

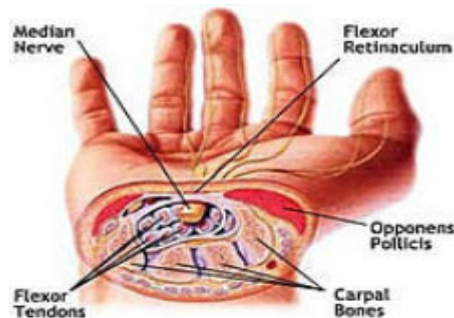
# Carpal Tunnel Program

The Symptoms of Carpal Tunnel Syndrome include numbness of the thumb, index, middle and half of the ring finger; pain may also be present, along with a burning or tingling of the fingers.

Carpal Tunnel Syndrome is normally caused by one of three factors:

1. Swelling within the carpal tunnel causing pressure of the median nerve against the flexor retinaculum ligament.
2. Loss of elasticity of the ligament causing pressure on the median nerve.
3. Disruption of the carpal bones, as with a fracture, leading to crumpling of the tunnel.

The most common cause seems to be the swelling within the tunnel from inflammation of the tendons due to injury or repetitive motion.

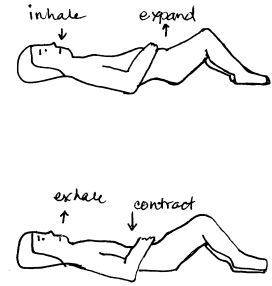


There are many things you can do to help reduce the symptoms. These are a few of the ways that have proven to be helpful to others, short of surgery. If you have questions about these exercises and you have not been to therapy, it is suggested you get a referral from your doctor.

1. **Walk one hour a day**, or do some other cardio-vascular activity that will increase your heart rate above what your normal daily activities provide, such as dance, swim, bike. This enhances your circulation. Work up to the hour over 2-3 weeks if this is not part of your daily routine. Check with your MD if there is any question about your ability to do this.
2. **Drink 8 glasses of water daily** – no coffee, tea or soda as these have caffeine and sodium which tend to dehydrate the body. Herbal tea is OK. The water helps to flush your system and add oxygen. You can try to drink a glass of water if you wake up in the middle of the night with numb hands. **Foods with a lot of sodium should be avoided.**

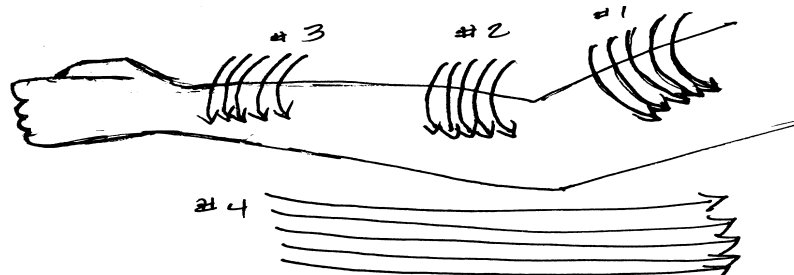
3. **Diaphragmatically breathe for 10 minutes, twice daily.**

This involves lying on your back, knees bent, and hands resting on stomach. As you breathe in, you want your hands and stomach to lift up; as you breathe out, your stomach should pull in. This is a slow rhythmical process, not rushed. Eventually, you can do this in a seated or standing position. Circulation is aided by this activity. Stress can also be reduced with this exercise.

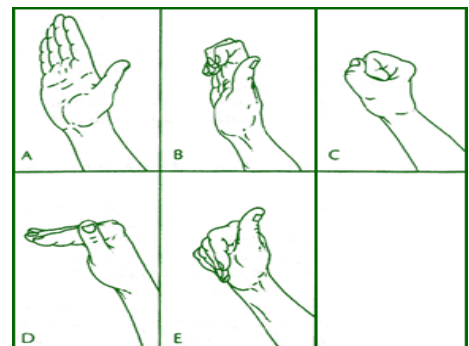


4. **Contrast bathes, 2 to 4 times a day.** For this you will need two basins or tubs. One is filled with cold tap water (68 degrees) and the other is filled with warm water (98 degrees). Place your hand in the cold for one minute, then the warm for one minute, alternating back and forth for 10-15 minutes. Always end in the cold water. **Epsom salts** may be added to the warm water. **If you are diabetic, you probably should not use Epsom salts** (it may cause excessive dryness to skin). This process increases the circulation, reduces swelling and eases movement.

