

Carpal Tunnel Syndrome Prevention and Treatment

A Non-Surgical, Drug-Free Approach

By Kate Montgomery

Statistics:

- Worker Compensation claims for repetitive stress injuries can cost up to \$50,000-\$100,000 per employee.
- OSHA estimates that by the year 2000, cumulative trauma disorders will account for 50 cents of each dollar employers spend on medical care.
- Between 1982-1990 repetitive strain injuries increased 700%.
- A study by the Labor Department said 3.2 million cases of repetitive motion injuries in 1989 were serious enough to cost lost time from jobs, adding up to 57 million lost workdays.
- The latest Canadian report on Ontario Workers Compensation states it could rise to \$52.5 billion by the year 2014, 69% above the current estimate.

What Is Different Today Than Back in the Days of the Old Fashion Typewriter?

The technological arrival of computers and higher technology appears to have undermined the biomechanics of the body. And our bodies were not prepared for it. The human body is a kaleidoscope of bones, muscles, nerves, organs and fluids all interwoven together as a whole to keep us functioning, breathing and moving. When the body is over-worked, over-strained and just gives out from exhaustion, it begins a downward spiral of ill health.

In the case of Carpal Tunnel Syndrome, the repetitive strain injury to the wrists and hands, its true cause lies in the over-used, over-worked, and over-fatigued muscles of the forearms and hands due to repetitive motion. The definition of CTS must be looked at through the whole picture, not just focusing on the pain in the wrist and hand. That is only a symptom not the cause. To treat it properly, one should understand the cause and how the body biomechanically functions.

Do You Experience These Symptoms?

- Increased occurrence of dropping objects.
- Loss of the sense of touch.
- Tingling and numbness in the fingers and hand.
- Loss of strength in the hand.
- Pain at night in the shoulder while sleeping.
- Pain in the wrist area.
- Pain in the elbow joint.

If you have these symptoms, then you may have carpal tunnel syndrome. Even if you don't elicit any of these symptoms, you could still be on your way to developing carpal tunnel syndrome.

What Is Carpal Tunnel Syndrome?

Carpal Tunnel Syndrome is an entrapment and compression of the median nerve due to a structural and postural misalignment which leads to a muscle-strength problem in the hand. A median nerve entrapment can develop at many locations.— from the vertebral joints in the neck through the shoulder joint, descending to the elbow and ending with the final distortion and pain in the wrist and hand. See Figure 1.

In the 1990's, Carpal Tunnel Syndrome has become the surgery of the decade. This is unfortunate because not only is the operation very expensive, but it causes loss of the use of the hand for two to six months with no guarantee of post-surgical improvement. And in most cases, the surgery is only a temporary bandage that is dealing with a symptom instead of with the cause. People in occupations that involve forceful or repetitive use of the hands are at risk to develop Carpal Tunnel Syndrome.

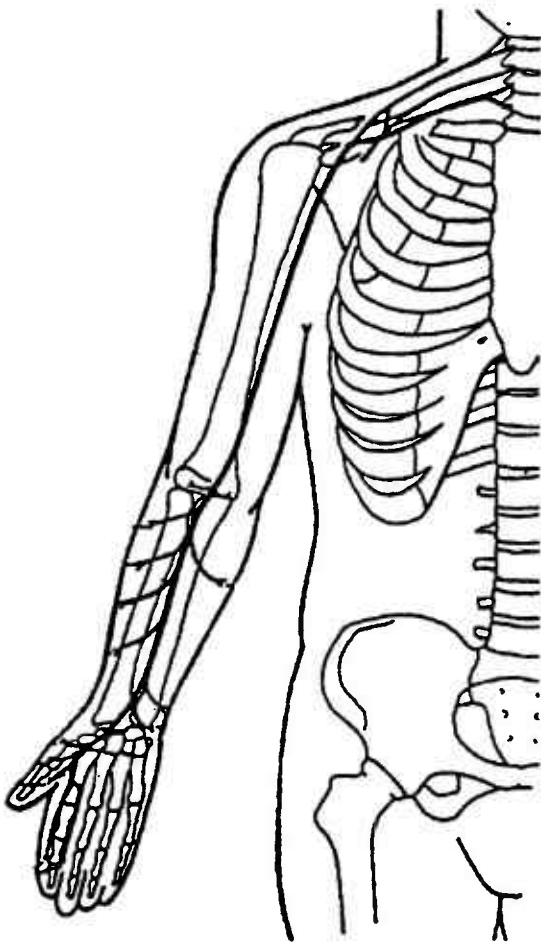


Figure 1. Median Nerve

How Does the Body Work as One Unit to Prevent CTS?

There are three systems working together to maintain function, harmony and balance without pain. The three are the skeleton, the muscles and the nerves. The framework of the body is the skeleton. It supports us and protects our delicate organs. The muscles are connective tissue made up of ligaments and tendons that connect the muscle bellies to the bones. The muscles are the shock absorbers. They feel our aches and pain when we over-work the body, whether it is through sport or job related activities. The next addition to this network is the nerves. They are the electrical system that allows us to feel sensations and to enable us to move. These three systems must work together in harmony for the body to function without stress, tension and pain.

