

# Carpal Tunnel Syndrome



## Education Booklet

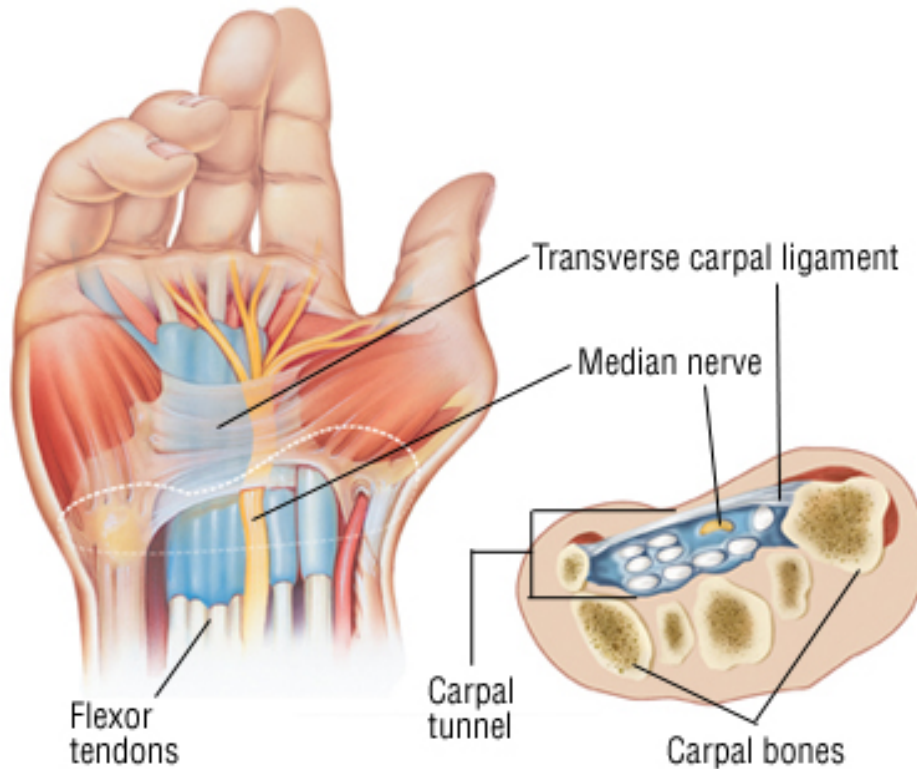
<http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001469/figure/A000433.B1081/?report=objectonly>

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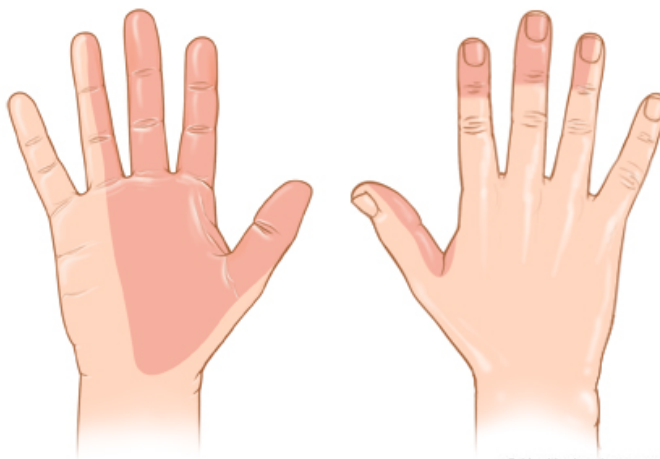
### What is it?

Carpal Tunnel Syndrome (CTS) is a condition caused by the median nerve being compressed as it passes through the carpal tunnel in the wrist. The carpal tunnel is narrow and is formed by the wrist bones and a thick ligament, as shown in the picture below. CTS affects more women than men and is most common in those aged between 40 and 65.



