# **Dealing with Carpal Tunnel Syndrome**

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The carpal tunnel is a narrow passageway surrounded by bones and ligaments on the palm side of your hand. When the median nerve - the main nerve on the front of your forearm - is compressed, the symptoms can include numbness, tingling and weakness in the hand.

Pressure on the median nerve causes Carpal Tunnel Syndrome or CTS - a painful condition that can get worse over time.

## WHY IT'S IMPORTANT TO GET TREATMENT

If pressure on the median nerve continues, it can lead to nerve damage and worsening symptoms. To prevent permanent damage, surgery to take pressure off the median nerve may be recommended for some patients.

See your doctor if you have symptoms of carpal tunnel syndrome that interfere with your normal activities and sleep patterns. Permanent nerve and muscle damage can occur without treatment.



## SYMPTOMS OF CTS

Carpal tunnel syndrome symptoms usually start gradually and include:

• **Tingling or numbness.** You may notice tingling and numbness in your fingers or hand. Usually



the thumb and index, middle or ring fingers are affected, but not your little finger. You might feel a sensation like an electric shock in these fingers.

The sensation may travel from your wrist up your arm. These symptoms often occur while holding a steering wheel, phone or newspaper, or can wake you from sleep.

Many people "shake out" their hands to try to relieve their symptoms. The numb feeling may become constant over time.

• Weakness. You may experience weakness in your hand and drop objects. Weakness may make it difficult to perform fine movements such as buttoning your clothes.

#### WHAT CAUSES CTS?

• **Anatomy**. A wrist fracture or dislocation, or arthritis that deforms the small bones in the wrist, can alter the space within the carpal tunnel and put pressure on the median nerve. People who have smaller carpal tunnels may be more likely to have the problem.

• **Gender.** Generally, CTS is more common in women - perhaps because the carpal tunnel area is smaller in women than men.

• **Nerve-damaging conditions.** Some chronic illnesses, such as diabetes, increase your risk of nerve damage, including damage to your median nerve.

• **Inflammatory conditions.** Rheumatoid arthritis and inflammatory conditions can affect the lining around the tendons in your wrist and put pressure on your median nerve.

- **Obesity.** Excess weight is another risk factor.
- **Body fluid changes.** Fluid retention may increase the pressure within your carpal tunnel, irritating the median

nerve. This is common during pregnancy and menopause.

• Workplace factors. Work that requires prolonged or repetitive flexing of the wrist can create harmful pressure on the median nerve or worsen existing nerve damage.



#### PREVENTION

- Reduce your force and relax your grip. If your work involves a cash register or keyboard, for instance, hit the keys softly. For prolonged handwriting, use a big pen with an oversized, soft grip adapter and free-flowing ink.
- Take short, frequent breaks. Gently stretch and bend hands and wrists periodically. Alternate tasks when possible. This is especially important if you use equipment that vibrates or requires a lot of force. Even a few minutes each hour can make a difference.
- Watch your form. Avoid bending your wrist all the way up or down. A relaxed middle position is best. Keep your keyboard at elbow height or slightly lower.
- Improve your posture. Incorrect posture rolls shoulders forward, shortening your neck and shoulder muscles and compressing nerves in your neck. This can affect your wrists, fingers and hands, and can cause neck pain.
- Change your computer mouse. Make sure that your computer mouse is comfortable and doesn't strain your wrist.
- Keep your hands warm. You're more likely to develop hand pain and stiffness if you work in a cold environment. If you can't control the temperature at work, put on fingerless gloves that keep your hands and wrists warm.



## TREATMENT OF CTS

Non-Surgical treatment may include:

- **Splinting your hand.** This helps keep your wrist from moving. It also eases the compression of the nerves inside the tunnel.
- Anti-inflammatory medication. These may be oral or injected into the carpal tunnel space. These reduce the swelling.
- Worksite changes. Changing position of your computer keyboard or making other ergonomic changes can help ease symptoms.
- Exercise. Stretching and strengthening exercises can be helpful in people whose symptoms have gotten better. These exercises may be supervised by a physical or occupational therapist.

#### Surgery for carpal tunnel syndrome

Surgery for carpal tunnel syndrome is usually done as an outpatient.

There are two types: open and endoscopic surgery. You may have local or general anesthesia, or both, for either.



During open surgery, the tissue that is pressing on the nerves is cut. This

relieves the pressure on the nerve.

The surgeon puts a long, thin rod through a tiny cut on the wrist during endoscopic surgery. This rod has a camera and light so the surgeon can see inside your wrist. Any tissue is cut with tiny surgical tools.

After surgery, you will need to wear the splint for a week or two.

#### RECOVERY

Immediately following surgery, you will be encouraged to elevate your hand above your heart and move your fingers to reduce swelling and prevent stiffness.

You should expect some pain, swelling, and stiffness after your procedure. Minor soreness in your palm may last for several weeks to several months.

Full range of finger motion and early symptom relief is usually seen within two weeks after the stitches have been removed.

Grip and pinch strength usually return by about 2 to 3 months after surgery.

You may have to wear a splint or wrist brace for several weeks. You will, however, be allowed to use your hand for light activities, taking care to avoid significant discomfort. Driving, self-care activities, and light lifting and gripping may be permitted soon after surgery.

You can usually return to most activities in six weeks. Your return to work depends on what you do and how

much control you have over your workplace actions and equipment.

