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 3 fingers (not your little finger).

Causes and risk factors

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

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

Symptoms

CTS can cause tingling, numbness, weakness, or pain in the fingers or hand. Some people may have pain that radiates from the hand all the way up the arm.

Symptoms of CTS most often occur in the thumb, index finger, middle finger, and half of the ring finger (but not the little finger). Pain in the wrist or hand is often worse at night or early morning.

Prevention

To help prevent CTS or keep it from coming back or getting worse:

- Keep your hands and wrists in a neutral position as much as possible while you:
  - Use your computer keyboard or mouse
  - Write
  - Text
  - Drive
  - Use scissors, pliers, screwdrivers, or other tools
  - Play the piano
  - Chop with a knife
- Avoid tight gripping and pinching.
- Use your whole hand—not just your fingers—to hold objects.
- Avoid sleeping on your hands.
- Wear wrist splints at night or while doing repetitive tasks.
- Stretch your hands throughout the day.
- Switch hands often when you need to repeat movements.

If you work on a computer:

- Use a soft touch when typing. A gel pad may help keep your wrists straight.
- Switch hands periodically if using a mouse.
- Relax your shoulders with your arms at your sides.
Take care of your health including:
- Staying at a healthy weight.
- Exercising for strength and flexibility.
- Quitting smoking, if you smoke.
If you have a long-term health problem, such as arthritis or diabetes, follow your doctor’s advice for keeping your condition under control.

Diagnosis
Your doctor may do a physical exam and ask about:
- Health problems—such as arthritis, hypothyroidism, or diabetes.
- If you are pregnant.
- If you recently hurt your wrist, arm, or neck.
- 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:
- 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
Home care
Mild symptoms can usually be treated at home. 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 isn’t stressed. Try to keep your wrist straight.
- 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.
- 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 getting worse.
- Hand becomes more numb.
- Hand is taking longer to wake up.
- Hand isn’t responding to the ice and splint.
Corticosteroids, such as cortisone, can relieve some of the pressure on the median nerve.

Surgery
Your doctor may refer you to the Orthopedic Department (or Plastic Surgery Department at some locations) for a surgery consultation if:
- Your nerve test is positive and the injections have worn off.
- You prefer not to receive shots.
The surgeon will discuss the risks and benefits of surgery with you.

Call Kaiser Permanente if:
- Your symptoms don’t 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.

Additional resources
For more health information, tools, classes, and other resources:
- Search kp.org/mydoctor
- Contact your local Health Education Department

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. Some photos may include models and not actual patients.