

Carpal Tunnel Syndrome



Polyclinics
SingHealth



*Disclaimer: Please note that the instructions shown are strictly for general information only.
If you have any queries, kindly check with your healthcare provider.*



SCAN ME

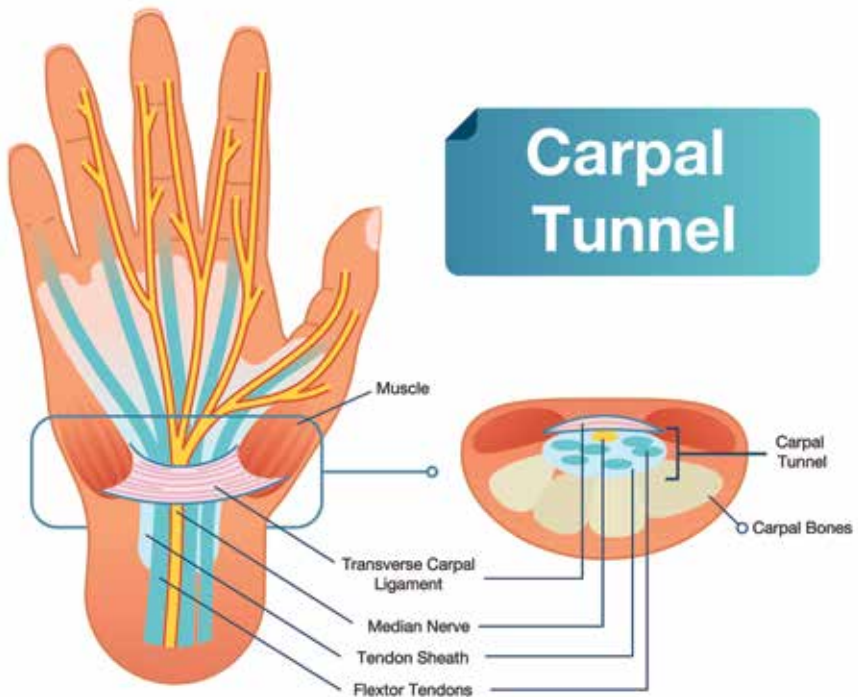
A

What is carpal tunnel syndrome?

The carpal tunnel is a narrow passageway over the palm of your hand which is surrounded by bones and ligaments.

Carpal tunnel syndrome (CTS) is a common nerve entrapment syndrome caused by increased pressure on a nerve called the median nerve located within the carpal tunnel.

The nerve provides sensation to the thumb, index and middle fingers, and to half of the ring finger. The little finger is typically not affected.



The wrist and carpal tunnel



What are the common causes of carpal tunnel syndrome?

Narrowing of the wrist space or increased pressure in the wrist (carpal tunnel) can cause irritation to the median nerve. This may be due to:

- Repetitive or high-force work using wrist and hand
- Prolonged work with vibration tools or extreme wrist motions
- Excessive use of computer with mechanical stress on the wrist
- Pregnancy – hand swelling and hormonal alterations
- Arthritic diseases e.g. rheumatoid arthritis and gout
- Heredity (smaller carpal tunnels can run in families)

Other risk factors include obesity, diabetes mellitus and thyroid gland hormone imbalance (hypothyroidism).



What are the signs & symptoms of carpal tunnel syndrome?

Stage 1 (Mild)

- Numbness at night, especially at the thumb, index and middle fingers, and half of the ring finger
- Intermittent numbness and tingling associated with overuse of the hand
- Symptoms may improve with rest and limitation of activities - shaking the hands often helps relieve the symptoms

Stage 2 (Moderate)

- Persistent numbness and tingling worsened with activities e.g. prolonged gripping and repetitive activities
- Difficulty using the hand e.g. holding a book to read, driving and typing on keyboard
- Small objects may slip from hand easily

Stage 3 (Severe)

- Profound loss of sensation with weakness in hand
- Shrink in size of the hand muscles (atrophy) at the base of thumb
- Inability to perform delicate tasks e.g. buttoning a shirt

D How long does it take to recover?

Mild symptoms may take months or years to resolve.

Untreated carpal tunnel syndromes commonly deteriorate over time.

For patients who are unresponsive to conservative treatment or have severe symptoms, surgery is usually a safe and effective option.

E You should seek medical attention early if you have...

- Numbness and/or weakness over entire arm and leg on the same side
- Facial numbness and/or weakness
- Progressive loss of sensation with weakness in hand
- Intense hand pain or movement restriction following a fall or trauma
- Prolonged morning hand stiffness
- Neck and arm pain

F What investigation do you need?

Imaging scan is not needed to diagnose Carpal Tunnel Syndrome.

Diagnosis can be made clinically with history and physical examination.

Further investigation such as nerve conduction study may be carried out by specialists when necessary.



What are the treatment options?

Depending on the condition, your healthcare provider may recommend:






Night splints	Activity Modification	Physiotherapy	Injections	Specialist referral
				
<ul style="list-style-type: none">• Keeping the wrist in a neutral position, and help to reduce the symptoms at night	<ul style="list-style-type: none">• Reduce activities that can result in overuse of the hands• Taking frequent rest breaks from repetitive activities• Apply workstation changes, (e.g. proper seating, hand and wrist placement) to avoid too much pressure or strain to the wrist	<ul style="list-style-type: none">• Exercises such as nerve gliding (Figure 1) may be helpful for mild to moderate symptoms• Therapeutic modalities (e.g. extracorporeal shockwave therapy (ESWT) or therapeutic ultrasound)	<ul style="list-style-type: none">• Corticosteroid injections may be used to reduce the inflammation in the carpal tunnel if the medication or physiotherapy does not improve the condition	<ul style="list-style-type: none">• Your doctor will refer you to see a specialist when necessary for further investigation and treatment such as surgery i.e. carpal tunnel release.



Figure 1 Nerve gliding exercises



1. Wrist in neutral, make a fist.



2. Wrist in neutral, extend fingers and thumb.



3. Thumb in neutral, extend wrist and fingers.



4. Extend thumb.



5. Turn forearm with palm facing you.



6. Use your other hand to stretch the thumb.

Figure 1 demonstrates the median nerve gliding exercise. Exercises 1 to 6 should be performed as one cycle and repeated up to five cycles with a 1-2 hour interval each day.

(Source: SingHealth Medical News, 1 Mar 2016)

Note:

[illegible]

Note:

[illegible]