

Chiropractic and Carpal Tunnel Syndrome: HELP IN YOUR HANDS

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Overview: Carpal tunnel syndrome (CTS) is an irritation of the median nerve in the wrist where it passes through the carpal tunnel, comprised of bones and ligaments in the wrist through which the nerves and tendons to the hand pass. When the carpal tunnel is inflamed, the median nerve may be compressed and irritated.

Those who are more prone to CTS are those whose professions or hobbies cause repetitive stress to the wrist. Professions with a higher incidence of CTS include typists, carpenters, cashiers, factory workers, and other professions that require continuous use of the wrist in awkward positions (especially extension, or bending the wrist backwards) or under pressure. Hobbies that can irritate the carpal tunnel include golfing, rowing, or running on a treadmill with too much weight/reliance on handles. There are also physical conditions which may make a person more prone to CTS: pregnancy, thyroid problems, diabetes, rheumatoid arthritis, and increased weight.



Symptoms:

- Weakness in the hands, tingling, and/or numbness
- Pain in fingers or palm – mostly of the thumb, index, middle and ring finger. If the little finger is affected, it may not be CTS
- Pain in forearm, possibly up to shoulder
- Pain that wakes you from sleep
- Difficulty gripping objects, especially small objects
- Loss of thumb strength

Conditions with Similar Symptoms:

- Injury to soft tissues – muscles, ligaments and tendons
- Broken bone
- Joint dislocation
- Nerve problems (other than median nerve)
- Obesity, rheumatoid arthritis, diabetes, lupus, hypothyroidism – these conditions may cause similar symptoms but may also aggravate CTS

YOUR TREATMENT

Because there are a variety of conditions that can cause symptoms that mimic carpal tunnel syndrome (CTS) and because there are a number of possible reasons you may be experiencing pain, a variety of treatment options must be considered. The decision on which treatment should be used will be based on your preferences, examination findings, the doctor's experience treating patients with similar conditions, and the best available scientific evidence.

- **CHIROPRACTIC MANIPULATION**, also called adjustment, of the carpal tunnel, wrist, cervical spine, or other area may benefit those with CTS. Manipulation may relieve the pressure in the carpal tunnel and improve function of the joints.
- **WRIST SUPPORTS** immobilize the wrist and prevent flexion and positions of the wrist that compress the nerve. Wrist supports worn at night may reduce nighttime symptoms; wearing the wrist support 24 hours each day may also be helpful. The length of time you need to wear the supports, and the type of splint you are to use, will be determined based on clinical findings and the severity of your symptoms.

A pilot study (a trial or a “test run” for a larger study) was conducted to begin scientifically evaluating the observation that some patients experience a decrease in blood pressure following manipulation of the cervical spine (neck). For this study, 50 people with Stage 1 hypertension (140-150/90-99), who were not taking blood pressure medication, were treated for 8 weeks with either a chiropractic adjustment procedure to the neck, or a “sham” (non-therapeutic) procedure. Blood pressure measurements from each patient were compared from before the study to after the 8-week study. In the chiropractic treatment group, the first cervical vertebra (Atlas) of the spine was adjusted to correct mal-alignment; the patients in the “sham” group thought they were receiving a treatment but they were not. After the study, the researchers concluded that “restoration of Atlas alignment is associated with marked and sustained reductions in blood pressure similar to the use of two-drug combination therapy.” (Bakris G, et al. *Journal of Human Hypertension*. May 2007; Vol. 21, Iss. 5, pp. 347-352.)

Though these results are promising and support what many chiropractors have observed in practice, it must be remembered that this was a small study and further, larger trials are needed to confirm results before strong conclusions can be made.

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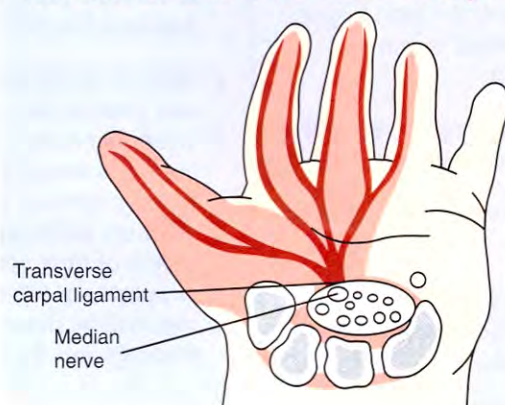
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- **ULTRASOUND** may decrease inflammation and therefore may relieve symptoms of CTS. Ultrasound therapy is applied to the wrist over the carpal tunnel area. Several treatments may be necessary.
- **EXERCISES** that may benefit CTS are those that exercise both the hand and the wrist. These exercises and stretches may help by strengthening the muscles of the wrists, hands, neck, and shoulders. Increased blood flow may also be beneficial. Loosening and stretching the carpal ligaments may also ease pressure in the carpal tunnel. The exercises you are to perform will be discussed with you following an examination and orthopedic testing to determine your specific needs.
- **CARPAL BONE MOBILIZATION** involves putting the joints and soft tissues of the wrist through normal range of motion in controlled stretches.
- **LASER TREATMENTS** may help to manage CTS symptoms. Laser is applied to the wrist, palm and other necessary areas determined by examination. Laser is

intended to activate endorphins, which naturally reduce pain. The treatment is painless and may require multiple treatments.

