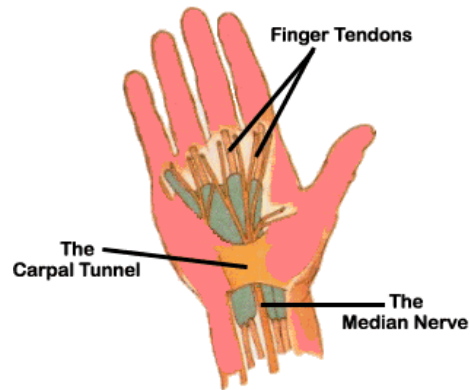


Carpal Tunnel Syndrome

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What Is Carpal Tunnel Syndrome?

At the base of the palm is a tight canal or “tunnel” through which tendons and nerves must pass on their way from the forearm to the hand and fingers. The nerve that passes through this narrow tunnel to reach the hand is called the Median Nerve. This narrow passage between the forearm and hand is what we call “The Carpal Tunnel”.

The Carpal Tunnel is normally quite snug and there is just barely enough room in it for the tendons and nerves that have to pass through it. If anything takes up extra room in the canal, things become too tight and the nerve in the canal becomes constricted or “pinched”. This pinching of the nerve causes numbness and tingling in the area of the hand that the nerve travels to. The condition that results when the Median Nerve is being pinched in The Carpal Tunnel is commonly referred to as “Carpal Tunnel Syndrome” or “CTS”.

Causes of Carpal Tunnel Syndrome?

The most common cause of Carpal Tunnel Syndrome is inflammation of the tendons in the tunnel, which can normally be attributed to repetitive use of the hand and/or wrist.

Repetitive Strain Injuries (RSIs) can happen to anyone whose work calls for long periods of steady hand movement, from musicians & dental hygienists to meat cutters & cashiers. RSIs tend to come with work that demands repeated grasping, turning and twisting; they are especially likely if the work requires repeated twisting or involves repetitive vibration, as in hammering nails or operating a power tool. Stressful hand, arm and neck positions — whether from working at a desk, long-distance driving or waiting on tables — only aggravate the potential for damage.

Symptoms

Symptoms include tingling or numb feeling in the hand and/or fingers; Shooting pains in the wrist or forearm, and sometimes extending to the shoulder, neck and chest, or foot; and difficulty clenching the fist or grasping small objects. For many unfortunate sufferers, CTS has a pattern of flaring up through the night thereby making sleep difficult. CTS symptoms can also be expected to arise frequently while performing the activity that is the cause of the condition in the first place

Diagnosis

Your doctor obtains a history of the problem, followed by a thorough physical examination. Your doctor may also request electrical studies of the nerves in the wrist. Several tests are available to see how well the median nerve is functioning, including the Nerve Conduction Velocity Test (NCV), which measures how fast nerve impulses are conducted through the nerve.

Treatment

Non-Operative Treatment

In the early stages of carpal tunnel syndrome, a simple brace will sometimes decrease the symptoms, especially the numbness and pain occurring at night. These braces simply keep the wrist in a neutral position. When the wrist is in this position, the carpal tunnel is as big as it can be - so the nerve has as much room as possible. The brace needs to be worn at night while you sleep. If you have symptoms during the day as well, the brace may help reduce those symptoms as well.

Anti-inflammatory medications may also reduce the symptoms of carpal tunnel syndrome. These medications include the common over the counter medications such as ibuprofen and aspirin. In some studies, high doses of Vitamin B-6 have also shown some efficacy in decreasing the symptoms of carpal tunnel syndrome.

There is some evidence that exercises may prevent or control the symptoms of carpal tunnel syndrome. Also, proper wrist position may contribute to the problem. Workplace ergonomics have long been thought to be a contributing factor and alteration of the worksite is a must for patients doing any type of repetitive work.

If these simple measures fail to control your symptoms, a cortisone injection into the carpal tunnel may be suggested. This medication will decrease swelling and may give temporary relief of symptoms.

Surgical Treatment

If all of the previous treatments fail to control the symptoms of carpal tunnel syndrome, surgery may be required to reduce the pressure on the median nerve. There are several different surgical procedures designed to relieve pressure on the median nerve. The most common are the traditional open incision technique, and the newer Endoscopic Canal Tunnel Release, which uses a smaller incision and a fiber optic TV camera to help see inside the carpal tunnel.