

# Carpal Tunnel Syndrome

## Overview, Symptoms, & Causes

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## Overview of Carpal Tunnel Syndrome

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Carpal tunnel syndrome (CTS) occurs when the median nerve, which runs from your forearm, through your wrist, into the palm of your hand, becomes pressed or squeezed at the wrist.

The median nerve and the tendons that bend the fingers pass through the carpal tunnel—a narrow, rigid tube of ligament and bones at the base of the hand. The median nerve provides feeling to the thumb, index, and middle finger, and part of the ring finger (but not the little finger). It also controls some small muscles at the base of the thumb.

## Who Gets Carpal Tunnel Syndrome?

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CTS is a common nerve condition.

Anyone can get CTS, but the condition usually occurs in adults. Women are more likely than men to get carpal tunnel syndrome.

# Symptoms of Carpal Tunnel Syndrome

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Symptoms usually start slowly, with numbness or tingling in the fingers, especially the thumb and the index and middle fingers. Symptoms often first appear in one or both hands at night but go away during the day. You may feel numbness, weakness, or tingling in your fingers. Your fingers may also feel swollen and cold. You might wake up and feel you need to “shake out” your hand or wrist.

As your symptoms get worse, you might feel symptoms during the day, especially with certain activities that require the use of your wrist and hand. These may include talking on the phone, reading a book or newspaper, or driving.

In chronic (long-term) or untreated cases, the fingers can feel numb all the time and you may have difficulty grabbing small objects, such as buttons and zippers. The muscles at the base of the thumb may also become so weak that it becomes difficult or impossible to grasp small objects.

## Causes of Carpal Tunnel Syndrome

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Researchers do not know the causes of carpal tunnel syndrome. The condition CTS may result from a combination of factors that increase pressure on the median nerve and tendons in the carpal tunnel, rather than a problem with the nerve itself. Sometimes, irritated tendons can thicken or swell, which can narrow the tunnel and compress the median nerve. In many cases, no single cause can be identified. Contributing factors may include the following:

### Environmental Factors

- Trauma or injury to the wrist, such as sprain or fracture, that causes swelling.
- Mechanical problems in the wrist joint.
- Repeated use of vibrating machinery.

### Medical Conditions

- Problems with the pituitary gland or the thyroid gland.
- Rheumatoid arthritis or other autoimmune diseases.

- Diabetes or other metabolic disorders that make the body's nerves susceptible to compression.
- Fluid retention during pregnancy or menopause.

## Other

- Age: CTS usually occurs in adults.
- Sex: women are more likely than men to develop CTS.