

Patient information: Carpal tunnel syndrome (The Basics)

Written by the doctors and editors at UpToDate

What is carpal tunnel syndrome? — Carpal tunnel syndrome is a condition that causes pain and numbness in the fingers and hands, and sometimes the arms. It happens when a nerve in the wrist called the "median nerve" gets pinched or squeezed.

The median nerve goes through a tunnel in the wrist that is formed by the bones of the wrist and a tough band of tissue called a "ligament" ([figure 1](#)). Experts do not know exactly how the nerve can get pinched, but they think it might happen when:

- Tendons that go through the same tunnel get swollen (tendons are bands of tissue that connect muscles to bones)
- Tissues surrounding the tendons harden
- People hold their hands in a position that makes the tunnel smaller

The median nerve carries signals about sensation – it tells the brain what the hand is "feeling." It gets input from these parts of the hand:

- Thumb
- Index finger
- Middle finger
- Parts of the ring finger
- Parts of the palm closest to the thumb

Women are more likely than men to get carpal tunnel syndrome. Being overweight probably increases the risk of carpal tunnel syndrome. Examples of other conditions that might increase the risk include pregnancy, diabetes, and rheumatoid arthritis.

What are the symptoms of carpal tunnel syndrome? — The symptoms include pain and tingling in the thumb and the index, middle, and ring fingers ([figure 1](#)). Often the symptoms affect both hands, but one hand might have worse symptoms than the other.

In some cases, pain and tingling can extend to the whole hand or even up to the wrist and forearm. Rarely, pain and tingling extends past the elbow to the shoulder.

Symptoms are usually worst at night and can even wake you up from sleep. The symptoms can also flare up when you do things that involve bending and unbending your wrist or raising your arms. Some activities can trigger symptoms in people with carpal tunnel syndrome. But they do not actually cause the condition. Examples include:

- Sleeping
- Driving
- Reading
- Typing
- Holding a phone

In many people, the symptoms come and go. But some people eventually have symptoms all the time. They can end up having trouble moving their fingers or controlling their grip.

Is there a test for carpal tunnel syndrome? — Yes. Electrical tests of the nerves can show if you have carpal tunnel syndrome, but these tests are not always necessary.

Your doctor will probably be able to tell if you have carpal tunnel syndrome by learning about your symptoms and doing an exam. During the exam, he or she might tap on or press on your wrist, or ask you to hold your hands in ways that are known to make symptoms worse.

Electrical nerve tests can prove if you really have carpal tunnel syndrome. Doctors usually order these tests for people who might need surgery to treat their condition.

- **Nerve conduction studies** – Nerve conduction studies can show whether the median nerve is carrying electrical signals the right way. In people with carpal tunnel syndrome, signals can be slow or weak.
- **Electromyography** – Electromyography, also called EMG, can show whether the muscles in the hand and wrist are responding the right way to electrical signals. This test is most useful in checking whether another condition besides carpal tunnel syndrome might be causing the symptoms.

Should I see a doctor or nurse? — See your doctor or nurse if you develop the symptoms described above, and they bother you.

How is carpal tunnel syndrome treated? — Treatments are often combined and can include:

- **Wrist splints** – Some people feel better if they wear splints at night that keep their hands in a "neutral position." The neutral position is when the wrist is not bent forward or backward and the fingers are curled naturally toward the palm.
- **Steroid shots or pills** – Steroids are a group of medicines that control inflammation and swelling. To treat carpal tunnel syndrome, doctors sometimes inject steroids into the carpal tunnel. People who do not want to get a shot can take steroids in pill form instead. But the pills are less effective than the shot.
- **Other physical treatments** – There is some evidence that yoga or another treatment called "carpal bone mobilization" can help people with carpal tunnel syndrome. For carpal bone mobilization, a physical or occupational therapist moves your hand or wrist around in a special way, so that the bones in the wrist move.
- **Surgery** – Doctors offer surgery to people who have ongoing or severe nerve damage that is causing the symptoms of carpal tunnel syndrome. Surgery for carpal tunnel syndrome involves cutting the ligament that stretches across the wrist to form the tunnel. However, women who get carpal tunnel syndrome during pregnancy usually don't need surgery. In most cases, the symptoms gradually improve after the baby is born.