- **VITAMIN B6** may improve symptoms of tingling, discomfort, and waking at night by improving nerve function. It is suspected that a vitamin B6 deficiency may cause CTS or worsen symptoms. Conversely, an excess of B6 may lead to nerve damage, so it is important to get the right amount. To improve your dietary intake of vitamin B6, eat beans, meat, poultry, fish, potatoes, bananas, and fortified foods like cereals. You can discuss finding quality supplements and appropriate doses with your chiropractor.
- **YOGA** is one form of exercise that may improve symptoms of CTS. As with other exercise plans, yoga improves strength and flexibility.
- **HEAT WRAPS**, used continuously and providing low-level heat, may provide relief of symptoms.
- **TRACTION** treatments of the wrist may decompress the carpal tunnel. The type of traction you receive will depend on clinical findings.
- **MAGNET THERAPY** involves the wearing of magnets around the wrist.

Illustrated HealthWays



YOUR ALTERNATIVES

Your condition may be best treated using both chiropractic treatments and other treatment from additional health care professionals. If your condition requires it, a direct referral for treatment may be made to medical, surgical or other health care providers.

- **SURGERY** is sometimes prescribed for treatment of severe carpal tunnel syndrome.

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The goal of surgery is to reduce pressure on the median nerve by partial severing of the soft tissue band of the carpal tunnel.

- **STEROIDS** may reduce inflammation and therefore provide relief of CTS symptoms. Steroids can be given by injection or orally. Steroid injections may increase pain temporarily, and subsequent pain relief is temporary. Oral steroids may provide longer relief than injections. Diabetics should not take steroids.
- **NSAID** – either over-the-counter or prescribed are non-steroidal anti-inflammatory drugs. NSAIDs include ibuprofen, naproxen, aspirin, and ketoprofen.
- **LIDOCAINE PATCH** can be applied to the wrist. Lidocaine is an anesthetic that may relieve pain. These patches must be prescribed.

Prevention:

- Eat well and take supplements for proper nutrition
- Relax your grip, especially for fine motor tasks
- Take frequent breaks and gently stretch your wrists and hands
- Avoid excessive bending of the wrists for tasks such as typing
- Watch your posture
- Keep your hands warm
- When possible, alternate hands for tasks
- Restrict salt intake to reduce fluid retention
- Stop any activity that causes wrist, hand, or finger tingling, pain, or numbness
- Avoid clothing and jewelry that fit tightly around the wrist
- When exercising, avoid placing stress on the wrists – such as leaning weight on handles of a treadmill
- Ask about splints if you are concerned about carpal tunnel syndrome or if you are in a high-risk occupation



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News & Views

Trans-fats Linked to Breast Cancer

Women with higher levels of trans-fats in their blood have about twice the risk of breast cancer than women with lower blood levels of trans-fat, according to a European study. Trans-fats are created from vegetable oils that have been modified to more closely resemble butter. In the study, blood samples from 25,000 European women were taken between 1995 and 1998 and the women provided information on their eating and lifestyle habits. Researchers at the University of Paris-South compared the blood samples of the 363 women who were diagnosed with breast cancer to those without cancer. The higher the levels of trans-fats in the blood, the higher the risk of cancer. Many companies are moving away from the use of trans-fats but they can still be found in some cooking oils, baked goods, snack foods, margarine, and other prepared foods. The study was published in the *American Journal of Epidemiology*. (Reuters. April 11, 2008.)

Is Your Baby Sleeping At Least 12 Hours Every Day?

Several studies have suggested that a lack of sleep in adults can lead to increased weight, but now a study, published in the April issue of *Archives of Pediatrics & Adolescent Medicine*, suggests that babies who get less than 12 hours of sleep per day are more likely to be obese by the age of 3 than babies who get at least 12 hours. Children who watched more TV also increased the child's weight, increasing the chances of obesity by age 3. For the study, starting at 6 months old, mothers were asked about their babies' sleep habits. Mothers were asked again at 1 and 2 years old; when their babies reached the age of two, mothers were also asked about television viewing. Of the babies who slept at least 12 hours of sleep each day, 7% were obese; of the babies who slept less than 12 hours, 12% were obese; babies who slept less than 12 hours AND watched 2 or more hours of TV a day, 17% were obese by age 3. Lack of sleep and television watching affect weight independently – combined, the risk increases further. Sleep is thought to affect weight because it affects appetite hormones. Television is thought to affect weight because it replaces activity – and that, in turn, affects weight since greater activity improves sleep quality so that the more active a baby is, the better he or she sleeps at night. (Associated Press. April 8, 2008.)

Exercise for Mom = Exercise for Developing Baby!

Pregnant women who exercise are doing more than improving their health – they may also be improving the cardiac health of their fetuses. According to a study presented at the Experimental Biology 2008 meeting in San Diego, "a mother who exercises may not only be imparting health benefits to her own heart, but to her developing baby's heart as well." The study involved only 10 pregnant women, so results need to be replicated in larger studies, but if confirmed, women can lower their babies' heart rates and health with exercise. (HealthDay News. April 8, 2008.) Pregnant women are advised to get information on appropriate exercises to perform while pregnant.

Q: How can I get the maximum benefit from my Doctor of Chiropractic?

A While receiving chiropractic treatment, you can magnify its positive effects by being a *seeker* and a *doer*. Seek additional information on the health problems or issues that you face. Seek additional information from your chiropractor and put his or her unique strengths, talents, special abilities, and interests to work for you. Seek more information about chiropractic and its scope of practice in your state. Chiropractic has many short- and long-term benefits of which you need to be aware in order to take advantage of them. Simply ask your Doctor of Chiropractic or the office staff for this information.

To be a *doer* means that you actually follow through with the recommendations and suggestions your Doctor of Chiropractic gives you. Do not hesitate to ask questions and request a review of stretches, postural changes, and any other advice that has been given to you so that you thoroughly understand how and why to get the best results. Responsive patients get the maximum benefits from care and your Doctor of Chiropractic is more than willing to help you *seek* and *do*.

GOOD NEWS
SHOULD BE SHARED.
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ON TO A FRIEND.

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