How To Get Rid Of Carpal Tunnel Syndrome

WITHOUT DRUGS OR SURGERY

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The Symptoms of Carpal Tunnel Syndrome

Carpal Tunnel Syndrome (CTS) usually begins with a slight soreness in the wrist(s). Maybe it's from a little too much typing at the office, or pulling the molds a little too hard at the factory where you work.

The next morning the soreness is gone, so you think nothing of it.

However, your wrists soon get sore again. A week goes by and you realize the soreness flares up every day. Before long, your wrists are sore in the morning.

Several weeks later, you feel pain in your wrists at night - enough to wake you up.

Now at the end of your work day - or even part way through it - there's a numbness and tingling in your hands. It kind of feels like they're falling asleep - especially the first three fingers. The pain at night is worse now - your hands are falling asleep as soon as you bend your wrists.
You notice at work you have problems grasping or pinching. Your finger motion decreases. Your hands get cold. There may be some swelling in your hands or wrists. The pain gets severe at times (that's the acute stage).

If you continue to work in spite of the pain (a lot of people do, for various reasons) the condition becomes chronic, which means things are getting progressively worse.

The numbness and tingling are there all the time now. Relief comes only when you keep your wrists straight.

The pain in your wrists and/or hands may radiate or travel up your arms as far up as your shoulders.

You notice that you're dropping things or you can't unscrew a bottle top (that's due to damage to the nerve that supplies feeling to the muscles in your hands).

If all this sounds and feels familiar, that's because you've got all the signs and symptoms of CTS. It's a relatively common condition.
A 1993 study estimated that CTS affects 1 percent of the American population. However, more people are recognizing the symptoms of CTS and are seeking medical advice.

**What CTS Is**

Carpal Tunnel Syndrome is a compression of the median nerve in the wrist. It was first described in medical literature by James Paget in 1854.

An understanding of the physiology of the wrist helps to illustrate the problem. The median nerve passes through the carpal tunnel before it branches off to innervate (supply feeling to) the thumb and first three fingers.

The carpal tunnel is formed by the transverse carpal ligament above the palm of the hand and by the hand or carpal bones on the bottom (back of the hand).

Besides the median nerve, there's also synoviam (joint fluid), connective tissue and the tendons of nine muscles. As a result of all these components,
there's not a lot of room in the carpal tunnel.

So, any abnormality - like swelling and inflammation, changes to the bones from fractures, or dislocations - will pressure the medium nerve and cause the numbness, tingling and weakness that characterizes CTS.

The most common cause of CTS is due to a thickening (fibrosis) of the synovial sheath that surrounds the tendons that are in the carpal tunnel.

This occurs as a result of repetitive wrist and hand movements. It can also be the result of resulting grasping or squeezing, such as in the use of hand tools.

However, you should be aware that there are other non-job related causes that can also cause swelling in the carpal tunnel and result in CTS. Some of the more common non-job or non-occupational causes of CTS are:

* rheumatoid arthritis
* hypothyroidism
* ganglion cysts
* acute trauma to the wrist
* pregnancy
* oral contraceptives
* menstruation
* menopause

It is extremely important to see a doctor to rule out non-occupational causes to the condition.

CTS occurs in women three times more frequently than in men, with the condition peaking in people who are between 30-50 years of age. In more cases than not, it's the dominant hand that is affected.

However, it's not uncommon to get it in both hands.

For the purposes of this report, we are going to assume that your diagnosis of CTS is the result of on-the-job overuse of your wrists and hands.

**How CTS is Diagnosed**

We've already given you the symptoms of CTS. So how do you know that you've really got it?

A good clinical examination is critical to rule out
other ailments. In addition, a good clinical exam is fairly accurate.

To begin, your doctor will (or should) take a detailed history of your complaint. He or she will ask you questions like:
* Where did your pain start?
* What were you doing when it started?
* What did (does) the pain feel like?
* What do you do to make it hurt?
* What do you do to relieve the pain?
* Where does it hurt?
* Does the pain wake you up at night?
* What kind of job do you have?
* What kind of position, movements, etc. do you have to do on your job?
* Do you do repetitive movements?
* If so, how many times do you do the movement per hour?
* How many hours per day?
* How many days per week?

Pain in the hand may be the result of muscle spasms in the neck, osteoarthritis in the vertebrae of the neck, or a nerve entrapment or compression (known as thoracic outlet syndrome).
A thorough exam of your neck and shoulder areas will rule out these possibilities.

Looking at the wrist, Phalen's test is a good indicator that you have CTS. In this test, you flex (bend downward) both wrists and at the same time push the back of the hands together.

If numbness occurs in less than one minute in the thumbs and/or first two fingers, then the test is positive for CTS.

If the numbness doesn't happen, then a reverse Phalen's test is done. Now you extend (pull back) both wrists and push the palms of your hands together (as in praying).

Again, the numbness should occur in less than one minute.

