



## What is Carpal Tunnel Syndrome?

Carpal tunnel syndrome (CTS) is pain, tingling, and weakness due to pressure on the median nerve in your wrist. The median nerve and several tendons run from your forearm to your hand through a small space in your wrist called the carpal tunnel. The median nerve controls movement and feeling in your thumb and first three fingers (not your little finger).



## Causes and Risk Factors

Pressure on the median nerve causes carpal tunnel syndrome. This pressure can come from swelling or anything that makes the carpal tunnel space smaller. Sometimes it is not possible to tell what causes the increased pressure. However, certain lifestyle and medical risk factors that may contribute to carpal tunnel syndrome include:

- Illnesses such as hypothyroidism, rheumatoid arthritis, and diabetes
- Pregnancy
- Obesity
- Forceful gripping or grasping activities with your hands
- Making the same hand or wrist movements over and over, especially if the wrist is bent down (your hands lower than your wrists)
- Wrist injuries and bone spurs
- Smoking, because it can reduce blood flow to the median nerve

## Symptoms

Carpal tunnel syndrome can cause tingling, numbness, weakness, or pain in the fingers or hand. Some people may have pain that can radiate from the hand all the way up the arm. Symptoms most often occur in the thumb, index finger, middle finger, and half of the ring finger. If you have problems with your other fingers but your little finger is fine, this may be a sign that you have carpal tunnel syndrome. Pain in the wrist or hand is often greater at night or early morning.

## Prevention

To help prevent carpal tunnel syndrome or keep it from coming back, take care of your basic health. Stay at a healthy weight. If you smoke, consider quitting. Exercise to stay strong and flexible. If you have a long-term health problem, such as arthritis or diabetes, follow your doctor's advice for keeping your condition under control.

Also, take good care of your wrists and hands by:

- Keeping your wrist in a neutral position as much as possible. Your wrist is in a neutral position when it is straight or only slightly bent. Holding a glass of water is an example of your wrist in a neutral position.
- Keeping your wrist straight while:
  - Using the computer, typing, or using the mouse
  - Writing
  - Driving
  - Using scissors, power tools, pliers, screwdrivers, or other tools
  - Playing the piano
  - Knitting, crocheting, and embroidering
- Using your whole hand—not just your fingers—to hold objects.
- Using a soft touch when typing. A gel pad may help keep your wrist straight.
- Relaxing your shoulders when your arms are at your sides.
- Avoiding sleeping on your hands.

- Switching hands often when you need to repeat movements.
- Stretching regularly throughout the day.

## Diagnosing Carpal Tunnel Syndrome

Your doctor may do a physical exam and ask about your health and activities. Your doctor will ask if you have any health problems—such as arthritis, hypothyroidism, or diabetes—or if you are pregnant. He or she will also ask if you recently hurt your wrist, arm, or neck. Your doctor will want to know about your daily routine and any recent activities that could have hurt your wrist.

During the exam, your doctor will check the feeling, strength, and appearance of your neck, shoulders, arms, wrists, and hands.

Your doctor may also suggest tests, such as:

- Blood tests to see if another health problem might be causing your symptoms.
- Nerve testing to find out if the median nerve is working as it should.

## Treatment

**At Home:** Mild symptoms can usually be treated with home care. The sooner you start treatment, the better your chances of reducing symptoms and preventing long-term damage to the nerve.

You can do several things at home to help your hand and wrist feel better:

- Stop activities that cause numbness and pain. Rest your wrist between activities.
- Take frequent breaks from repetitive hand motions. Switch between different activities as often as possible.
- Change the way you do activities so your wrist is not stressed. Try to keep your wrist straight as much as possible.
- Do wrist circles and stretch your fingers every hour.
- Reduce the amount of salt in your diet to help decrease swelling.
- Maintain good posture. Avoid rounding your shoulders or slouching.
- Ice your wrist for 10 to 15 minutes, 1 or 2 times an hour.
- Over-the-counter (OTC) nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, may relieve pain and reduce swelling. Carefully consult the package so that you take the correct dosage. If you have questions, please contact your doctor.
- Wear a wrist splint at night to keep your wrist in a neutral position. This takes pressure off your median nerve.

### Corticosteroid Injections (Shots):

Your doctor may recommend corticosteroid shots directly into your wrist if:

- your symptoms are frequent or increasing
- you have more numbness in your hand
- your hand is taking longer to wake up

- you are not responding to the ice and splint

Corticosteroids, such as cortisone, can relieve some of the pressure on the median nerve.

**Surgery:** If your nerve test is positive and the injections have worn off, or if you prefer not to receive shots, your doctor may refer you to the Orthopedic Department (or Plastic Surgery Department at some locations) for a surgery consultation. The surgeon will discuss the risks and benefits of surgery and can help you decide what the best option is for you.

## Call Kaiser Permanente if:

- Your symptoms do not get better or you still have numbness in your hand or wrist after 1 month of home treatment.
- You are experiencing severe pain or numbness that does not go away with rest, ice, changing positions, or a normal dose of pain relievers like aspirin or ibuprofen.
- Your hand grip feels weak.

### Other resources

- Visit your doctor's home page at [kp.org/mydoctor](http://kp.org/mydoctor) to use online health tools, view your Preventive Health Reminders, check most lab results, and much more.
- Contact your Kaiser Permanente Health Education Center or Department for health information, programs, and other resources.

This information is not intended to diagnose health problems or to take the place of medical advice or care you receive from your physician or other health care professional. If you have persistent health problems, or if you have additional questions, please consult with your doctor. If you have questions or need more information about your medication, please speak to your pharmacist. Kaiser Permanente does not endorse the medications or products mentioned. Any trade names listed are for easy identification only.