Cubital Tunnel Release

Overview
A cubital tunnel release is a surgical procedure to relieve pressure or stretching of the ulnar nerve in the arm, a condition known as cubital tunnel syndrome. Also called the “funny bone” nerve, the ulnar nerve is located on the inner side of the elbow.

Elbow Anatomy
The elbow is a flexible joint with a range of motion. It can flex and rotate. Within the elbow joint is a tunnel of tissue, known as the cubital tunnel, where the ulnar nerve passes through. At the medial epicondyle, a bump on the end of the upper arm bone (humerus), the nerve passes close to the skin surface, leaving it vulnerable to injury. From there, it travels underneath the forearm muscles into the hand.

The ulnar nerve is known for a few things. It provides feeling to the little finger and half of your ring finger, and it controls muscles involved in fine movements in the hand. Larger muscles in the forearm are also served by the ulnar. Since it’s so close to the skin at the elbow, bumping it causes a shocking sensation.

Causes and Signs of Ulnar Tunnel Syndrome
When the ulnar nerve is stretched or compressed, it can cause forearm pain, numbness/tingling in the ring and small fingers, and hand weakness. It may be difficult to grip an object or coordinate your fingers to type. The causes of ulnar tunnel syndrome include:

- Pressure: Direct pressure to the nerve can leave your pinky and ring finger numb, which can happen when you lean on your elbow for a long period of time.
- Stretching: The nerve may be irritated if your elbow is bent long periods; this can cause your hand to fall asleep; for example, when you wake up at night.
- Impact: Striking the inside of the elbow causes a numbness, pain, and a sensation like an electric shock because the nerve has sustained a direct blow.
- Fluid: A buildup of fluid inside the elbow can compress the nerve, causing symptoms such as pain and numbness.
- Anatomy: The ulnar nerve doesn’t always stay put in some people. It can move across the bony bump during movement, which causes irritation; also, soft tissue can thicken over the nerve and affect its function.

If you have symptoms, avoid keeping your arm bent for a long time and don’t rest your elbow on a computer chair armrest. Avoid any activity that puts pressure on the inside surface of the elbow. If symptoms occur at night, wrap a towel around the affected elbow when it is straight to prevent it from bending.
When Is Cubital Tunnel Surgery Needed?
In severe cases of nerve compression, nerves in the arm can be damaged. It’s important to see a doctor if abnormal sensations haven’t completely disappeared within six weeks. Prolonged compression can cause muscle wasting in the hand, which is irreversible, or ulnar neuropathy.

A doctor can assess whether you have ulnar nerve entrapment by reviewing your medical history, daily activities, and examining your arm. A physical exam can check for common causes of ulnar compression, while medical tests may be ordered, including:

- **X-rays:** Images can show bone spurs or signs of arthritis, but they don’t provide a view of the nerve or causes of compression directly.

- **Nerve conduction tests:** Electrical impulses are applied using electrodes to assess nerve function and locate where the compression is occurring. If the nerve isn’t working as it should, signal conduction takes longer.

- **Elbow flexion test:** If symptoms occur with the elbow flexed for under 60 seconds, it is considered a positive result for cubital tunnel syndrome.

Procedure Details

What Is a Cubital Tunnel Release?
If nonsurgical methods haven’t worked, there is severe compression, or it has caused muscle weakness or damage, a cubital tunnel release is one surgical option. This surgery works best for mild to moderate compression. The cubital tunnel is shaped, in part, by a roof or large ligament in the elbow. A surgeon cuts and divides this structure to expand the tunnel. As a result, pressure on the nerve is reduced.

Recovery & Outlook
The ligament heals after the surgery; as it does, new tissue grows across the space created by the surgeon. This leaves more room for the nerve to slide during movement. Surgery is generally performed on an outpatient basis and physical therapy is recommended with cubital tunnel syndrome exercises to help restore motion and strength. Results are usually favorable, and newer techniques include minimally invasive endoscopic procedures, but, generally, it can take time to know the long-term outcome since nerves heal slowly. In some cases, symptoms never fully go away.

Alternatives to Surgery
Doctors often recommend nonsurgical methods before resorting to surgery. These include prescribing non-steroidal anti-inflammatory medications to reduce swelling and avoiding injections that can cause nerve damage, similar to cases of radial tunnel syndrome. Your doctor may recommend wearing a padded cubital tunnel syndrome brace at night (to keep the elbow at a 45-degree angle) or provide nerve gliding exercises to relieve the symptoms of a pinched nerve in the elbow.
Treatment of mild symptoms without surgery is effective in about 50% of patients.

**Call Today for an Appointment**
We employ physicians in Phoenix who are experienced with diagnosing and treating cubital tunnel syndrome and performing cubital tunnel release surgery. Our surgeons specialize in all forms of orthopedic care. For more information, contact Banner CORE Center for Orthopedics at 1.855.409.7520 or [make an appointment online](mailto:make%20an%20appointment%20online).