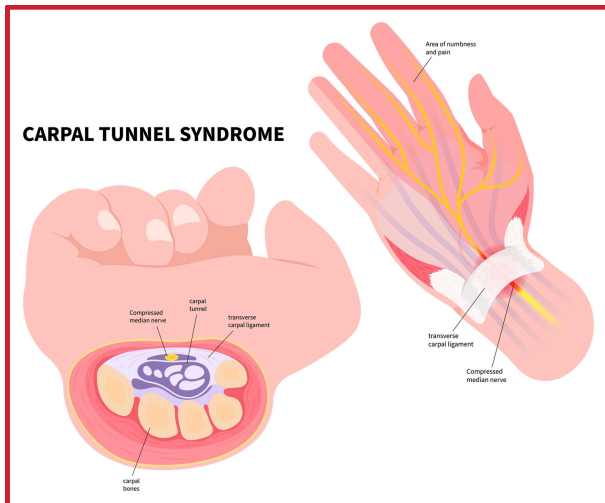




Carpal Tunnel Syndrome

What is the Carpal Tunnel?

The carpal tunnel is a narrow passageway in the wrist, about an inch wide. The floor and sides of the tunnel are formed by small wrist bones called carpal bones and the top is formed by a ligament. The tunnel protects the median nerve and flexor tendons that bend the fingers and thumb.



What is Carpal Tunnel Syndrome (CTS)?

Carpal Tunnel Syndrome (CTS) is a condition caused by compression of the median nerve as it passes through the carpal tunnel in the wrist. Symptoms typically develop gradually and may include:

- Numbness and tingling that you feel in the thumb, index, middle, and half of the ring finger
- Pain or discomfort that feels worse at night or with repetitive hand use
- Weakness or clumsiness
- Difficulty with gripping and manipulating objects, or fine motor tasks

How Can I Self-Manage CTS?

Do a Posture Check

The better posture you have at your head, neck and shoulders, the more efficient your arms and hands will be during a task.

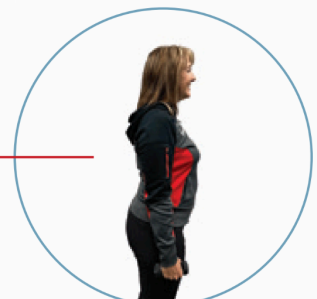


POOR POSTURE:

Head jutting forward, shoulders rounded, chest muscles tight.

GREAT POSTURE:

Ears are in line with the shoulders, which are in line with the hips and the ankle bones.





Carpal Tunnel Syndrome

Examine Your Hobbies

Consider the body positions you are in at work AND how your body is positioned during hobbies you enjoy in your free time. Do your hobbies include wood working, fixing up a vehicle, doing a home renovation, lifting weights in the gym, taking care of the lawn by pulling weeds or using a weed eater, riding a motorcycle, playing video games? Ask yourself are my hands and arms in a similar position during my hobby as they are when I am working? Am I using similar tools or performing similar tasks? Are my hands being exposed to a lot of vibration? If so, your symptoms could be worsened because you're placing the same pressure on the same tissue. Give your tissues a break!

Give Yourself a Break

- Split up the task to allow for rest and recovery
 - For example: Complete lawn work or home projects over more than one day
- Set a time limit
 - For example: Set a timer for a certain duration and once it goes off, you're finished with the task/project/video games etc. for the day
- Take microbreaks BEFORE you notice discomfort or symptoms
- Perform frequent counter stretches/counter moves to allow for muscle recovery
- Use wrist splint/brace at night
- Perform self-massage to the forearm
- Use a heating pad, ice pack, or contrast baths

