CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Cubital Tunnel Syndrome

Cubital tunnel syndrome: pressure on the ulnar nerve at the inner elbow.

Kieran Hirpara 4.0

What you're feeling

You are likely experiencing pain, tingling, or numbness in your ring and little fingers. This happens because the ulnar nerve is being squeezed at your elbow. This condition is known as cubital tunnel syndrome. It is the most common form of entrapment for this specific nerve. It is also the second most common nerve compression issue in your upper arm.

The discomfort often worsens when you bend your elbow for long periods. You might notice it increases when you sleep with your arm curled up. Many patients find that symptoms flare up at night or upon waking. Reaching behind your back to fasten a bra can become difficult. Tucking in a shirt may also trigger pain or weakness. You might feel a sense of instability or clumsiness in your hand.

Men with this condition are more likely to notice muscle wasting in their hand. This is called muscle atrophy. It occurs more often in men than in women. The condition can also affect people who face economic hardship. These patients often require surgery at an earlier age than others.

If your symptoms are mild or moderate, you may benefit from non-surgical treatments. The majority of patients with these levels of severity improve without an operation. However, if you are a child or teenager, the condition is rare. Non-surgical treatment is unlikely to resolve symptoms in younger patients.

Your surgeon will discuss your diagnosis based on probabilities rather than certainties. There is no single test that confirms this condition with 100% accuracy. Clinical evaluation is the most important part of the diagnosis. Nearly forty percent of patients with a provisional diagnosis had either another nerve issue or normal test results. If your symptoms are severe, you may benefit from an earlier referral for hand surgery evaluation.

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What's actually happening

Cubital tunnel syndrome happens when the ulnar nerve gets squeezed or stretched at your elbow. This nerve runs from your neck down to your hand. It passes through a narrow tunnel on the inside of your elbow. Think of this tunnel like a tight sleeve. When the space inside shrinks, the nerve loses its freedom to move.

Your elbow is not just a simple hinge. It is a complex joint where bones and soft tissues interact. As you bend your arm, the shape of your elbow changes. The bone inside the tunnel pushes into the space, narrowing it further. This dynamic change puts pressure on the nerve. Even if you do not bend your arm all the way, repetitive bending can still cause harm. In fact, repeated partial bending might irritate the nerve more than holding it fully straight or fully bent.

The nerve also needs to glide smoothly as you move your wrist and fingers. If your shoulder position changes, it pulls on the nerve at the elbow. This extra tension adds strain to an already sensitive area. For some people, an extra muscle or a loose ligament adds even more pressure. This is less common, but it can trap the nerve further.

When the nerve is compressed, it cannot send signals properly. This leads to the numbness, tingling, or weakness you feel in your ring and little fingers. The problem is not just static pressure. It is the combination of squeezing, stretching, and reduced blood flow to the nerve. Understanding this helps your surgeon choose the right treatment. Surgery aims to create more room for the nerve to move freely again.

What we can do about it

Most patients with mild or moderate symptoms find relief through conservative treatment. Your journey usually starts with self-management and physiotherapy. You may be advised to avoid leaning on your elbow or keeping it bent for long periods. Physiotherapy aims to reduce irritation and improve nerve movement. This approach is unlikely to resolve symptoms in pediatric and adolescent patients, so children may need a different path. Give non-operative treatment a fair chance before considering other options.

Medical management focuses on controlling pain and inflammation. Your surgeon may recommend pain medication or anti-inflammatories to help you manage daily activities. While the evidence does not detail specific injections like cortisone, hyaluronic acid, or PRP for this condition, your clinician will discuss what is appropriate for your case. The goal is to calm the irritated nerve so you can participate in therapy. Note that nearly forty percent of patients with a provisional diagnosis had either another nerve pathology or a normal nerve conduction study, so accurate diagnosis is key before starting medication.

If conservative care reaches its limit, surgery may be considered. Surgery is effective in treating cubital tunnel syndrome, with more than 90% of patients cured or showing improvement. There is no consensus on the single best surgical treatment, and most surgeons use more than one operative procedure based on your specific factors. A subset of patients may benefit from earlier referral for hand surgery evaluation. Reoperation after primary surgery provides satisfactory results for those who fail conservative treatment. Your surgeon will discuss the best approach for you, keeping in mind that clinical evaluation is paramount in diagnosis.

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What to expect

Cubital tunnel syndrome often develops slowly. You may notice symptoms earlier than someone with carpal tunnel syndrome, but this condition tends to progress more gradually. For many people, the condition does not settle on its own. A subset of patients may benefit from earlier referral for hand surgery evaluation and earlier surgery. This can help prevent long-term nerve damage.

Surgery is generally effective. More than 90% of patients are cured or show improvement after treatment. Your surgeon will aim to relieve pressure on the ulnar nerve. This is the nerve that runs through the elbow. Symptoms in an extra-ulnar distribution can resolve following cubital tunnel release. Patient-reported outcomes are good, but they are affected by preoperative symptom severity. If you have had symptoms for a long time, recovery may feel different than for someone with recent onset.

Complications are uncommon. The short-term complication rates of cubital tunnel surgery are low (3.2%). However, these rates are higher for patients with chronic kidney disease. Your surgeon will take care to avoid unnecessary revision surgeries by paying close attention to the structures near the elbow.

If you require surgery again, the results are less predictable and satisfying than primary surgery. Reoperation after primary surgery of cubital tunnel syndrome gave satisfactory results for patients who fail conservative treatment, but outcomes are not guaranteed. There is currently no consensus on the best surgical treatment of cubital tunnel syndrome. Your surgeon will choose a method based on your specific anatomy and their experience.

Recovery feels gradual. You may notice quicker symptom improvement if you have an anomalous muscle in your arm. Most people return to normal activities as pain decreases. However, there are no significant differences in long-term outcomes after open and retractor-endoscopic in situ decompression of the ulnar nerve in cubital tunnel syndrome. The goal is to restore function and reduce discomfort. With proper care, you can expect a good quality of life after treatment.

When to see someone

See your GP if you have persistent pain that does not improve with rest. Ask for a specialist review if you notice weakness or instability in your hand. Cubital tunnel syndrome is the most common form of entrapment of the ulnar nerve. It is also the second most common nerve compression syndrome of the upper extremity. You may present earlier in the course of your disease than patients with carpal tunnel syndrome. Symptoms interfering with sleep or work are a clear sign to seek help. The majority of patients with mild or moderate symptoms benefit from conservative treatment. However, clinical evaluation is paramount because electrodiagnostic testing is often not sensitive enough. Diagnosis should be discussed in terms of probabilities rather than certainties.

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