Can carpal tunnel syndrome be prevented? — It's unclear whether there is any way to prevent carpal tunnel syndrome. People sometimes think that the condition happens because they use a computer too much or do other movements repeatedly with their hands. The truth is, there is no good proof that doing repeated hand movements increases the risk of carpal tunnel syndrome.

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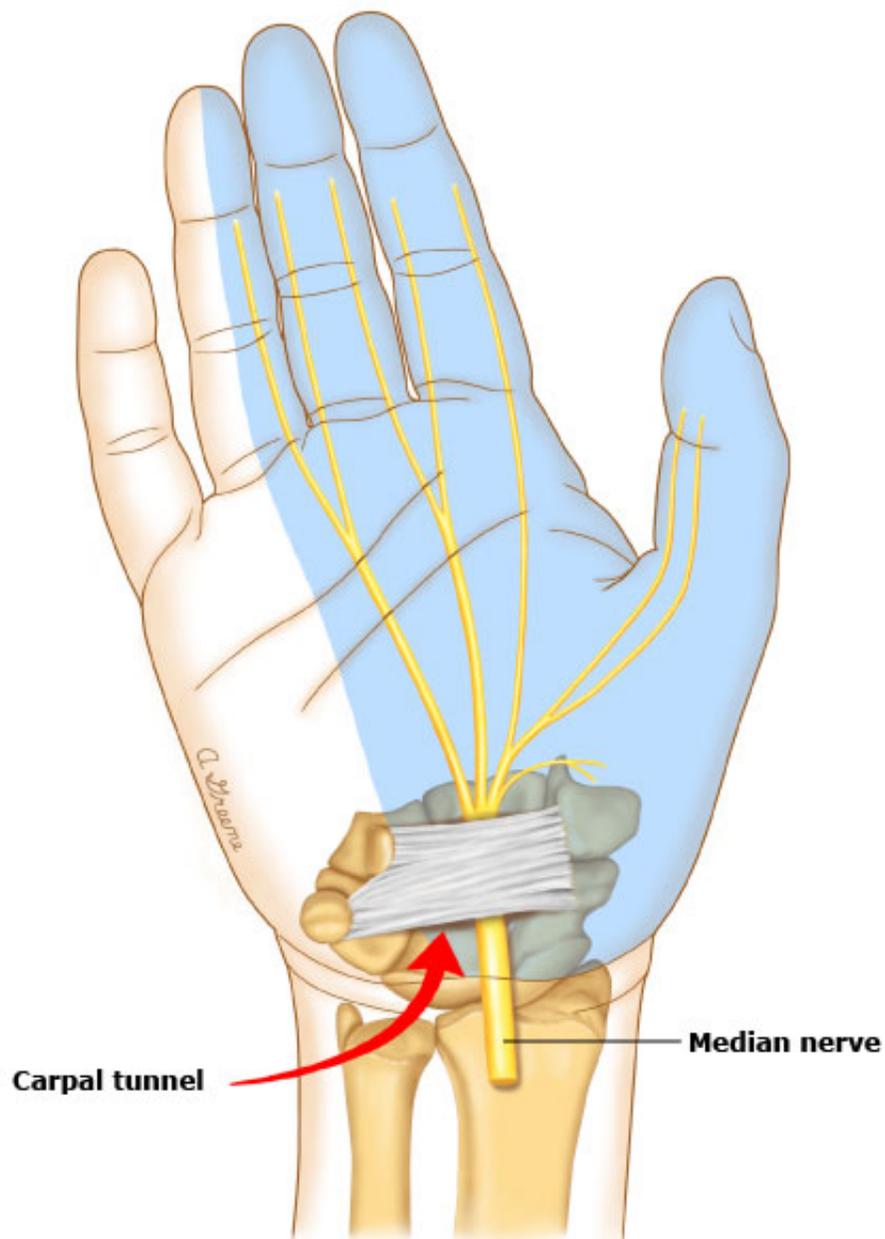
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GRAPHICS

Carpal tunnel syndrome



The carpal tunnel is a tunnel in the wrist that is formed by the bones of the wrist and a tough band of tissue called a "ligament." Carpal tunnel syndrome happens when a nerve that goes through that tunnel, called the "median nerve," gets pinched or squeezed. Carpal tunnel syndrome causes pain and numbness most often in the areas shaded here in blue.

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