

Patient information

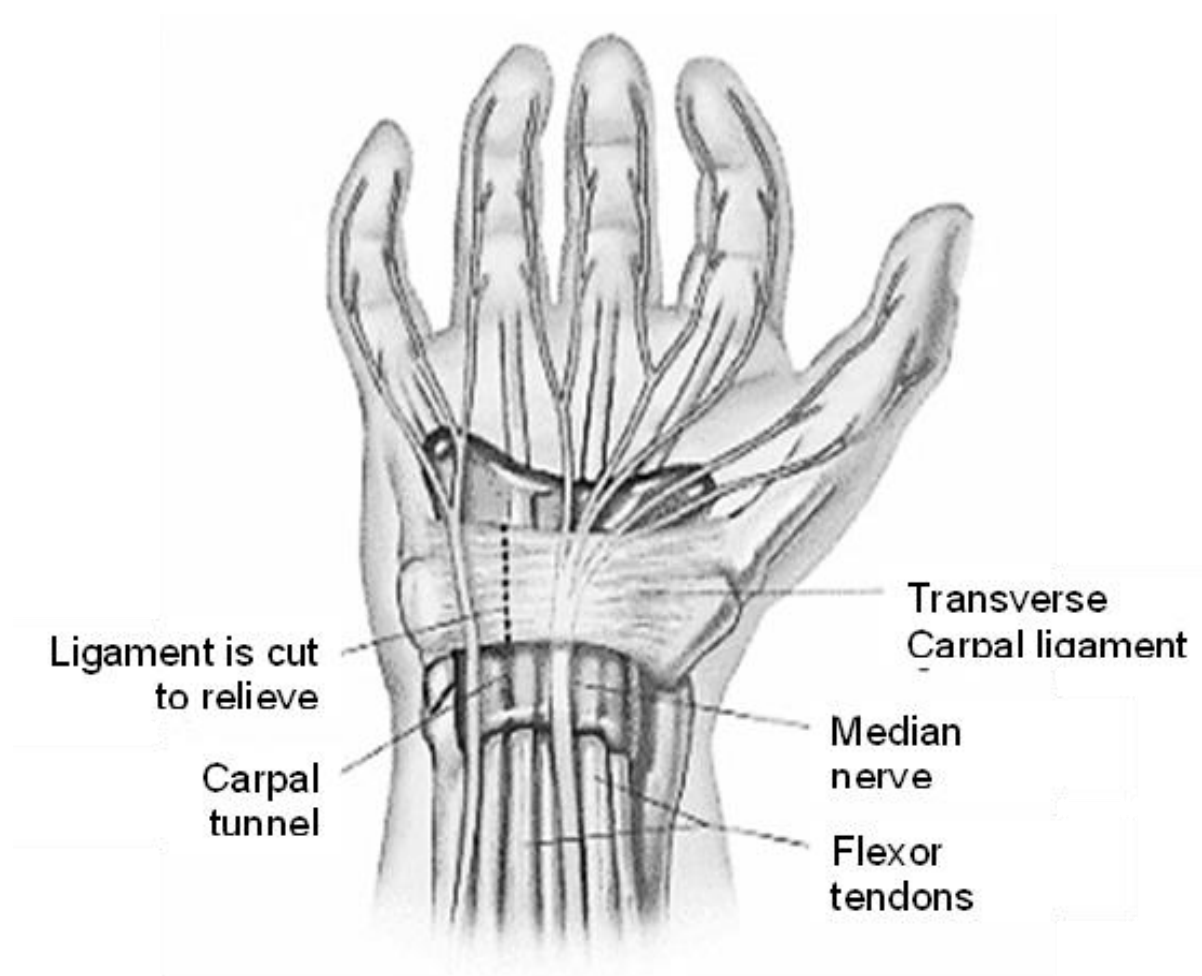
Carpal Tunnel Syndrome

Hand Therapy, Therapies Department

What is the Carpal Tunnel?

The Carpal Tunnel refers to the space in the wrist through which the tendons to the fingers pass through; this is formed by the bones in the wrist and a ligament passing over them, it contains the median nerve, which is responsible for the movements of your thumb/fingers, and the sensation in your thumb, index, and middle fingers plus part of the ring finger.

Carpal tunnel Syndrome is the compression of the median nerve as it passes through this tunnel.



Who gets it?

Carpal Tunnel Syndrome can affect all ages. It is most common in women.

Cause

There is no known underlying cause for Carpal Tunnel Syndrome, however some risk factors include: -

- A build-up or retention of fluid e.g. during pregnancy/menopause.
- Following a wrist fracture where bone positions may be altered or due to swelling after a wrist injury.
- With arthritis because of soft tissue swelling.
- Can be associated with diabetes and under active thyroid.
- Positioning of the wrist during daily activities such as excessive/repetitive hand & wrist movements.
- Vitamin deficiency.

Symptoms

- Pain, aching, tingling, numbness, mainly in thumb, index, and middle fingers (plus part of ring finger).
- Often worse at night – sleep may be affected.
- As symptoms progress, occasionally the whole hand and forearm may be affected.
- If present for a long time, muscles at the base of the thumb can become weak and wasted; the grip is weakened, and objects may be dropped.

Investigation

If there is weakness and wasting of the thumb muscles, you may be referred for Nerve Conduction Studies which can confirm if the problem is the Carpal Tunnel as similar symptoms may be caused by pressure on the nerve elsewhere – e.g. in the neck.

