

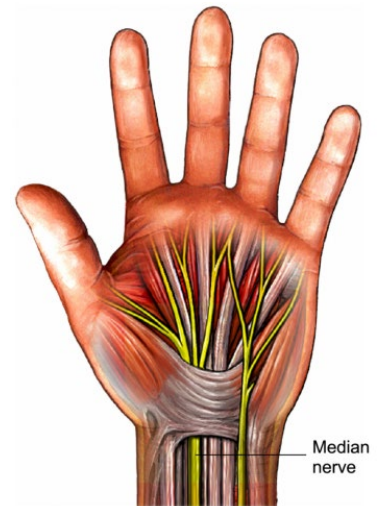
Carpal tunnel syndrome and first line treatment options

Information for patients

What is carpal tunnel syndrome?

Carpal tunnel syndrome (CTS) is a condition that occurs when the median nerve, which runs from the forearm into the palm of the hand, becomes compressed at the wrist. This can lead to symptoms such as:

- Numbness or tingling in the thumb, index, middle, and part of the ring fingers
- Pain in the hand or wrist that may radiate up the arm
- Symptoms may be worse at night and can disturb sleep
- Weakness in hand grip or difficulty with fine motor tasks.



Areas of the hand supplied by the median nerve

Causes of carpal tunnel syndrome

In most patients, we don't understand why people develop carpal tunnel syndrome. However, it can result from various factors, including:

- Wrist injuries or fractures
- Activities with repetitive high hand and wrist movements
- Medical conditions (e.g. diabetes, arthritis, hypothyroidism, obesity)
- Fluid retention during pregnancy or menopause.

First line treatment options

Most cases of CTS can be managed without surgery and symptoms can get better by themselves.

Here are some effective treatments:

1. Wrist splinting

- **What it is:** Wearing a splint helps keep your wrist in a neutral or straight position, reducing pressure on the median nerve.
- **When to use:** It's particularly helpful at night to prevent wrist flexion during sleep.
- **Where to get a splint:** Some pharmacies may stock carpal tunnel wrist splint (Futuro splint). They can also be found online for less than £10.
- **How to use:** Flatten out the metal bar so that it is straight rather than slightly bent. This makes the most space available for the nerve. Wear it at nighttime for 3–6 months. It can take a little bit of getting used to but should help prevent the sensation of tingling/pins and needles/numbness or dead hand and improve your sleep.

The photograph shows the type of splint we recommend. It has a metal bar on the palm side of the splint that should help stop the wrist from bending when you sleep. This helps to reduce the pressure on the nerve at nighttime that makes you wake up with pins and needles or tingling in the hand.



2. Activity modification

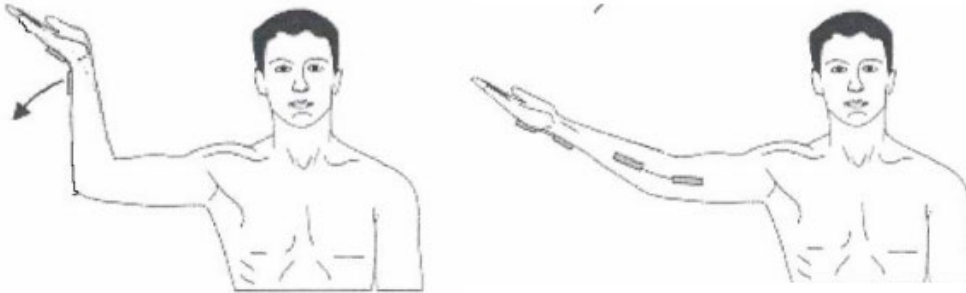
- **What to do:** Identify and reduce activities that aggravate your symptoms. This may include taking regular breaks from repetitive tasks.
- **Tips:** Use ergonomic tools and workstations to minimise strain on your hands and wrists.

3. Mobilisation exercises

- **What it is:** See below for some exercises that can strengthen the muscles in your hand and improve flexibility.
- **Benefits:** Mobilisation may improve your symptoms without any medical intervention.

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.

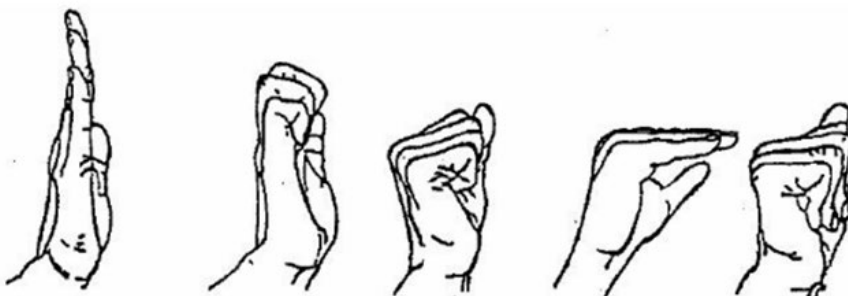


Tendon Glides

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.



STRAIGHT

HOOK

FULL FIST

TABLE TOP

STRAIGHT FIST

Please note that if any exercises make your symptoms worse, stop doing them until you can talk to your healthcare provider.

