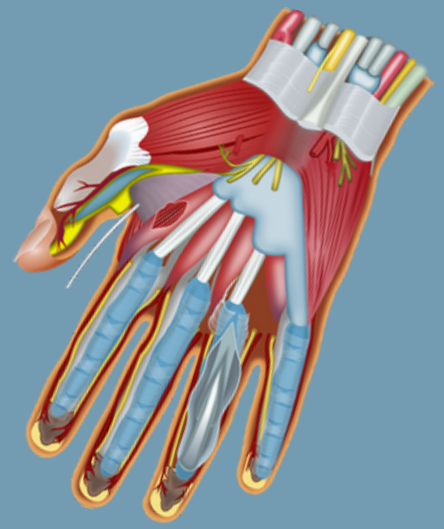


# CARPAL TUNNEL SYNDROME



## WHAT IS CARPAL TUNNEL SYNDROME?

- Carpal Tunnel Syndrome (CTS) is the compression of the median nerve within a canal created at the wrist by the carpal bones bordering the bottom of the canal and a thick, fibrous ligament laying over the top.
- The median nerve is one of the three main nerves that provide power and sensation to the hand. It emerges from the neck and travels all the way down the arm to the fingers.
- The median nerve supplies sensation to the thumb, index, middle and half the ring finger. This nerve also supplies power to the thumb muscles within the hand that move the thumb into opposition (tip-to-tip pinch to the other fingers).



## COMMON SYMPTOMS OF CTS

- Pain in the wrist, thumb and hand. Pain may radiate to the elbow and even the shoulder.
- Numbness and tingling, typically in the thumb, index and middle fingers and half of the ring finger.
- Nighttime numbness in the hand.
- Feeling clumsy or frequently dropping objects.
- In severe cases, the muscles at the base of the thumb may begin to atrophy and it becomes difficult to perform fine-motor activity such as picking up pills or coins or putting on earrings.



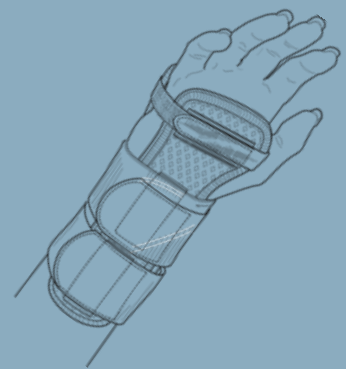
## WHAT SHOULD I DO IF I HAVE CARPAL TUNNEL SYNDROME?

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### WEAR A WRIST BRACE

Most of us sleep with the wrist in a bent position. This places pressure on the nerve as it passes through the carpal canal. Wearing a wrist brace at night holds the wrist in a flat (neutral) position. In this position, the carpal tunnel canal has the largest volume. More room in the tunnel means less pressure on the median nerve.



### CHANGE YOUR ACTIVITY

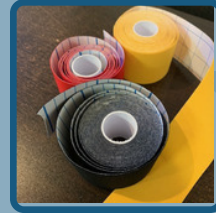
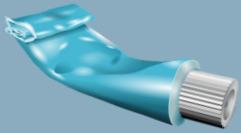
- Any injury, illness or activity that causes swelling of the tendons that pass through the carpal tunnel can cause CTS. Common activity related reasons include awkward positioning of the wrist, repetitively making a fist or squeezing an object, or holding/squeezing an object for a long period of time.
- Make ergonomic adjustments and improvements to your work station, hobbies & sleeping position.
- Avoid or modify activities that place your wrist in a bent forward position.
- Avoid or modify activities that place your wrist in a position that is angled to the side.
- Avoid repetitive gripping.
- Avoid holding objects for long periods of time, especially if the grip requires some force.





## INCREASE YOUR COMFORT

- Use cold packs for acute pain or swelling.
- Use heat packs to control more chronic pain or to relax the muscles.
- Wear compression or Isotoner gloves at night to help control swelling and to provide a comforting, neutral warmth.
- Use a topical pain relieving cream if helpful and as needed.
- Apply therapeutic taping to help reduce pain, tingling and numbness.



## CONSULT WITH A CERTIFIED HAND THERAPIST

- A Certified Hand Therapist will assess your symptoms and provide individualized treatment based on your needs.
- A therapist may:
  - use modalities such as ultrasound, electrical stimulation, heat and cold to improve circulation to boost healing and to reduce pain.
  - provide manual therapy techniques;
  - teach tendon and nerve gliding exercises;
  - address postural imbalances that may be contributing to the hand pain;
  - provide advice in making ergonomic changes,



## CONSULT WITH A PHYSICIAN

- A physician will assess your symptoms and decide on the best course of action for you.
- A physician may:
  - prescribe a short course of anti-inflammatory medications, such as NSAIDs, or over-the-counter (Advil, Aleve) if not contraindicated by other medical conditions.
  - May recommend a cortisone injection into the carpal tunnel to reduce inflammation and symptoms.
  - May suggest additional testing if conservative treatment methods do not relieve the symptoms to decide if a surgical option may be necessary.



## HELPFUL RESOURCES FOR MORE INFO

- The American Society of Hand Therapists (ASHT) - PDF Educational Handout
- American Society for Surgery of the Hand (ASSH) -Website Information
- American Association for Hand Surgery (AAHS) - PDF FAQ
- American Academy of Orthopaedic Surgeons (AAOS) - Website Information
- California Orthopaedic Surgery & Hand Institute - a detailed PowerPoint/movie presentation
- OrthoInfo Learning Module (AAOS) - a comprehensive learning module defining carpal tunnel syndrome, explaining conservative treatment options, outlining surgical options, advising on how to prepare for surgery & what to expect following surgery.