<http://www.drugs.com/health-guide/images/205264.jpg>

CTS can cause a variety of symptoms, including pain, tingling, numbness, swelling, weakness or clumsiness of the thumb, index, middle and ring fingers. Symptoms are often worse over night, but may also occur throughout the day. Any condition that reduces the amount of space within the carpal tunnel can cause CTS. Examples of these can include (but are not limited to): inflammation, wrist arthritis, wrist fractures, fluid retention, diabetes or rheumatoid arthritis.



Areas of the hand supplied by the median nerve

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## What can be done to help reduce symptoms?

There are a few strategies that can help you reduce or prevent the symptoms of CTS. These strategies may include activity modification, good posture, exercises and splinting. This booklet discusses each of these in more detail.

### 1) Changing the way you use your hands and complete activities

Certain activities can increase the severity of symptoms. Ways to reduce the impact of these activities include:

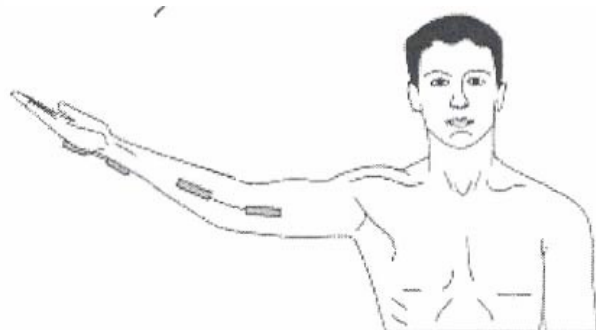
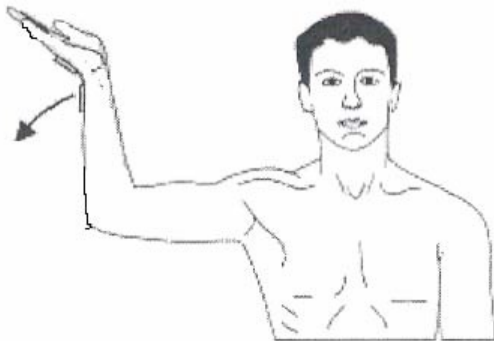
- **Reducing duration, frequency and/or force required to complete tasks. For example:**
  - Take regular breaks during heavier or repetitive tasks/ tasks that increase your symptoms
  - Consider other ways that a task can be completed. EG. Push heavy objects across a table or bench rather than carrying it, ask your butcher to cut up your meat for you, etc.
  - Alternate heavier tasks with lighter tasks
- **Avoid positioning your wrist in extremes of movement** (ie forwards and backwards).
  - There is less room in the carpal tunnel when your wrist is bent, which increases the amount of pressure within the carpal tunnel.
- **Avoid prolonged or repetitive pinching or gripping.** For example:
  - Loosen your grip and change your position regularly when reading a book, talking on the phone, pushing a shopping trolley or sweeping/mopping.
- **Modifying your environment.** For example:
  - Use equipment/tools/cutlery with thicker handles as this requires less force to hold.
  - Review your computer station set up. Your therapist can discuss this with you further.
  - Consider using soft gloves/mitt, or softer conforming handles, to reduce vibration during activities such as using a lawn mower or riding a bike.

## 2) Exercises

These exercises help relieve CTS symptoms by gently gliding the median nerve and tendons through the carpal tunnel.

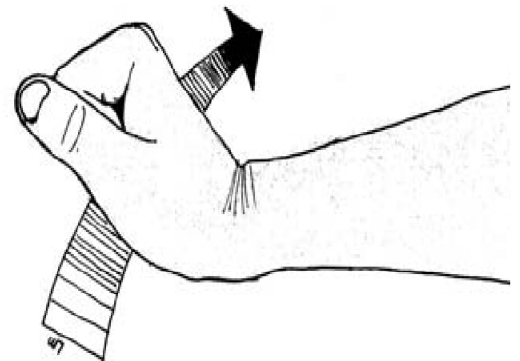
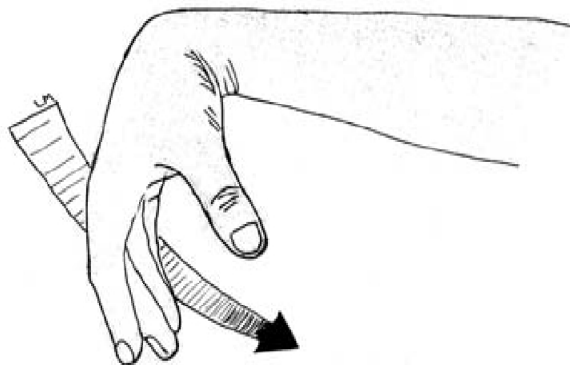
### 'Median Nerve Glide - Arm'