5. **Manual Edema Mobilization or Horseshoes and Sweeps,** stimulate the lymphatic system so that tissues can heal. **If you have a history of cancer, you should most likely avoid this exercise as it affects the lymphatic system.** You begin by placing one full hand, not just the fingers, gently across the front of the upper arm and moving it in a horseshoe pattern 5 times. You then move your hand approximately 4 inches down the arm and repeat the same thing, and do this once more at the wrist. Next, you sweep your hand gently up your arm. This should be done twice daily for 5 minutes.

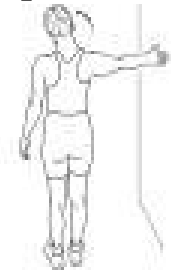


6. **Tendon glides** are important to do twice daily after contrast bathes. There are two sets of tendons that go to each finger. By doing the glides the tendons are separated and forced to slide against each other. This prevents the tendons from sticking together when inflammation is present.



**7. Nerve glides are also important; however, do not do these after a carpal tunnel release.**

This is done by standing tall, place hand at side with palm facing forward, wrist bent back; lift the arm up to the side and slightly backwards until feel a tug on the nerve. You can rest your hand on the wall if you need support. Next, you will tilt your head to the opposite side of the raised arm in a slow manner, holding that position for 5 seconds, and repeating this 3 times. You may partially turn your body away from your arm to increase the stretch.



**8. Throughout the day you should do stretches.** If you are at work on a computer or in the same position for extended periods of time, you should stretch for 5-10 seconds every 15 minutes. Your stretches should be in the opposite pattern of you work position. Remember, no sharp pains should occur with stretching and what you do to one side of the body you will need to repeat on the opposite side. Initially, you may need a time to help you develop the 15 minute habit.



Figure 9.

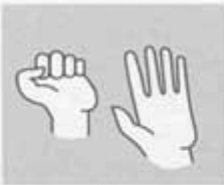


Figure 10.



Figure 11.



Figure 12.



Figure 13.



Figure 14.



**9. Body Mechanics are important.** A work site evaluation may be done if the injury is work related. Carpal tunnel syndrome is aggravated by activities that are repetitive, forceful, vibratory, or tortional/twisting in nature. Bending any joint (neck, shoulder, elbow, and wrist) beyond neutral position for extended periods of time will impact the nerve and cause compression. Using the wrist rest is often contraindicated as this will encourage hyperextension of the wrist; a negative tilt on the keyboard is helpful in promoting a neutral wrist position on the computer.

These are positions to **avoid**:



Avoid bending the wrist towards the small finger



Avoid bending wrist with keyboard use



Avoid bending elbows past 90°

10. **Splints can be worn at night to help keep the wrist in neutral.** When the wrist is bent forward or backward to the extreme position, the tunnel acts like a hose and impedes the nerve conduction. If you wake at night with numb fingers, it is best to wear night splints to prevent bending. Splints for the wrist can be purchased from most drug stores.



11. **If you sleep on your side, support your free arm on your side and thigh so that you are not compressing your shoulder onto the nerves.** You can also use a couple of pillows in front of you and pull your elbow forward onto the pillows if hooking the elbow over your waist is uncomfortable. This will help prevent compression of the nerves high up in your arm and shoulder.



12. **Sometimes vitamins and herbs can help.** Check with your MD about vitamin B6 and Flaxseed oil capsules. Some people have found relief with these additives. Be careful with the additives however, as vitamin B6 is stored in tissues and can become toxic with extended use.

13. **Moist heat is sometimes helpful to increase circulation,** as with wax, warm shower or warm soaks.

**Once you have carpal tunnel syndrome, it tends to stay with you unless you change what you are doing. Some women get CTS when they are pregnant and it resolves itself after delivery. Some get it with computer usage. There are certain things that can help the condition, but normally it takes some change in your behaviors. Avoiding those tasks which cause the pain and finding a different way to do them is the trick. Therapy can sometimes help, although if it does not help, you should see Orthopedic Surgery concerning surgical interventions so that muscle damage does not occur.**

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