

Ulnar Nerve Entrapment at the Elbow (Cubital Tunnel Syndrome)

What is Cubital Tunnel Syndrome?

The ulnar nerve is one of the three main nerves in your arm. It travels from your neck down into your hand, and can be constricted in several places along the way. The ulnar nerve gives feeling to the little finger and half of the ring finger. It also controls most of the little muscles in the hand that help with fine movements, and some of the bigger muscles in the forearm that help you make a strong grip. Ulnar nerve entrapment occurs when the ulnar nerve in the arm becomes compressed or irritated. Depending upon where it occurs, this pressure on the nerve can cause altered sensation, numbness, ache or pain in your elbow, forearm, hand, wrist, or fingers. The most common place where the nerve gets compressed is behind the elbow. When the nerve compression occurs at the elbow, it is called "cubital tunnel syndrome."

What causes this syndrome?

In many cases of cubital tunnel syndrome, the exact cause is not known. The nerve is especially vulnerable to compression at the elbow because it must travel through a narrow space with very little soft tissue to protect it.

Common Causes of Compression

When you bend your elbow, the ulnar nerve stretches around the bony ridge of the medial epicondyle. Because this can irritate the nerve, keeping your elbow bent for long periods or repeatedly bending your elbow can cause painful symptoms. For example, many people sleep with their elbows bent. This can aggravate symptoms of ulnar nerve compression and cause you to wake up at night with your fingers asleep.

- In some people, the nerve slides out from behind the medial epicondyle when the elbow is bent. Over time, this sliding back and forth may irritate the nerve.
- Leaning on your elbow for long periods of time can also put pressure on the nerve.

What are the symptoms of Ulna nerve compression at the elbow?

This can present itself in one of the ways below or in a combination of symptoms:

- Generalised ache in the forearm, especially in the inner aspect.
- Pain or ache around the elbow.
- Weakness of grip in the hand.
- Wasting of muscles in the hand.
- Altered sensation or numbness around the inner aspect of the forearm or in the little and ring fingers.
- Some people may experience a flicking sensation as the nerve comes out of the groove behind the elbow.

What are the treatment options?

Non-surgical treatment

Some of the symptoms respond to simple measures, such as avoiding prolonged pressure on the elbow, not holding elbow bent for long periods of time, wearing splints at night that keep the elbow extended and avoiding repeated elbow flexion. In some people the condition progresses inspite of conservative measures and it can result in permanent damage to the nerve if left on its own. This may result in muscle weakness and altered feeling in the hand.

Surgical treatment

If the symptoms does not respond to non-surgical measures, an operation may be needed to relieve the compression on the nerve and to divert the nerve to a new location if needed.

What does surgical treatment entail?

This is a procedure that is usually performed as a day care procedure under a short general anaesthetic. You will have a dressing and a bandage around the elbow immediately after the operation and will need to keep the dressing dry and avoid strenuous activities for 2 weeks. After which normal activities can be resumed in a gradual manner. As with any procedure, there are certain minor risks which can happen uncommonly, like infection or nerve injury. Please discuss this with your doctor.

What is the long term outcome?

In most patients, the nerve recovers well once it is surgically decompressed. It may take 3-6 months for all the symptoms to settle down, as the nerve recovery is a gradual process. If the nerve has been damaged from a long standing compression before surgery, it may take a bit longer to recover. You can expect gradual recovery for up to 12-18 months in such cases.

Shoulder Surgeon