

Introduction

Carpal tunnel syndrome is a common condition that causes pain and numbness in the hand. If not treated, carpal tunnel syndrome may cause pain that is difficult to manage. If this happens, surgery may be needed.

This reference summary explains what you can do to help prevent carpal tunnel. It briefly reviews what carpal tunnel is, its causes and symptoms.

Carpal Tunnel Syndrome

A major nerve called the median nerve passes through a narrow tunnel at the wrist.

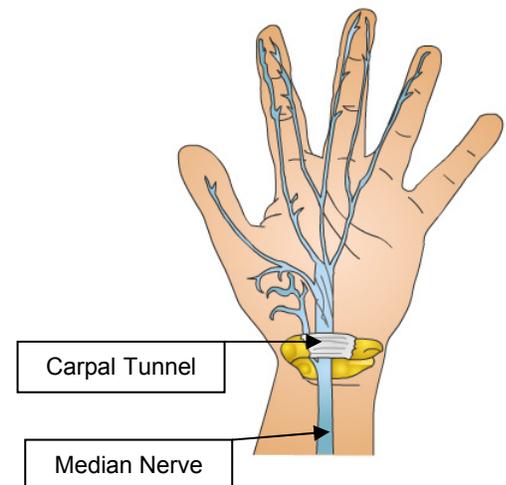
This tunnel is called the carpal tunnel, which means the wrist tunnel.

The floor of the carpal tunnel is made of bones called the carpal bones and the roof is made of a ligament. A ligament is a group of fibrous tissue that connects bones and cartilage together.

The median nerve supplies sensation to the thumb, index finger, middle finger, and half of the ring finger. It also supplies some of the thumb muscles.

Several tendons pass through the carpal tunnel along with the median nerve. Tendons are connective tissue that connects muscles to bones.

Sometimes the ligament in the carpal tunnel can get thicker. This gives the nerve less room and puts pressure on it.



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When the nerve has extra pressure, it can cause numbness and pain in the first three to four fingers of the hand. When this happens, the condition is called carpal tunnel syndrome or CTS.

The symptoms of carpal tunnel usually happen to the palm of the hand. They start in the wrist and shoot down into the hand.

Sometimes the numbness and some pain can reach the forearm. Carpal tunnel syndrome does not cause pain higher than the forearm.

Carpal tunnel syndrome symptoms can get worse at night. CTS may even be bad enough to wake you up.



People with carpal tunnel syndrome often drop objects because of the weakness and numbness in the hand.

Causes

The most common reason for carpal tunnel syndrome is the ligament getting thicker. This is thought to be caused by the repetitive use of the hands. However, there may be other reasons for this syndrome, which are discussed in this section.

Swelling of the tissues and bones surrounding the carpal tunnel may cause carpal tunnel pain. This is usually because of arthritis.

A thyroid gland that does not work right and a pituitary gland that makes extra growth hormone could also cause swelling in the tissues of the carpal tunnel and cause the symptoms.

Being overweight or pregnant can cause or worsen carpal tunnel syndrome.

Fractures in the wrist can affect the nerve in the carpal tunnel, causing the same symptoms.

Complications of diabetes may damage the median nerve, resulting in symptoms similar to those of carpal tunnel.



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Preventing CTS

The most common cause of carpal tunnel is thought to be repetitive use of the hands. Activities such as using a nail gun repeatedly, painting, typing, knitting and writing for long periods of time are examples of the kinds of repetitive movements that may cause carpal tunnel.

If you use your hands in repetitive ways, it is important to rest the hands every ten to fifteen minutes. You can decrease continuous stress on the hand by taking a few minutes to rest. Moving your hands and wrists around in a different motion for a minute or so may also help decrease stress on the hands.

Do not use more force than needed to perform a task involving the hands. If your work involves typing, for instance, hit the keys softly. If you are going to be writing with your hands for a long time, use a big pen with an easy grip and free-flowing ink. This way you won't have to grip the pen tightly or press as hard on the paper.

Proper workstation and desk setup is also important. Your hands and forearms should be as straight as possible. The wrist should not be bent down or propped all the way up for long periods of time. The hand should not be pointing too far in or out for long periods of time.

In cases of typing for example, an angled keyboard may help more than a regular straight keyboard. A soft wrist rest may also help reduce some stress on the bones and ligaments of the wrist.



Wrist Rest



Angled keyboard

Preventing Diseases

In addition to avoiding repetitive movements of the hand, you can prevent carpal tunnel by preventing or managing diseases that can cause it or make it worse.

Treating rheumatoid arthritis and other arthritic conditions may prevent carpal tunnel. Keeping your hands warm may also prevent your hands from getting cold and stiff. If you use a keyboard, you can use fingerless gloves to keep the hand and wrist warm while still typing.

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If you have diabetes, managing your diabetes and controlling your blood sugar level may help prevent permanent damage to the median nerve.

Managing diabetes depends on eating right, exercising, measuring your blood glucose level, and taking medications as they were prescribed to you.

If you have thyroid disease, your doctor can prescribe hormone replacement to you to help prevent carpal tunnel syndrome and other complications.

Losing weight may also help overweight patients prevent carpal tunnel syndrome.



Conclusion

Carpal tunnel syndrome is a very common condition that may require surgery if it is not prevented or if the pain is not well controlled.

There are many possible causes of carpal tunnel syndrome, but repetitive motion of the hand is the major cause.

To prevent carpal tunnel

- Rest your hands every 10 to 15 minutes as you use them
- Avoid bending your hands all the way up or down
- Do not use more force than needed to do a hand task
- Improve your posture as you sit
- Prevent and manage rheumatoid arthritis and other diseases that can cause carpal tunnel

These prevention tips are not a guarantee that you will prevent carpal tunnel. But, they can reduce your risk for getting carpal tunnel syndrome. Talk with your doctor and decide which prevention methods will work best for you.



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