4. Medications

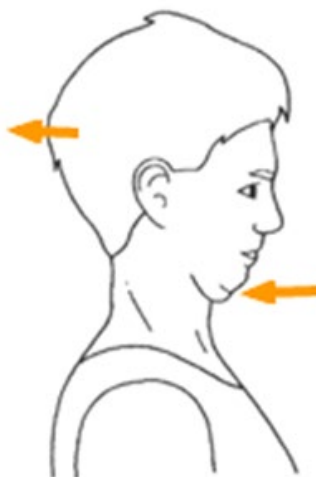
- **Nonsteroidal Anti-Inflammatory Drugs (NSAIDs):** Medications like ibuprofen can help reduce pain and inflammation.
- **Corticosteroid Injections:** May be used as treatment or for diagnostic purposes for your condition. It is not a first line treatment and is only administered by trained professionals

6. Posture and ergonomic adjustments

Maintain good posture. 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.

- **Workplace setup:** Adjust your chair, keyboard, and mouse to ensure proper wrist positioning and posture.
- **Supportive devices:** Consider using ergonomic keyboards and mouse pads with wrist support.
- NHS Inform – preventing work-related injuries:

www.nhsinform.scot/illnesses-and-conditions/muscle-bone-and-joints/preventing-work-related-injuries#what-you-can-do



Sitting

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

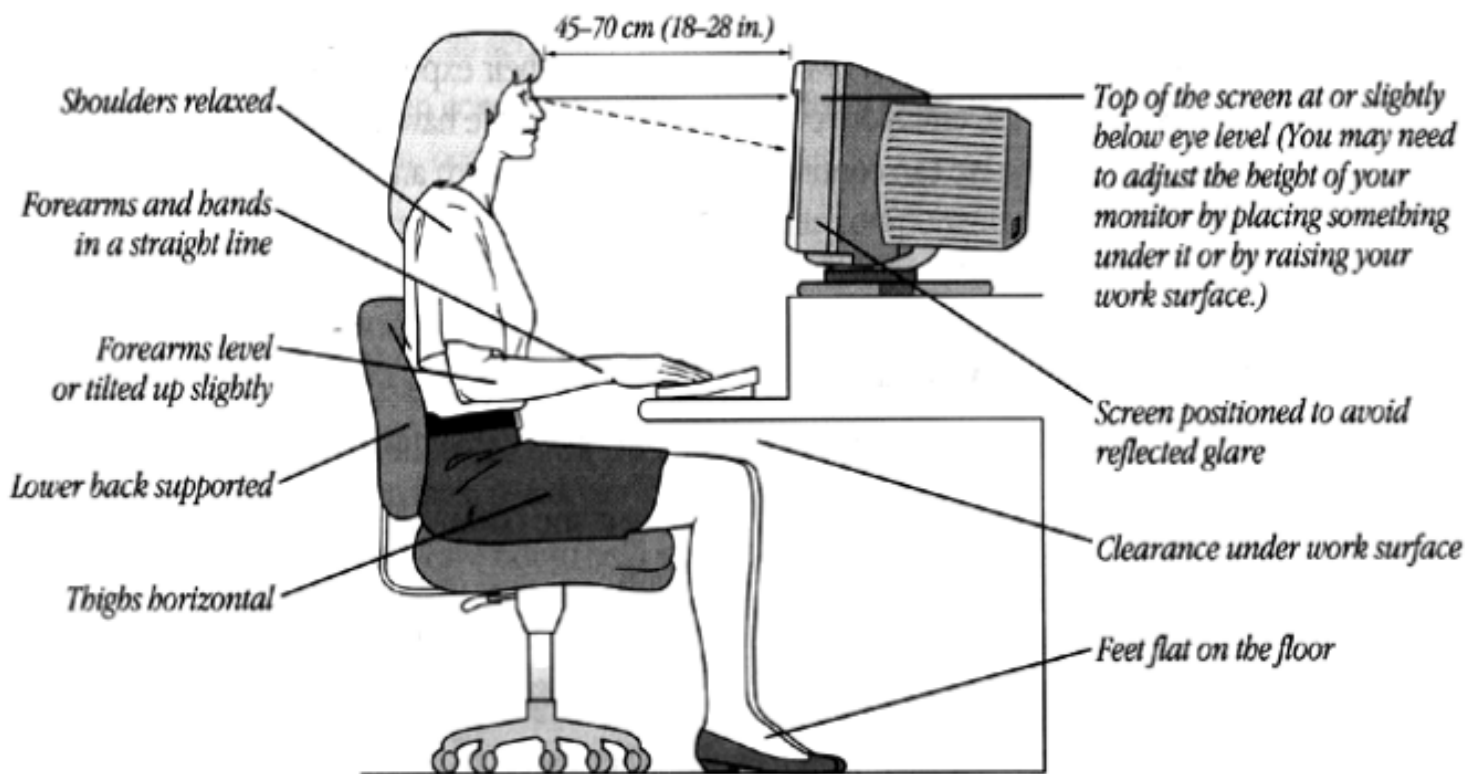
Your elbows should rest by your side, with wrists straight and feet firmly on the floor.

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.



When to seek further help

If first line treatments do not improve your symptoms after 6 weeks, or if you experience severe weakness, persistent pain, or changes in hand function, consult your GP for further evaluation.

Summary

Carpal tunnel syndrome can often be effectively managed through first line treatment. Early intervention and lifestyle adjustments may reduce or cure your symptoms.

If you have questions or concerns about your condition or treatment options, please don't hesitate to speak with your healthcare provider.

Resources

Lothian Virtual Hand Clinic - Carpal tunnel syndrome:

<https://lothianvirtualhandclinic.co.uk/carpal-tunnel-syndrome/>



NHS Inform – Carpal tunnel syndrome

www.nhsinform.scot/illnesses-and-conditions/muscle-bone-and-joints/arm-shoulder-and-hand-problems-and-conditions/carpal-tunnel-syndrome/