The skeleton is anatomically and structurally sound and is designed to follow a perfect format

and design. So are the muscles and nerves. Each part must rely on the other to be in perfect alignment so balance will exist. When the skeleton is in the proper alignment, the holes the nerves go through would be fully open so that the electrical conductivity is 100%. That would allow the muscles to receive the signals needed for the strength they need to function at 100%. Last, is the care and feeding of the muscle. Over-worked and over-exhausted muscles resort in muscle spasms, trigger points, pain and what I call dead muscles, simply refusing to move. Muscles need to be touched, nurtured, fed and loved to bring them back to life.

Is your job creating stress on your wrist and hands?

In today's world, many careers create stress on our elbows and wrists--from the very technically advanced to the most routine job.

Are you the grocery clerk who repeatedly waves your hand over an electronic eye? Are you a waitress who carries heavy trays, hyper-extending your hand? Do you scrub floors while leaning on the opposite hand? Are you a computer programmer, dispatcher for the sheriffs department, a baker, a butcher, a musician, a massage therapist, a quilter/knitter, a cyclist, an airline stewardess, a student who carries heavy books, a mother carrying her kids? The list goes on and on. All these careers, and more can lead to Carpal Tunnel Syndrome.

Short of stopping the activity that aggravates the condition, Carpal Tunnel Syndrome can be prevented or improved by alleviating muscular tension through a health maintenance program and redesigning tools, workstations or job tasks.

How Can You Determine If You Have Carpal Tunnel Syndrome?

Applied Kinesiology techniques (muscle monitoring) is a bio-feedback system. It is a system of evaluation to increase the performance of the body. It is a unique tool in the healing arts to accentuate recovery.

By using applied kinesiology techniques you can determine the grip strength of the hand by assessing the muscular strength of the thumb and little finger and misalignment of the elbow joint.

Testing procedure:

- Place the pads of your thumb and little finger together, palm side-up, and have a friend try to pull the thumb and little finger apart.
- Place the pads of your thumb and little finger together, palm side-down, and have a friend try to pull the thumb and little finger apart.

In both tests, if the fingers come apart easily, you may have a misalignment of the bones in the elbow and wrist joint. This is a sign you have Carpal Tunnel Syndrome.

Things You Can Do:

Beginning with correct posture and utilizing acupressure points and neuro-lymphatic reflex points for the upper body can help to maintain the balance of energy in the muscles that can affect CTS.

Correct Posture at a workstation starts with sitting up straight with proper support along the spinal curve.

1. **Back** tilts slightly backward to increase the space between the torso and the thighs; thighs are at right angles to the torso.
2. **Shoulders** are down and slightly backward, stress free.
3. **Arms** are relaxed.
4. **Forearms** are at right angles to the floor.
5. **Wrists and Hands** are in a neutral position, supported and slightly elevated.
6. **Feet** should be flat on the floor or on a footrest.
7. **Head** should be erect with the eyes directed slightly down (approximately 15° below the horizon) to view the computer screen.

Correct posture allows for increased blood flow throughout the body and reduces spinal compression.

The Lymphatic System is known as the cleansing system of the body. It helps to filter out and dispose of toxins and poisons that accumulate in the body. The lymph system is continuously detoxifying the body and strengthening the immune system. It is composed of nodes that are made up of a network of vessels, capillaries and

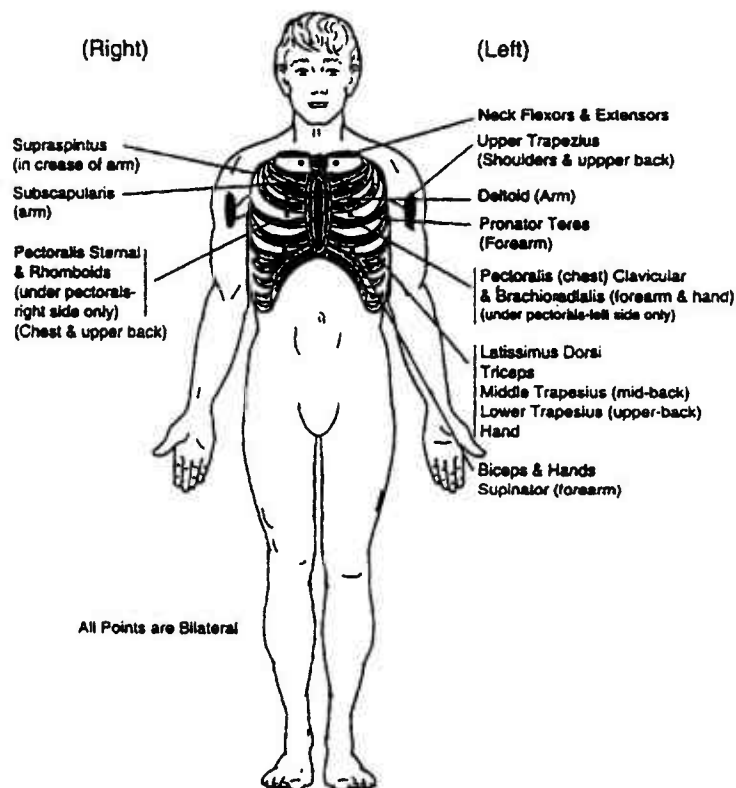


Figure 2. Upper Body Neuro-Lymphatic Reflexes

ducts. Sore and fatigued muscles are a sure sign that the lymph system is clogged up. Every muscle has an associated neuro-lymphatic reflex point. By rubbing these points firmly and deeply, 1-5 minutes, or as long as it is needed, you can alleviate the pain and soreness by decreasing the inflammation in the affected area. Refer to Figure 2 for the location of the neuro-lymphatic reflex points for the neck, upper back, shoulders and hands.

