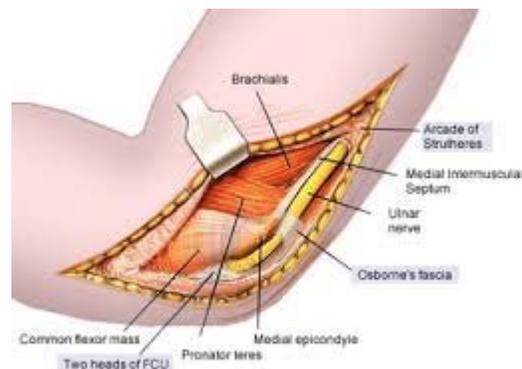


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## Cubital Tunnel Syndrome

Cubital tunnel syndrome, also known as ulnar neuritis, ulnar nerve entrapment, or ulnar nerve compression, is a nerve compression syndrome involving the ulnar nerve along the inside aspect of the elbow. It is a condition similar to carpal tunnel syndrome, but involving a different nerve at a different location. Cubital tunnel syndrome is the second most common nerve compression syndrome after carpal tunnel syndrome.



### Symptoms:

The most common symptoms of cubital tunnel syndrome are pain along the inner aspect of the elbow and numbness/tingling. Numbness can be in the smallest two fingers, and along the inner aspect of the hand, wrist, and sometimes the forearm. Numbness and tingling often occur at night time, and may commonly wake people from sleep. Pain is often dull and aching, but may be sharp or burning. Symptoms may be made worse with flexion (bending) of the elbow. With more severe nerve compression, finger deformities and loss of hand function, strength, and dexterity may result. Severe and chronic compression may cause muscle atrophy in the hand; this condition may be irreversible.



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## **Cause:**

As with the more common carpal tunnel syndrome, cubital syndrome may arise spontaneously, without injury or incident. The nerve can be compressed by connective tissue that helps to keep the nerve in its place along the back of the inner elbow. The compression is thought to cut off the blood supply to the nerve. There is sometimes a history of injury to the inner aspect of the elbow, or fracture or dislocation of the elbow that may cause swelling around the nerve, or stretching of the nerve. Symptoms may be brought on by excessive or prolonged pressure along the inner aspect of the elbow, prolonged leaning on the elbow, or by prolonged bending of the elbow, such as when people sleep with the elbows bent.

## **Diagnosis:**

A careful history and physical examination will diagnose most cases of cubital tunnel syndrome. X-rays may be obtained to evaluate for other causes of elbow pain, and to evaluate for bony abnormalities. Diagnostic ultrasound is sometimes used to visualize abnormal movement (subluxation) of the nerve. MRI is usually not required. Formal evaluation by a neurologist (nerve specialist) and evaluation of the nerves (electrodiagnostic studies) is frequently obtained to confirm the diagnosis, and to rule out other sources of nerve compression (such as neck problems, or compression of the ulnar nerve at the wrist).

## **Treatment:**

Treatment usually begins with conservative (nonsurgical) treatment. Surgery is reserved for those who do not improve, or who have progression of symptoms despite appropriate conservative treatment.



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## Nonsurgical Treatment

--Avoiding pressure on the nerve, such as resting the arm on an arm rest, and avoiding prolonged elbow bending (flexion) are simple remedies that can help relieve symptoms. Modalities such as anti-inflammatories, ice, and heat, may be marginally helpful.

--Physical therapy and cortisone injections are not usually helpful in treating nerve compression symptoms.

--Extension bracing of the elbow, particularly at night-time can help relieve pressure on the nerve. This can be done simply by wrapping a towel or small blanket around the elbow to help keep it straightened. It is difficult to maintain this position during waking hours.

## Surgery

Surgery is required when there is progression of nerve symptoms, or failure to improve with conservative treatment. Surgery involves decompressing the ulnar nerve at the elbow (releasing tissue that may be causing pressure on the nerve), and sometimes moving the nerve from *behind* the elbow to a new position *in front* of the elbow. This is called anterior transposition. Surgery is usually accomplished utilizing an incision over the inner aspect of the elbow. Smaller-incision endoscopic surgery can also be used to decompress the nerve. Surgery usually results in immediate release of pressure on the nerve, but nerve symptoms may take months to improve. In patients with chronic (greater than 3-6 months) nerve compression, there may be permanent damage to the nerve that is not recoverable with surgery.