CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Carpal Tunnel Syndrome

The median nerve passes through the carpal tunnel at the front of the wrist, alongside nine flexor tendons.

Kieran Hirpara 4.0

What you're feeling

You may notice numbness, tingling, or pain in your thumb, index finger, middle finger, and half of your ring finger. This happens because the median nerve is squeezed in your wrist. You might also feel pain in your elbow if you have ulnar nerve compression at the same time. Most patients with both conditions show signs of both issues.

Your symptoms often flare up at night or when you wake up in the morning. You might shake your hands to make the feeling go away. Daily tasks can become difficult. You may struggle with reaching behind your back to fasten a bra or tucking in a shirt. Simple actions like lifting objects or gripping things may feel weak or awkward.

Pain alone, without tingling or numbness, is not typical for this condition. If you have a history of ulnar nerve issues, you are at higher risk of developing carpal tunnel syndrome, especially within the first two years. Women may notice symptoms linked to hormone changes.

If your numbness starts and worsens quickly over just a few hours, tell your surgeon right away. This could be acute carpal tunnel syndrome needing urgent care. Ignoring these signs can lead to persistent symptoms or less successful surgery.

In elderly patients with advanced disease, surgery may not remove all symptoms completely. However, most patients still find the surgery justified and satisfactory. If you are 65 or older, your short-term recovery might be slower. Your surgeon will discuss the best approach for your specific situation.

What's actually happening

Your hand contains a narrow tunnel called the carpal tunnel. Inside this tunnel runs the median nerve, which sends feeling to your thumb, index finger, and middle finger. Think of this nerve like a rope that carries signals

from your brain to your hand. When the tunnel gets too tight, it squeezes that rope. This pressure stops the signals from flowing freely, which is why you feel numbness, tingling, or pain.

Several things can cause this squeeze. Over time, repetitive movements or using hand-held vibratory tools can irritate the nerve. Conditions like diabetes or carrying extra weight can also impair how the nerve functions. Even the shape of your wrist bone structure plays a role, though this difference is usually too small to diagnose on its own.

Your daily habits matter more than you might think. Bending your wrist away from its neutral position can deform the median nerve more than just curling your fingers. This happens whether you are using electronic devices heavily or lightly. Moving your wrist into extension stretches the nerve the most. Turning your palm upward also causes the nerve to slide and shift significantly. These movements reduce the space inside the tunnel, increasing pressure on the nerve.

The ligaments in your wrist help keep it stable and tell your brain where your hand is in space. When these structures are stressed, they contribute to the instability that worsens symptoms. The amount the tissue pushes forward into the tunnel matches exactly with how bad your symptoms feel. This is why your surgeon asks detailed questions about your pain during the exam.

While nonsurgical methods like braces can help by widening the tunnel space, they do not fix the underlying crowding. If the pressure remains, the nerve continues to suffer. Surgery aims to cut the tight band holding the tunnel closed, giving the nerve room to breathe again. This simple release is safe and effective, with 97% of patients experiencing complete or partial relief.

What we can do about it

You can start by trying simple self-care and physical therapy. These nonsurgical methods are effective for mild to moderate symptoms and are often underused. Your therapist may use techniques to help manage pain and gently decompress the nerve. Some patients also find lymphatic drainage techniques helpful for pain relief, though their impact on full functional recovery is not yet clear. You should give conservative treatment a fair chance before considering surgery. This approach allows you to avoid the small risks associated with an operation while still seeking relief.

If self-care is not enough, your surgeon may recommend medical management. This often includes pain medication or anti-inflammatory drugs to reduce swelling and discomfort. You might also receive an injection into the carpal tunnel. Cortisone injections are commonly used to calm inflammation and provide relief. While the evidence does not specify exact durations for hyaluronic acid or PRP in this context, cortisone is a standard option to try. These treatments aim to reduce pressure on the nerve and improve your daily comfort. They serve as a bridge to see if your symptoms can be controlled without an operation.

Surgery is considered when conservative care has reached its limit or if your symptoms are severe. Carpal tunnel decompression surgery is safe and effective, with 97% of patients experiencing complete or partial relief. It involves releasing the tight band of tissue pressing on your nerve. This procedure is suitable for you even if you have diabetes, as outcomes are similar to those in non-diabetic patients. If you also have ulnar nerve compression at the elbow, your surgeon may treat both conditions at the same time. This simultaneous

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approach can lead to comparable surgical outcomes with a potentially reduced time to return to work. Most patients find that this step provides the lasting relief needed to regain normal hand function.

What to expect

Carpal tunnel decompression surgery is safe and effective. Ninety-seven percent of patients experience complete or partial relief from their symptoms. Most people find that their hand function and comfort improve significantly after the procedure. Even if you have severe disease or diabetes, you can expect long-term improvement similar to patients without these conditions.

If your symptoms are mild or moderate, they may improve without surgery. Nonsurgical methods are effective and often underused. One-third of patients see a long-term beneficial effect from corticosteroid injections, especially if they respond well initially. However, the condition often progresses steadily over time rather than resolving on its own. If left untreated, nerve damage can become permanent.

Recovery feels different depending on how advanced your condition was before surgery. Patients with mild or moderate symptoms usually see a faster resolution of daytime numbness and tingling. Those with severe disease may experience a more prolonged recovery. In some cases, numbness may not fully resolve one year after surgery, even though other symptoms improve considerably.

Long-term outcomes are generally favorable. The rate of recurrence is 2.5%, and the rate of persistent symptoms is 3.75%. However, if you had end-stage disease, your surgeon might not be able to eliminate all symptoms entirely. Some patients may still have residual issues, but patient satisfaction remains high because the surgery is justified by the relief it provides.

You do not need routine in-person follow-up after surgery. A telephone clinic is a safe and acceptable way for your surgeon to check on your progress and identify any potential complications early. This approach helps you return to normal life without unnecessary office visits.

When to see someone

See your GP if you have persistent pain or numbness that does not improve with rest. Ask for a specialist review if you notice weakness or instability in your hand. Seek urgent care if numbness starts and worsens over just a few hours, especially after an injury. Your surgeon may recommend early release if you have autonomic findings, as ignoring these can lead to persistent symptoms. Be aware that carpal tunnel syndrome can sometimes be an early sign of systemic amyloidosis. If you have a history of ulnar nerve issues, your risk of developing this condition is significantly higher, particularly within the first 2 years. Early diagnosis helps ensure the best outcome.

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