Acupuncture Points can be used for further relief:

1. **Large Intestine 4.** Relief on contracture and pain in the arms, hands and fingers. Relief of pain involving strains and sprains. Moves blood and energy.

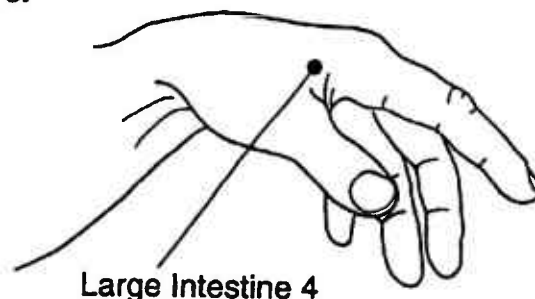


Figure 3. Large Intestine 4

2. **Baxie Points.** For the relief of spasms and contracture in the muscles of the hand. Increases circulation, decreases swelling.

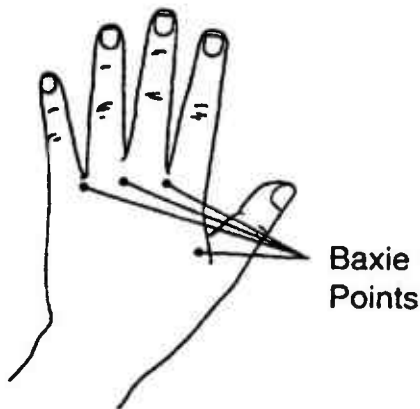


Figure 4. Baxie Points

3. **Triple Warmer 4.** Increases energy. Relieves pain in shoulder, arm, wrist and hand.

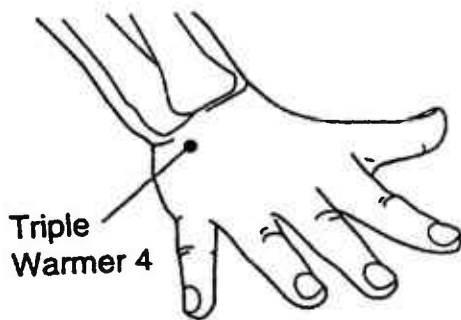


Figure 5. Triple Warmer 4

For each of the points above: Locate point. Press and rub firmly for 10 - 30 seconds or as long as needed to achieve desired results. Relax and breathe slowly and deeply.

4. **Pericardium 6.** For relief of pain and contracture in the elbow and the arm.

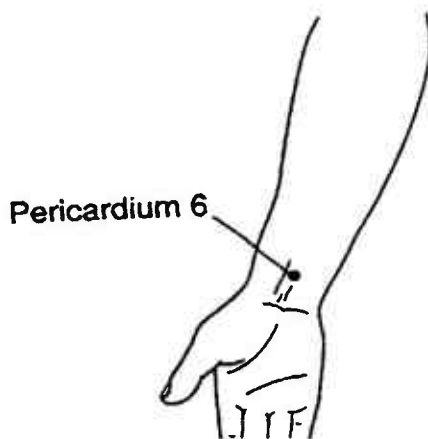


Figure 6. Pericardium 6

5. **Heart 7.** Relaxes the muscles.

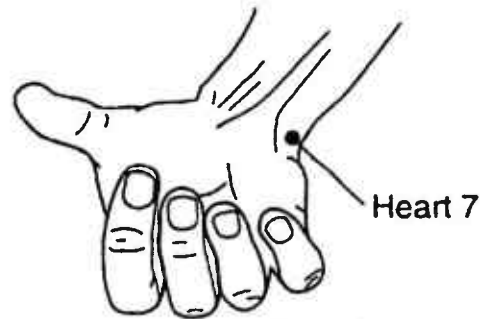


Figure 7. Heart 7

Locate the point. Hold lightly and gently massage. Breathe into this point slowly and deeply. Hold for as long as needed to achieve desired results.

The key to preventing CTS is a consistent maintenance program of massage therapy and daily self-alignment techniques to maintain harmony and balance in the joints of the elbows and wrists. Along with stretching, strengthening exercises and nutrition, this program would prevent carpal tunnel syndrome and teach you about maintenance of the body.

Kate Montgomery, certified sports massage therapist and health educator and healthcare consultant in San Diego, CA. She is the author of Sports Touch/The Athletic Ritual and Carpal Tunnel Syndrome/Prevention and Treatment.

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