Modify Daily Activities to Allow for More Hand Rest

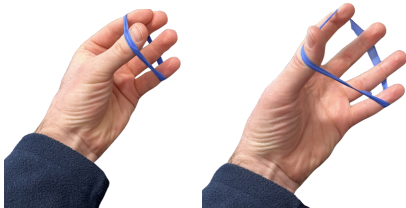
- Use scissors to open bags rather than pulling with fingers
- Open jars or bottles with a bottle opener or rubber grip to minimize force
- Hold the steering wheel with a relaxed grip when driving
- When cleaning dishes use dishwashing gloves with grip texture to reduce the amount of grip force needed and rest dishes along the side of the sink to help keep wrists in neutral
- Use a wider pen/pencil or built-up grips to reduce pinch force when writing or using utensils
- Avoid over-gripping and use the whole hand (power grip) rather than pinching when lifting/carrying objects
- Add cushioning material to handles for improved grip



Carpal Tunnel Syndrome

Strengthen and Stretch

There isn't a lot of focus on strengthening the small extensor muscles of the fingers and forearm. Working on these muscles can reduce stress to the carpal tunnel. **Try some of the exercises below and scan the QR codes for more information.**



Resisted Finger Extension

1. Begin this exercise with a rubber band secured around all four fingers and your thumb. Your hand should be slightly cupped.
2. Gently spread your fingers and thumb apart, then slowly return back to the starting position and repeat.
3. Make sure to keep your fingers and wrist as straight as you can during this exercise. Perform 1-3 sets of 10-15 repetitions.

Resisted Wrist Extension

1. Begin sitting in an upright position with sore arm resting on a table or your leg, holding a weight with your hand hanging off the edge.
2. Palm should be facing the floor.
3. Curl your wrist up, then slowly lower it back down smoothly and with control.
4. Make sure not to rotate your wrist. Perform 1-3 sets of 10-15 repetitions.



1. Easier



2. More Intense



Wrist Flexor Stretch – Palm Down/Up

1. Elbow straight at shoulder level, palm DOWN
Grab Fingers and slowly bend wrist backwards (toward the sky)
2. Elbow straight at shoulder level, palm UP
Grab Fingers and slowly bend wrist backwards (towards the floor). Hold stretches for 20-30 seconds, repeat on other side.

Weightbearing Wrist Flexor Stretches

1. Stand facing table, palms resting on surface with fingers pointing away from you. Slowly move body forward and over your hands to increase stretch in forearms
2. Stand facing table, palms resting on surface with fingers pointing towards you. Slowly lean back or away from the table to increase stretch in forearms. Fingers off edge of table makes it less intense - can be done on floor or vertical surface. Hold stretches 20-30 seconds.

1. Easier



2. More Intense



Finger Grip Stretches

1. Pull each finger back so stretch is felt below the finger in the palm.
2. Hold 20 seconds, perform 1-2 times each finger as often as needed.

Hand and Wrist



Elbow





Carpal Tunnel Syndrome

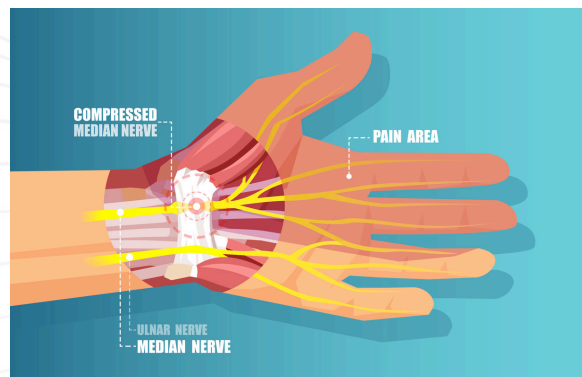
The Median Nerve and Nerve Glides

The median nerve runs from the neck, down the arm, into the forearm, through the carpal tunnel and into the fingers. It controls movement of the forearm and hand as well as touch, pain and temperature sensations into the hand and fingers. If the nerve is being compressed anywhere along its track, this can lead to wrist pain, numbness/tingling or decreased grip.

