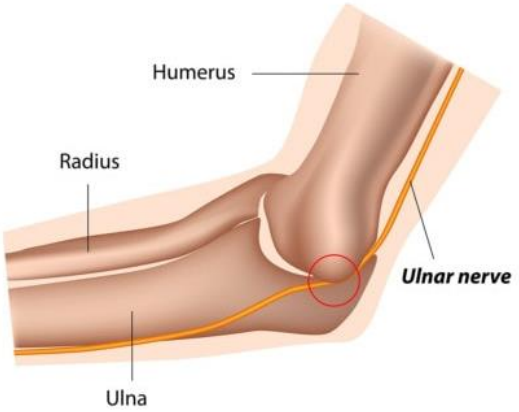
Cubital Tunnel Syndrome

What is it?

The ulnar nerve is one of three major nerves in your arm that controls the feeling and muscles in your hand. It passes just behind the inner section of your elbow (often called the 'funny bone') in a soft tissue compartment called the cubital tunnel. As it passes through the cubital tunnel, the ulnar nerve can be stretched or compressed which causes pain and numbness in the hand. This is called cubital tunnel syndrome.



Pain and numbness in the ring and little fingers is often the commonest and earliest symptom of cubital tunnel syndrome. This is often intermittent during early stages of the disease. In addition, the symptoms may be brought out by leaning on the elbow or holding the elbow in a fixed position e.g., holding a phone, using a keyboard (1).

As the condition progresses, the pain or numbness may become permanent, and the hand might become weak. Weakness of the hand may also be associated with loss of muscle bulk in the hand, in particular, on the back of the hand between the thumb and index finger.

Causes of Cubital Tunnel Syndrome

Often, there is no identifiable cause. Sometimes, the cubital tunnel can become narrow with time due to arthritis or due to a previous elbow fracture.

How is it diagnosed?

Cubital tunnel syndrome is diagnosed clinically – your doctor will speak and examine you thoroughly and based on that, a diagnosis of cubital tunnel syndrome is made. Often, you may also be referred for nerve conduction studies which is a test where small electrical wires, called electrodes, are placed on your skin (2). These will be placed over the length of your arm, from your shoulder to your fingertips. The electrodes will then be used to send very small electric shocks to measure how well the nerve is functioning. Rarely, x-rays and blood tests may also be required.

What are the treatment options available?

Nonoperative treatment options include activity modification to reduce pressure on the nerve for example, using a headset to speak on the telephone or wearing protective pads on the elbows. Your doctor may also recommend a splint around the elbow to reduce bending (3).

In severe cases or where nonoperative treatment has been unsuccessful, surgery may be required. In general, surgery will involve making a small cut on the inner side of the elbow and opening up the cubital tunnel to reduce the pressure on the nerve (decompression in situ). In rare, the nerve may need to be moved to the front of the elbow (transposition) or the tunnel will need to be widened further by removing part of the bone (medical epicondylectomy) (2).

Your surgeon will discuss with you what option is best suited for you.

Frequently asked questions (FAQs)

How long will recovery from surgery take?

Recovery occurs differently on a case by case basis. In mild cases, surgery might allow complete recovery and cessation of symptoms. However, in severe cases, surgery is aimed at preventing the worsening of symptoms but may only allow very limited recovery. Improvement of symptoms can take up to 18 months.

When can I drive/return to work?

You can drive once your wound is completely healed and you feel that you can completely control your vehicle. This can take up to 6 weeks.

You can work once you feel your hand is ready for it, although this may vary according to your job. For desk-based jobs, you may be able to return to work after a few days but for heavy duties e.g. using machinery, lifting heavy objects, this may take up to 6 weeks before you can return to work.

References

1. Nakashian MN, Ireland D, Kane PM. Cubital Tunnel Syndrome: Current Concepts. Curr Rev Musculoskelet Med. 2020 May 30;13(4):520–4.

2. Burahee AS, Sanders AD, Shirley C, Power DM. Cubital tunnel syndrome. EFORT Open Reviews. 2021 Sep 14;6(9):743–50.

3. Cubital tunnel syndrome | The British Society for Surgery of the Hand [Internet]. [cited 2022 Jul 22]. Available from: https://www.bssh.ac.uk/patients/conditions/22/cubital_tunnel_syndrome