Treatment

- Some symptoms resolve without treatment – e.g. after pregnancy or with a flare up of arthritis.
- Avoiding or reducing excessive or repetitive movements where you are bending your wrist or gripping hard. Reducing use of vibrating tools such as instruments or work tools. Take regular breaks from repetitive activity and regularly change your posture. Alternate heavier tasks with lighter ones.
- You may be given a wrist splint to wear at night which will hold your wrist in a position that prevents excess pressure on the nerve.
- You may be referred for Physiotherapy or Occupational Therapy.

- Steroid injections may occasionally be given to reduce swelling in the connective tissue; this may help to relieve symptoms.
- If your symptoms remain after trialling splint and exercises and Nerve Conduction Studies have confirmed Carpal Tunnel Syndrome, surgery can be an option. Surgery is carried out to release the pressure on the nerve and can be carried out under local anaesthetic as a day case.
- Poor posture of the neck/spine can also irritate the nerve higher up its route and make carpal tunnel symptoms worse.

Exercises

1. Neck retraction exercise

This helps to improve posture and mobilises the neck joints. Gently draw your chin backwards (as if trying to make a double chin) until you feel a stretch up the back of your neck. Keep your eyes facing forwards not down. Then relax, do not push next forwards.

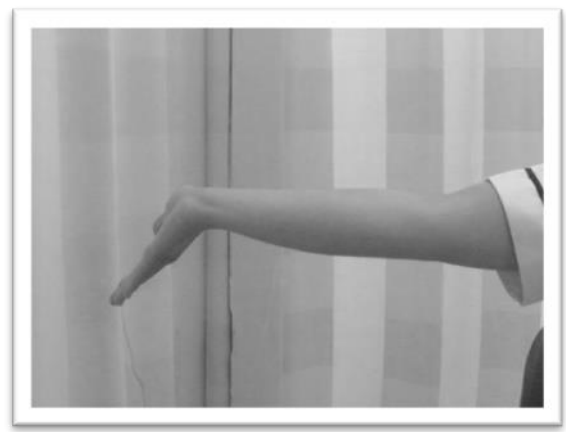


2. Neck rotations

Gently turn your head to look over each shoulder in turn as far as you can **comfortably** go. This helps to mobilise the neck joints; this is where the nerves arise from. Perform 10 reps three to four times per day.

3. Median nerve glide

These exercises gently glide the median nerve through the carpal tunnel. **Do not push into the movement and stop if your symptoms worsen whilst doing this exercise.** Take your arm out to shoulder height with palm facing up, if this is uncomfortable you can bend your elbow to release the tension. If arm is straight then gently take your wrist backwards with fingers straight and pointing down towards the floor, you may want to stop here when you first start these exercises (nerves can be irritable and if your symptoms are worse you must stop). If this is still comfortable: gently stretch your neck sideways to the opposite side. Then straighten your neck back to the midline, relax your wrist and fingers and bend at the elbow to release the stretch. Initially check your symptoms after one repetition, progress to 10 reps three to four times per day



4. Tendon Gliding Exercises

These exercises gently glide the tendons that are in the Carpal Tunnel. 10 reps of each of the above four exercises three to four times per day.





5. Working posture

Avoid very bent over (flexed) postures when typing, in the picture below the chair is too low causing the elbows to bend excessively, the chin to poke forwards, the hips, elbows, wrists to bend excessively and the body to slump.

Try to sit more upright as demonstrated (approximately 90-degree angle at hips, knees, and elbows), the chair height improves the position of elbows, wrist, hips, shoulders, spine and head. Try to keep your wrist straight when typing or moving your mouse.

Try to avoid long periods in one posture doing the same activity. Every 20-30 minutes, stand up and stretch all joints out in the opposite direction to typing posture.

You can also raise up the height of your screen to eye level to avoid excessive neck bending, the screen should be a minimum of 15 inches from you. If you use a telephone for more than 40% of the working day, consider a hands-free set to reduce neck strain.



Movement

General exercise has been shown to have significant positive effects on pain, function, cardiovascular function, and mental wellbeing in those struggling with musculoskeletal pain. It is safe to be completing general activity with Carpal Tunnel Syndrome, as long as you avoid aggravating positions for your wrist and hand.

The NHS recommends adults engage in 150 minutes of moderate intensity activity per week. For ideas of suitable exercises, you can visit their website and choose a workout which you feel would best suit your ability.

Useful links

<https://www.nhs.uk/conditions/nhs-fitness-studio/>

<https://www.hse.gov.uk/pubns/priced/hsg57.pdf>

https://www.bssh.ac.uk/patients/conditions/21/carpal_tunnel_syndrome

<https://cks.nice.org.uk/topics/carpal-tunnel-syndrome>

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Following your discharge from hospital or attendance at your Outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your feedback is greatly appreciated.

Further Information

- The British Society for Surgery of the Hand (BSSH; website www.bssh.ac.uk) patient leaflet [Carpal tunnel syndrome](#).
- The Royal College of Surgeons of England (RCSEng; website www.rsceng.ac.uk) patient leaflet [Carpal tunnel release](#).
- The Versus Arthritis (website www.versusarthritis.org) leaflet [Carpal tunnel syndrome](#).
- The NHS (website www.nhs.uk) leaflet [Carpal tunnel syndrome](#).
- The Patient (website www.patient.info) leaflet [Carpal tunnel syndrome](#).
- Shared decision making information in the [NHS England Decision support tool](#).

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