An easy exercise to ensure that the median nerve is moving well is called a “nerve glide” also known as “neural flossing,” “neural slide,” or “neural mobilization.” After an injury, repetitive strain or with prolonged poor posture, the tissue surrounding the nerve may become restricted which will result in decreased health of the nerve. The goal of nerve glides is to improve nerve mobility, reduce nerve irritation, and improve circulation and oxygenation, which promotes healing.

Nerve glides are **not** the same as stretches. When performing nerve glides, you want to move slowly and gently - these movements are meant to be dynamic and should not be held for a long period of time. You might notice a mild tingling or stretching sensation, which is normal, but you should not feel sharp pain or worsening symptoms.

A median nerve glide can be used with any type of shoulder, wrist or hand tightness and pain. If your job includes a lot of overhead work, sustained postures, gripping/twisting or repetitive hand tasks, please make median nerve glides a consistent part of your day; routinely performing them over several weeks can improve mobility and reduce symptoms.

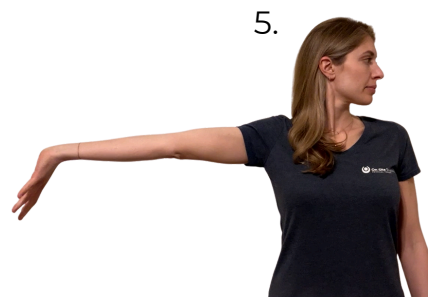
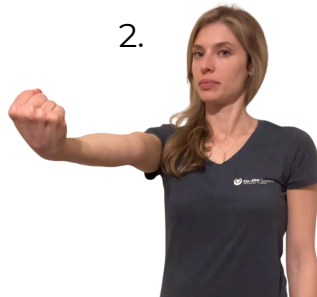
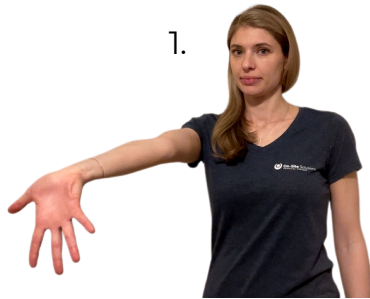




Carpal Tunnel Syndrome

Median Nerve Glides

Several different nerve glides can be performed that affect the median nerve. Try the glides below and choose one that feels the best for you. As a reminder, nerve glides are not stretches and should not be held for longer than 10 seconds. They are gentle movements that should not reproduce pain - you may feel mild tension or a few tingles, and that is OK.



1. Lift right arm out in front, to shoulder level, palm of hand facing up. Spread fingers and bend wrist until fingers point to the floor.
2. Bring fingers and wrist up, forming a tight fist. Flex/bend wrist toward you.
3. Bend elbow pulling fist toward the shoulder.
4. Rotate arm out towards the side, arm still bent and fist held. Turn head toward fist.
5. Straighten elbow and fingers. Bend wrist, pointing fingers towards the floor. Slowly turn head towards opposite shoulder.
6. Complete steps 1-5 with both arms BEFORE and AFTER your work day. Hold each position for 10 seconds.



Carpal Tunnel Syndrome



1. Curl one arm toward the top of your shoulder bending your arm and wrist.
2. Slowly straighten your elbow out to the side of your body.
3. When elbow is straight, extend your wrist and open your fingers so they are pointed towards the floor.
4. Move between these two positions in a smooth and controlled manner.
5. Perform about 10 repetitions, 1-3 times per day.



1. Start with one elbow bent, palm up as if you are holding a tray, with head positioned away from that side.
2. Straighten our arm and move your head towards that shoulder at the same time.
3. Return to the starting position and repeat, making sure wrist stays in same position.
4. Perform about 10 repetitions, 1-3 times per day.



1. Place your palms together with fingertips pointing upward.
2. Push your elbows to the left as far as you can until you feel a gentle pulling/gentle tension.
3. Push your elbows to the right as far as you can until you feel a gentle pulling/gentle tension.
4. Perform about 10 repetitions, 1-3 times per day.