1. Hold your arm out to side with your palm facing up and wrist bent back
2. Straighten the elbow and hand  $\frac{3}{4}$  of the way,
3. Alternate these positions.
4. Repeat **5** times, **5** times per day.



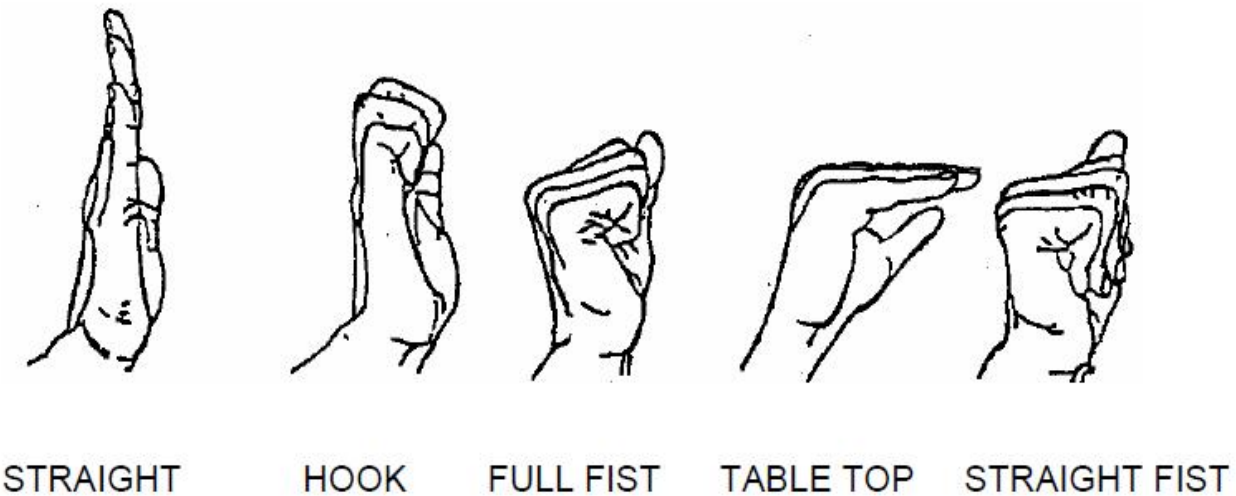
### 'Median Nerve Glide - Wrist'

1. Bend your wrist down (flexion) and back (extension). Keep your fingers relaxed.
2. Keep your elbow still while you do the exercises.  
Do **10** repetitions of each exercise.  
Do **5** exercise sessions each day



## 'Tendon Glides'

Start with fingers and wrist straight every time.  
Do each exercise **5-10** times per session, and hold for **1** second.  
Do these sessions **5** times each day.



