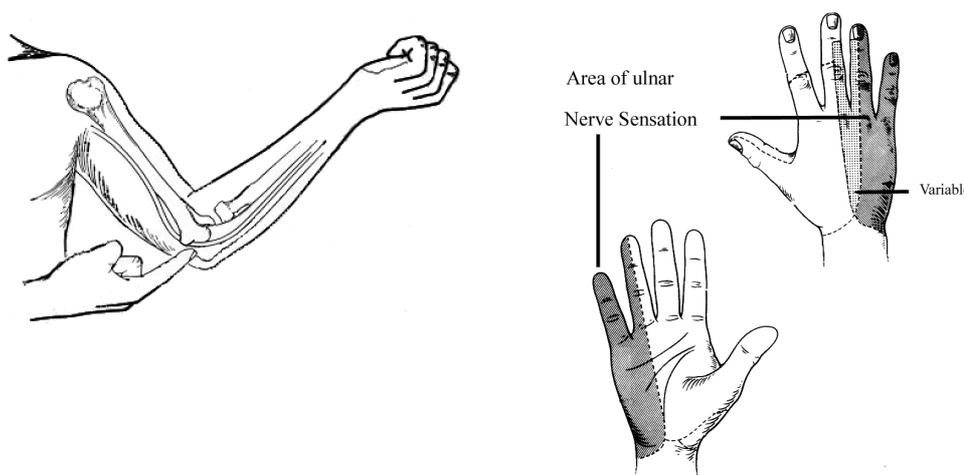
CUBITAL TUNNEL SYNDROME

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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 (the medial epicondyle) and the tip of the elbow (the olecranon process). The ulnar nerve travels through this passageway and is prevented from moving in and out of position by a covering of tissue called fascia. The exit of the tunnel is between the two muscle origins of flexor carpi ulnaris.

Cubital tunnel syndrome occurs when there is compression or injury to the nerve in the cubital tunnel. The nerve can be felt in the tunnel.



WHAT ARE THE CAUSES?

There are many ways the ulnar nerve can be injured or compressed in the cubital tunnel.

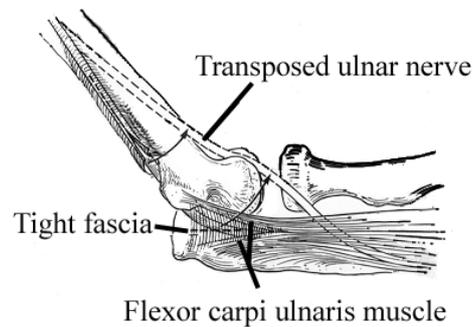
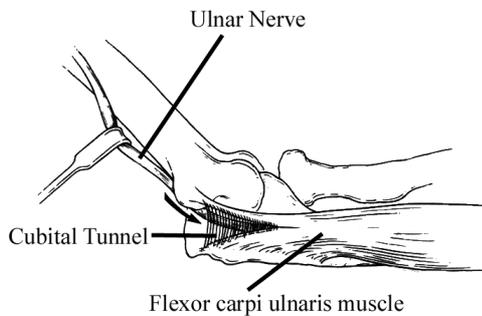
1. Chronic compression to this area (such as resting on the elbow) may produce swelling within the cubital tunnel, irritating the nerve
2. Chronic stretching of the nerve may occur when a person sleeps with their elbows very bent up against their body. When the elbow is bent, the nerve is stretched around the "corner" of the bony prominence (medial epicondyle). Long periods of this stretching at night or during the day may irritate the nerve.
3. The fascia covering the nerve may lose its ability to stabilize the nerve when the elbow is bent or straightened. The nerve is repetitively injured as it slides in and out of its normal position (subluxation).
4. Fractures of the elbow may cause deformity that stretches the nerve or narrows the tunnel.
5. As the elbow joint forms the floor of the cubital tunnel, any arthritis or swelling of the joint may narrow the tunnel, compressing the ulnar nerve.
6. Tumours, ganglion cysts or extra muscles may compress the nerve.

WHO IS AFFECTED?

Diabetic people are more often affected, as their nerves are more prone to compression. People who engage in work or sports that require repetitive or prolonged elbow flexion (bending) or leaning on the elbow and those with hypothyroidism (underactive thyroid) are also more likely to develop this problem.

WHAT ARE THE SIGNS AND SYMPTOMS?

The ulnar nerve provides feeling to the little finger and half of the ring finger. It supplies several muscles in the forearm but most importantly controls many of the small muscles in the hand responsible for strength of grasp and coordination. Symptoms include intermittent numbness and tingling of the small and ring finger, and aching along the inner aspect of the forearm and elbow. If nerve damage progresses there may be permanent loss of feeling in the ring and small fingers along with weakness and clumsiness of the hand.



HOW IS IT DIAGNOSED?

In most cases the diagnosis is made by taking a history of the symptoms and examination of the upper limb. Unless the compression is severe, nerve conduction tests are usually negative and not helpful.

HOW IS IT TREATED?

In a large percentage of patients, avoiding prolonged or repetitive flexion or resting on the elbow may alleviate the symptoms. To prevent elbow flexion at night and to prevent pressure on the nerve during the day, an elbow pad may be beneficial. A hand therapist can fit an elbow pad and recommend exercises. The majority of people will respond well to these simple measures.

When cubital tunnel syndrome is severe or unresponsive to conservative treatment, surgery may be indicated. The aim of surgery is to relieve the nerve compression or the ulnar nerve within the cubital tunnel. The simplest method is to divide the fascia over the nerve (in situ decompression). If there is an element of stretching of the nerve, it may be necessary to move it out of the cubital tunnel to the front of the elbow (decompression & transposition) as this prevents the nerve being stretched when the elbow is bent. These procedures usually involve a general anaesthetic and an overnight stay in hospital.

WHAT HAPPENS AFTER SURGERY?

Following surgery, the arm is immobilised in a bulky dressing from the hand to above the elbow. There is a light fibreglass splint (half-cast) under the dressing that keeps the elbow bent at 90 degrees. This is all removed in one week and an exercise program commenced under the guidance of a hand therapist. The sutures are dissolving. Strengthening begins at 4 to 8 weeks following surgery.

RECOVERY

Recovery to using the arm for all activities without restriction takes at least 3-4 months. Depending on the severity of the nerve compression, it may take many months for the nerve to recover. In severe cases, complete recovery of feeling and strength may not be possible. With proper diagnosis and treatment, progression of the condition may be prevented.