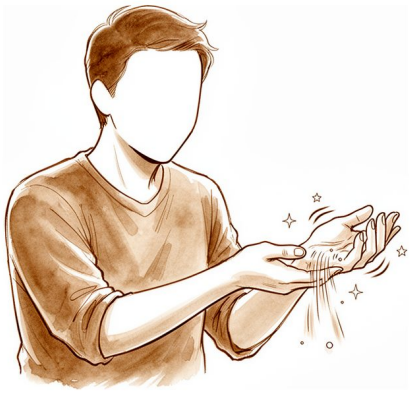
CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Carpal Tunnel Syndrome



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

What you're feeling

Carpal tunnel syndrome happens when the nerve running from your forearm into your hand gets squeezed at the wrist. The tingling and numbness usually show up in your thumb, index and middle fingers. Many people notice it first at night. The tingling can wake you up, and you may shake or rub your hand to settle it. Symptoms often flare on waking too, or after using your hands a lot during the day.

As the condition gets worse, the numbness can become constant and the muscles at the base of your thumb can waste away. That makes pinching and gripping harder. You might struggle to hold a coffee mug, turn a door handle, button a shirt, or hold your phone for long. Some people also feel aching in the hand or wrist that does not line up neatly with those three fingers. That is still common, and these symptoms often settle after treatment as well.

A few things raise the chance of developing carpal tunnel syndrome. Carrying extra body weight and doing highly repetitive hand work are both linked to it. It is also more common in women, and it becomes more frequent through middle age. Sometimes it appears alongside other nerve compression, such as at the elbow. Occasionally it can be a sign of a wider health problem, which is why your surgeon takes a full history rather than only looking at your wrist.

The symptoms can improve without surgery, especially when they are mild to moderate. If they keep going or get worse, it is worth getting them checked. Numbness that comes on quickly and worsens over hours needs urgent attention, and pain that is severe or constant should be assessed promptly too.

What's actually happening

Inside your wrist there is a narrow tunnel formed by the small carpal bones on one side and a tough band of tissue, called the transverse carpal ligament, across the other. Through this tunnel run the tendons that bend

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your fingers, and the median nerve, which gives feeling to your thumb, index and middle fingers. The tunnel has very little spare room. Anything that takes up extra space inside it, or makes it smaller, squeezes the nerve.

That squeezing is the whole problem. Swelling of the tendon linings, fluid changes during pregnancy or with thyroid and kidney problems, a wrist fracture that has healed with extra bone, or simple thickening of the tunnel's roof can all crowd the nerve. Pressure inside the tunnel rises. The nerve reacts by producing the tingling, numbness and night symptoms you read about above. When the pressure stays high over months and years, the nerve itself becomes damaged, which is why numbness can turn constant and thumb muscles can waste.

Doctors describe two patterns. Acute carpal tunnel syndrome is rare: pressure shoots up suddenly, often after an injury, and the hand needs urgent attention. Far more common is the chronic type, where pressure creeps up slowly. At first it may only rise now and then, for example when you hold your wrist bent for a while, such as during sleep. Over time the pressure stays raised all the time and symptoms become constant.

Treatment follows from this picture. Splints and other nonsurgical methods can settle mild to moderate symptoms by easing the pressure. When they do not, an operation called carpal tunnel release cuts the ligament forming the roof of the tunnel. This opens the tunnel up and takes the pressure off the nerve. Most people who have it get complete or partial relief, with 97% of patients experiencing complete or partial relief. The nerve then recovers at its own pace, and feeling can keep improving for longer than was once thought.

What we can do about it

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, starts with the least invasive options that suit your condition. Patients are generally referred to our clinic by their GP; if a physiotherapist has suggested you see us, you will still need a referral from your GP in order to be eligible for the Medicare rebate. At the clinic visit we take a history, examine your hand and arrange imaging if it is needed. For carpal tunnel syndrome we usually begin with non-operative care and consider surgery if that has not given enough improvement.

The first step is often a wrist splint. It holds your wrist straight, which lowers the pressure inside the tunnel and improves blood flow and nerve function. You would wear it for at least 4 weeks, and improvement usually shows up within the first 2 weeks. Wearing it full time may work better than wearing it only at night. A splint that keeps the wrist straight relieves symptoms better than one that bends it back. Hand therapy and stretches can sit alongside this, and some people find lymphatic drainage techniques help with pain. Used early and consistently, these measures can settle mild to moderate symptoms and may avoid surgery altogether.

If a splint alone is not enough, we may offer a cortisone (steroid) injection into the tunnel. This reduces swelling around the nerve. Combining the injection with splinting gives a modestly greater reduction in symptoms, better functional recovery and better nerve function at 12 weeks than the injection alone. We do not use steroid tablets for this condition, because even a short course carries long-term risks that are not fully known.

If these steps have not settled your symptoms, surgery may be the next option. Carpal tunnel release cuts the ligament forming the roof of the tunnel, which takes the pressure off the nerve. Surgery relieves symptoms

better than splinting. It is a shared decision: we will talk through what you have tried, how bad your symptoms are and what matters to you, and decide together whether surgery is right for you.

What to expect

Carpal tunnel syndrome does not usually stay the same. Mild symptoms can settle on their own or with simple treatment such as a splint. Some people get long-term relief from a cortisone injection, especially when it works well at first. But when symptoms are severe or have been present a long time, they rarely go away without treatment. Left alone, the numbness tends to become constant and the hand can weaken.

With the right treatment, most people improve. The great majority of people who have surgery get complete or partial relief. Feeling and hand function usually keep getting better over the first 12 weeks, and improvement can continue well beyond a year. Nerve recovery is slow, so be patient with your hand.

How quickly you improve depends partly on how severe things were to begin with. If your numbness and tingling were mild or moderate, they tend to settle sooner than when the nerve has been squeezed hard for a long time. If your symptoms were severe, recovery can take longer and may not be complete even a year later, particularly the numbness. Even then, most people still feel a real reduction in their symptoms.

A few things are worth knowing. Some people notice extra tingling for a while after the nerve is released. Symptoms outside the three main fingers also tend to settle, with more than 85% of these resolving. If you have diabetes, surgery helps about as much as it does for people without diabetes.

Sometimes symptoms do not fully settle, or they come back after a period of relief. This is uncommon, and it can usually be worked out why. A small number of people need a further operation, and that is more likely in the first year than later. If you are one of them, a second release can still bring meaningful improvement in hand function and quality of life.

Your surgeon will talk with you about where your own symptoms sit on this spectrum, so you know what a realistic recovery looks like for you.

When to see someone

See your GP if tingling or numbness in your thumb, index or middle fingers keeps coming back, wakes you at night, or stops settling after a few weeks of a splint. Ask for a specialist review if the numbness becomes constant, your grip weakens, or the muscles at the base of your thumb look flatter than they used to. Severe or constant pain also deserves a prompt assessment rather than waiting it out.

Go to an emergency department if numbness comes on suddenly and worsens over hours, especially after a wrist injury. That pattern needs same-day assessment, because pressure inside the tunnel can rise fast and the nerve needs relieving quickly.

A few warning signs call for urgent investigation rather than routine review. Pain that is severe and constant, numbness that arrives without any obvious trigger, or symptoms that do not match the usual three-finger

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pattern can all point to something less common going on. Tell your GP about them clearly, because they change how quickly you should be seen.

If you have already had a release and symptoms return or never fully settled, go back to your surgeon. Imaging or nerve tests can usually show why, and a second operation helps many people in that situation.

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