

What is carpal tunnel syndrome?



Carpel tunnel syndrome (CTS) occurs when the median nerve, which runs from the forearm into the hand, becomes compressed between displaced bones of the wrist – called subluxation. Nerve signals originate in the brain and follow tracts down the spinal cord, down the arm and into the hand where a semicircular narrow and rigid tunnel of ligaments and bones allows the median nerve and tendons to travel through the highly mobile wrist area. The tunnel deforms when there is a sprain, inflammation or damage to the ligaments allowing the bones to move away from their normal positions.

CTS commonly occurs from repetitive motion of the hand, wrist and arm. Sometimes it comes from an injury such as a fall or from an auto accident by grasping the steering wheel too tight during the collision. The nerve can be more susceptible to compression at the wrist if it is also pinched or irritated at the next level – elbow, shoulder or neck. When the nerve is compressed or irritated at both the wrist and neck area it is called a double crush injury or syndrome.

Sometimes thickening from irritated tendons or other swelling narrows the tunnel and causes the median nerve to be pinched. This is why anti-inflammatory drugs such as aspirin or ibuprofen can decrease the pain in some patients. But drugs really are a no-end kind of treatment that never gets to the cause of why there is inflammation in the first place. They also have significant side effects, including stomach or intestinal bleeding (ulcers), especially in older patients.

When carpal tunnel syndrome strikes, the result may be pain, weakness or numbness in the hand and wrist. Sometimes the pain runs from the wrist and back up the forearm. Many patients will also say they have other bothersome symptoms such as back and neck pain or stiffness.

The median nerve controls sensations to the palm side of the thumb and fingers, except the little finger, as well as impulses to some small muscles in the hand that allow the fingers and thumb to move. Pain, tingling and numbness in the hand can be caused by neck problems such as a herniated disc, sprain, subluxation and arthritis.

It is important to make sure that a comprehensive diagnosis is obtained prior to contemplating surgery. Surgery is a very drastic and last resort option, so one should try conservative treatments first. If the problem is an irritated or compressed nerve in the neck, no amount of wrist surgery will help.