### Please Note:

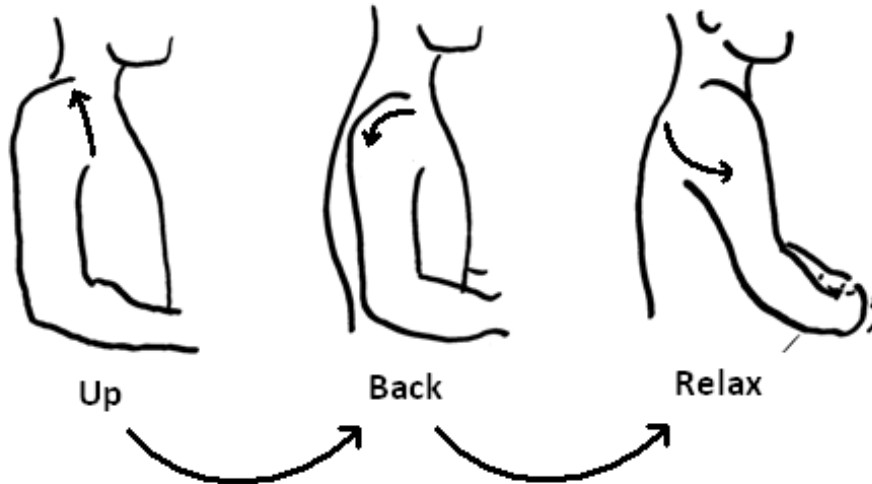
- If you feel an increase in your pain or symptoms you should stop that exercise until you can talk to your therapist.
- Only do the exercises your therapist tells you to do.
- Your exercises are an important part of getting better. They will only help if you do them as often as instructed.
- This information is intended as a general guide only. Please ask your therapist if you have any further questions.

### 3) Maintain good posture

As the median nerve starts in your neck and travels along the length of your arm, it is important to maintain good posture, particularly of your shoulders and neck. Your therapist will discuss this further with you.

**Shoulder roll exercises** help to encourage correct posture.

Do these exercises slowly, **10** times per session, **5** sessions per day.



<http://www.holistic-doc-pain-support.com/images/shoulderrolls.png>

#### Standing

Wear supportive, lightweight, low heeled shoes.

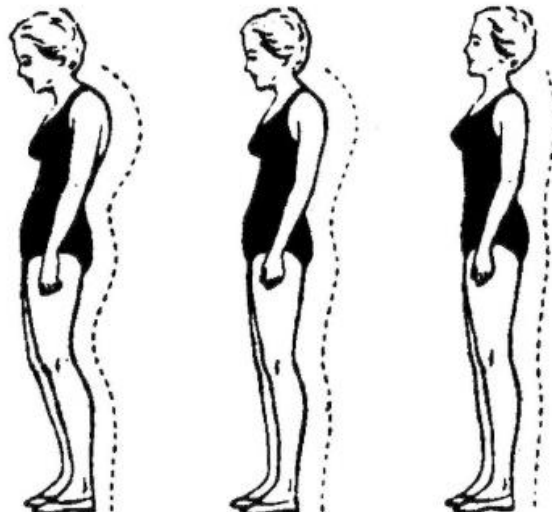
Stand with feet flat and shoulder-width apart and equal weight on each leg.

When standing, ensure your chin is tucked in, head is up straight and the “S” curve of your back is maintained.

Lift chest up and tuck in your abdominal muscles to maintain a comfortable (neutral) position of the back.

Imagine a line is dropped from your ear – it should go through the tip of the shoulder middle of the hip, back of the kneecap and ankle bone.

Avoid locking your knees - keep them relaxed and slightly bent.



## Sitting

Always sit with your bottom and spine back in a firm chair, with shoulders relaxed.