Tapping the wrist over the median nerve may also produce tingling in the first three fingers. This is Tinel's sign - but it only means that the nerve is irritated; it doesn't necessarily indicate that the nerve is compressed.
Thumb strength is also tested. Any weakness indicates nerve impairment. Also, the thenar eminence (the fat pad below the thumb) may be visibly smaller, which also indicates nerve impairment.

X-rays and MRIs are not very useful at diagnosing CTS, but your doctor may order an electromyelograph (EMG) and nerve conduction study to confirm his/her diagnosis.

An EMG checks for muscle function and a nerve conduction study tells you if the nerve is compressed and at what level the compression is occurring (the neck, elbow, wrist, etc.)

For many doctors, surgeons, insurance companies and workmens' compensation organizations, the nerve conduction test is the definitive test for a diagnosis of CTS.

In this test, needles are inserted from the shoulder down to the wrist. A small electric current is then sent through the arm. If the nerves conduct the current normally, there is no CTS.
Any abnormality in the flow of current means CTS is present. Further, this test shows to what degree that CTS is present.

A MRI or CAT scan is rarely used, unless another condition is suspected.

**Treatment Plan**

If caught early enough, conservative treatment will be sufficient.

Such treatment begins with stopping whatever activity is causing the problem - working at a computer, gripping a hammer, running power tools, etc.

You should put your wrist in a position so the median nerve is not compressed. A wrist splint will keep your wrist in a straight or neutral position.

This is because a bent or flexed wrist pushes on the median nerve, which is what causes your fingers to get numb and tingly.
It is also important for you to wear this splint at night because the tendency is to bend the wrists while sleeping.

This causes continual compression of the median nerve for all or most of the night. The result is further damage and a delay of healing.

Another reason for wearing the splint at night is that, without the splint, you could be awakened by severe wrist pain, resulting in a loss of sleep.

The better carpal tunnel splints keep your wrist in a neutral position, but allow you to use your hands.

This way you can continue your ADL (activities of daily living) and/or work (with some limitations).

Now you need to treat the symptoms and begin the healing process. The median nerve, because of the long-term aggravation it has endured, becomes compressed due to swelling (edema) and the formation of scar tissue.

So, at home, you should use ice to reduce the swelling, pain, and inflammation.
At this point heat should not be used because it may increase the swelling in the carpal tunnel. Heat balms should also be avoided because they may increase inflammation.

Your doctor may refer you to a physical therapist, occupational therapist, or an athletic trainer for further treatment. They have therapeutic modalities that will help speed up your healing.

For example, microcurrent electric stim, high volt galvanic stim, iontophoresis, phonophoresis and ultrasound treatments are some of the tools these health professionals use to reduce pain, swelling, inflammation and scar tissue.

Some of these modalities may be used alone or in combination, depending on your symptoms. Some mild active and/or passive stretching is also effective immediately after these treatments because the tissue is more pliable then.

Your home program should include avoiding activity that causes pain (you'd be surprised how many people don't follow this common sense advice), a
gentle stretching program, and ice treatments.

Strengthening your wrists and forearms should begin after your symptoms have decreased or been eliminated.

Along with your therapy, your doctor may prescribe anti-inflammatory medication for short-term use (two to four weeks). These medications are designed to get rid of inflammation - not to relieve pain.

Your pain will go away after the inflammation is gone. Non-steroidal, anti-inflammatory drugs (NSAIDS) typically take three to five days to build up in your bloodstream, which is necessary for them to have an anti-inflammatory affect (sometimes it takes longer).

These medications are routinely prescribed and are safe for short-term use. However, you must take the NSAIDS with food as they can cause gastric discomfort on an empty stomach.

If you experience such discomfort even if you take these drugs with food (heartburn, nausea, etc.), stop taking the pills and notify your doctor as soon as possible.
Some doctors may choose to inject corticosteroids into your carpal tunnel. These are very powerful anti-inflammatory agents and work much more quickly than the pills.

While medical studies have shown dramatic relief from pain and swelling with these injections, such relief tends to be temporary. Usually the symptoms return.

Should conservative treatment fail, your next option is surgery.

In some cases, surgery is your first option if symptoms are severe: disabling pain, an inability to use your hands for ADL, muscle atrophy around your thumb(s), and the experiencing of sensory changes in your hand(s).

The surgery involves making an incision on the palm and wrist, then fully releasing or partially removing the carpal ligament.

You should know that if this is not done correctly, CTS can recur. In some cases, the tendon sheaths
and scar tissue may need to be removed.

This results in a bigger incision.

Immediately after surgery, your wrist will be splinted and immobilized for 24-48 hours. Your surgeon may immobilize your wrist for one to three weeks, depending on the extent of the surgery.

However, wrist movement as early as possible is essential to help eliminate the development of scar tissue.

As the incision heals, scar tissue may adhere to the median nerve, causing further pain. There is also the chance that hematoma (swelling) may occur, thereby increasing your symptoms.

Further, there is also the chance that RSE (reflex sympathetic dystrophy) can occur. RSE is a diffuse superficial and deep burning pain in an extremity (in this case the arm, wrist or hand) because of the injury (CTS), surgery, and/or immobilization of your wrist.

