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CARPAL TUNNEL



Carpal Tunnel Syndrome (CTS)

Carpal tunnel syndrome (CTS) is a debilitating disorder caused by irritation or pressure to the median nerve. The median nerve originates in the neck, runs through the shoulder, arm and forearm into the wrist and hand. It is one of the major nerves in the hand that provides sensation and movement for the thumb, index and middle fingers. CTS often is described as an aching pain with burning, tingling and numbness in the wrist or hand and, occasionally, in the forearm. In some cases, muscle weakness, swelling and loss of temperature sensation may be present. Patients may begin to drop objects or have difficulty lifting small items or turning door knobs.

It is thought that jobs that require workers to use their hands, wrists, or arms in a repetitive manner tend to have a higher incidence of CTS. But renowned hand surgeon Dr. Charles Eaton says there is no scientific evidence that shows such activities actually cause carpal tunnel syndrome.

Medical Treatments

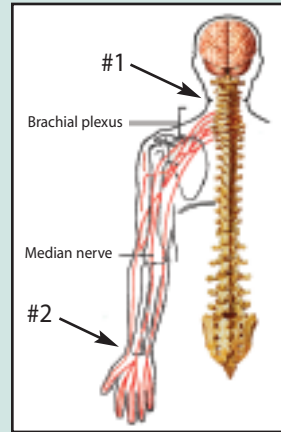
The standard medical treatments for CTS may include braces, splints, over-the-counter or prescription non-steroidal anti-inflammatory drugs (NSAIDs), vitamin B6, cortisone injections, or surgery. Unfortunately, drugs have potential side effects and surgery is not always successful.

In fact, three separate studies published in the *Journal of Hand Surgery* followed the failure rate of some of the common treatments for CTS. One study revealed that wrist splints and NSAIDs had an 82.6% failure rate while another showed steroid injections had a 72.6% failure rate. The third study showed an average failure rate of 57% in patients that underwent carpal tunnel release surgery.

These failure rates support the idea that the actual cause of CTS in the majority of patients might be nerve irritation at a site away from the wrist, as is the case with Double Crush Syndrome.

Double Crush Syndrome & Carpal Tunnel

Stress to the median nerve commonly begins in the neck (Diagram #1 - cervical spine), where the median nerve begins. The nerve is then aggravated by added pressure or irritation anywhere from the neck to the wrist (Diagram #2), which can then cause symptoms in the hand and fingers. This is called "Double Crush syndrome" and is widely referenced in the scientific and medical research journals as a consistent finding in patients with carpal tunnel syndrome. Pressure or irritation to the nerve roots as they exit the neck makes the median nerve more vulnerable to injury at the wrist.



A growing number of studies suggest that the Double Crush phenomenon is one of the most common causes of CTS. The prestigious medical journal *The Lancet* found that nearly 7 of every 10 CTS patients had nerve irritation in the neck. Another study

found that 89% of carpal tunnel sufferers also had arthritis in the neck. Both studies suggest the vast majority of CTS patients actually have Double Crush phenomena.

This would explain the high failure rates when it comes to medical treatments for carpal tunnel syndrome. Treatments directed solely at the wrist neglect possible nerve irritation and/or compression in the neck, which renders the lower nerves in the wrist more susceptible to injury. In this case, it is essential to first correct the cervical problem to allow the wrist condition to fully heal.

A similar phenomenon can also occur with Thoracic Outlet Syndrome (TOS) and cervical radiculopathy (tingling, pain down the arms).



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CTS & The Cervical Spine

Problems in the neck or cervical spine can be as simple as poor posture and muscle tension, or as serious as disc bulges, arthritis, or spinal misalignments, also referred to as subluxations.

A proper evaluation for CTS should include an exam of the entire length of the median nerve, starting at the neck and working down to the hands, wrists and fingers. Since the neck is the most common site for Double Crush to occur, a consultation with an upper cervical doctor would be in the best interests of any CTS sufferer, especially if they have been recommended for carpal tunnel surgery.

The purpose of upper cervical care is to correct misalignments in the neck that produce irritation to the nerve roots that extend to the wrist, hands and fingers. Clinical findings have discovered that this can prevent the need for surgery.

Upper Cervical Health Centers Of America

Upper Cervical Health Centers of America is a network of Upper Cervical Doctors of Chiropractic located throughout the United States who have extensive education, training and experience with carpal tunnel syndrome and the upper cervical spine.

If you suffer from carpal tunnel syndrome and would like to schedule a consultation with one of the doctors at Upper Cervical Health Centers of America, call the number on the back of this pamphlet or visit the Web site at www.UpperCervicalCare.com.

Upper cervical care has helped countless CTS sufferers. Your Upper Cervical Health Center doctor knows how to develop a program specific to your needs. Most health insurance companies recognize the benefits of upper cervical care and include it among the services they cover.