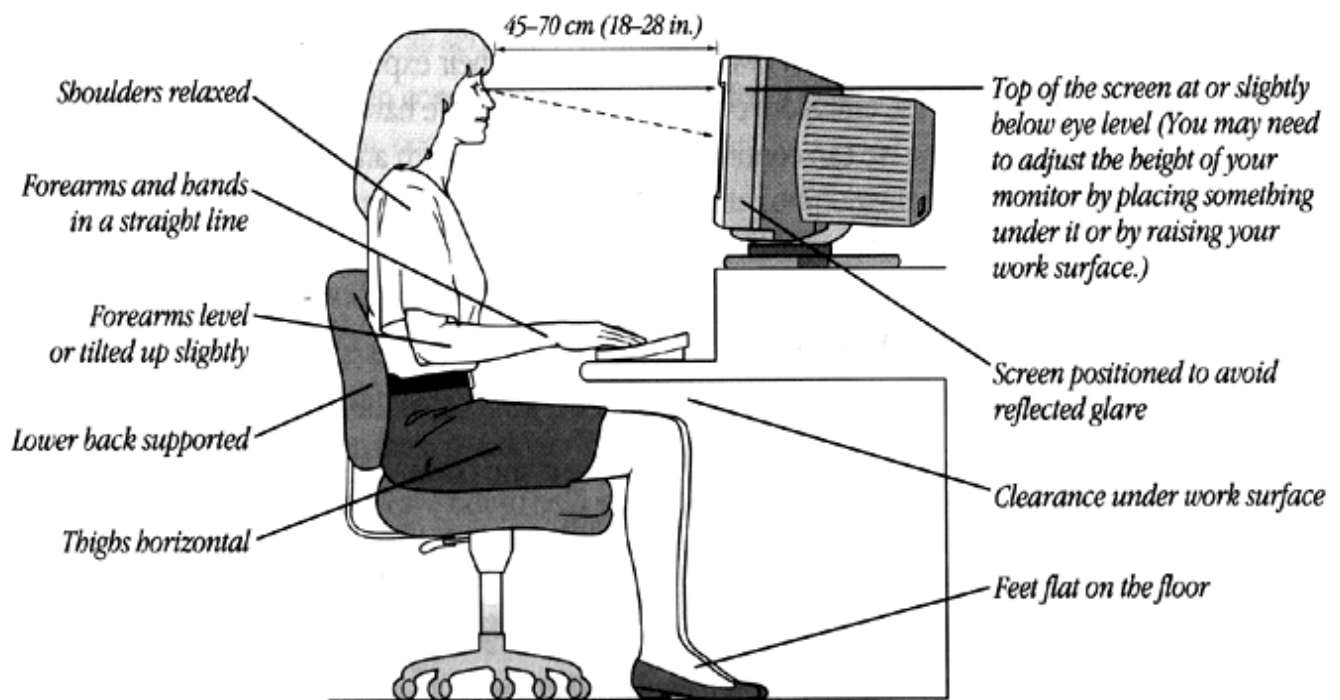
Your elbows should rest by your side, with wrists straight and feet firmly on the floor.

When working at the computer, keep your screen at eye level so you are not bending over your work.

Ensure you are using a height-adjustable chair with a supportive back-rest.

Keep your hands and wrists relaxed and supported.

Taking regular breaks during prolonged periods of work can reduce strain and discomfort.



## 4) Splinting

Wearing wrist splints while you are sleeping may reduce the severity of symptoms.

Splints help to reduce symptoms by:

- Allowing inflamed areas within the wrist to rest
- Positioning the wrist to reduce pressure within the carpal tunnel (because the carpal tunnel is most open when the wrist is straight).

Please note that after you start using the splints, it may take several weeks before you start to notice an improvement in your symptoms.

### Wearing Instructions

Straps should be applied firmly, but not too tight.

Wear liners under splint for hygiene/comfort.

Your splint is to be worn overnight in bed.

Your Occupational Therapist and Doctor will alter this wearing regime when appropriate.

### Precautions

Contact your therapist for a splint adjustment if you experience the following:

- Rubbing
- Increased pain
- Skin irritation
- Red marks lasting longer than 20 minutes
- Increased swelling
- Pins and needles
- Colour changes to your skin

### Care of Splint

- Hand wash in cold soapy tap water: Remove metal/plastic bar prior to washing. Rinse thoroughly and dry in shade.
- Splint liners may be washed more regularly in cold soapy tap water.

Do not attempt to adjust your splint. Contact your therapist if any adjustments are necessary.

### Follow-Up Check

Please bring the splint your therapist has provided with you to your next appointment.

Your Therapist is: \_\_\_\_\_

Contact Hours are: 8.00am -4.30pm