According to medical studies, it is generally
accepted that complications do occur in approximately one to two percent of open release surgeries (such as surgeries to correct CTS).

To minimize the chances of this happening to you, do exactly what your doctor and therapist tell you. Yes, there will be pain after your surgery - after all, somebody just sliced deeply into your wrist. The incision needs time to heal.

Surgery enlarges your carpal tunnel and takes pressure off the median nerve. Only now can the nerve begin to heal.

Of all the tissue in the body, nerve tissue has the longest healing time.

It is important to realize that surgery allows this healing process to begin; it is not the end. In other words, you've got some work ahead of you.

Your therapist may ask you to gently stretch your wrist, use ice to reduce swelling and inflammation, and massage your wrist along the scar to break down the scar tissue.
Do it (You'd be surprised how many people don't)!

Movement is the key to getting your wrist(s) back to normal. Your therapist will prescribe you with all the guidelines you need to this end. In addition, you should massage some Vitamin E cream into the scar to help soften and heal it more quickly.

As a general rule, your activities with your wrist should not increase your symptoms. If they do, then you've done too much.

Soft tissue (scar from incision, damaged tendon in the carpal tunnel, etc.) will take at least six weeks to heal - possibly longer, depending on the individual.

Nerve tissue may take up to two to three times longer. I've seen some patients ready to return to work in six weeks with no complications, and I've seen patients who've had continuing problems 12 weeks after surgery.

Your rehabilitation program will progress from gentle stretching to active movements to weight lifting. Do not neglect any part of this regimen.
Just because your wrist doesn't hurt any more and your fingers don't fall asleep at night doesn't mean you're completely healed - far from it!

The damaged wrist, at the very least, must have the same flexibility, strength and endurance it did before your CTS occurred.

In fact, it's to your advantage to get more flexibility, strength and endurance to minimize a recurrence of CTS.

**Causes of CTS**

The cause of CTS can be summed up in one word: **REPETITION**. In two words: **REPETITIVE MOTION**.

Those are your keys to recognizing and/or preventing CTS. CTS is an injury caused by overuse (unless you have a non-related medical condition, as was mentioned earlier).

Computer and factory work (especially typing, light assembly, gripping and squeezing power tools, cutting with a knife or scissors, etc.) are occupations that can and do cause CTS.
Any activity where the wrist is flexed (bent) repetitively and with high frequency can cause CTS.

The constant flexion/extension of the wrist in this way overloads the tendons, causing the tendons to swell.

This starts CTS. Constant gripping/squeezing tools also overloads the tendons in the same way.

At the first sign of wrist pain, you must see your doctor - this cannot be emphasized strongly enough. A mild case of CTS always has a good prognosis. As your symptoms get worse, you move closer to surgery being your only option.

Prevention

Usually the first thing your doctor will have you do is wear wrist splints at work. These splints will limit the bending/extending of your wrist(s), but should not limit finger movement.

If your symptoms are mild, some anti-inflammatory drugs, wrist splints and rest should take care of the
problem.

However, your job may require you to continue to wear wrist splints even after your symptoms disappear. This will prevent CTS from recurring.

The idea is to prevent your wrists from bending or to keep them straight.

Another strategy is to change jobs at regular intervals. If you do a lot of data entry or computer work, stop and do some filing or phone work for awhile.

Assembly line workers should change jobs every few hours in order to vary the demands put on your wrists.

You can also practice good body mechanics and ergonomics.

For example, sitting all day wreaks havoc on your body. To minimize this, sit up straight: head up, shoulders back, stomach in, wrists parallel to your desk or keyboard, elbows at 90 degrees.
If you must type, use a wrist pad.

You should also modify your job. The job must fit the worker - you. In other words, you cannot stretch, crunch, push, or pull your body to fit the work you're required to do.

The height of your desk, assembly platform, or machine may need to raised or lowered, or your seat may have to be raised or lowered to make your body fit your job.

You may need to get closer or farther away from your work station to get a better angle to lift, thereby reducing wrist strain.

Additionally, your tools may have to be redesigned. The angle of your tool grips may need to be changed and/or padded to reduce wrist strain.

A tool grip that is too big will also cause problems.

Another key is to keep your wrists flexible. Your wrists should form a 90 degree angle when they are pushed back and forward without any effort.
Stretch your wrists by pulling one back with your other hand until you feel a slight pull. Hold this stretch for three full minutes, but don't cause any pain.

Now push your wrist forward and repeat the three-minute stretch. You should do this three or four times a day.

Finally, you need to strengthen your wrists. Do wrist curls, both extension and flexion. Begin with light weights (as little as one pound) and do two to three sets of 20-25 repetitions.

Another good exercise is to extend your arm in front of you, make a tight fist so that your fingertips touch the middle of your palm, then open your hand completely.

Do two to three sets of 20-25 repetitions. Practice these exercises only if you're not suffering any symptoms.

Doing an exercise that increases your wrist pain is counterproductive.