

Carpal Tunnel Syndrome

What is Carpel tunnel syndrome?

Carpal Tunnel Syndrome (CTS) is a condition resulted from pressure on the median nerve at the wrist. Median nerve supplies sensation to your thumb, the first two fingers and part of the ring finger, in addition to providing strength to your thumb muscles.

Who Gets Carpel tunnel syndrome?

In some cases, no direct cause of the syndrome can be identified. Most likely the disorder is due to a congenital predisposition - the carpal tunnel is simply smaller in some people than in others. However, there are numerous factors that may cause carpal tunnel syndrome. It may be related to strenuous repetitive use of the hands, or occur after trauma such as a wrist fracture. The nerve can be compressed from something extra within the canal like tumour, an anomalous muscle, or a hematoma, which can occur particularly in patients taking anticoagulant or after a fall on the hand. Other disorders associated with carpal tunnel syndrome include diabetes mellitus, hypothyroidism, alcoholism, severe infections, and arthritic diseases such as rheumatoid arthritis, and gout. Carpal tunnel syndrome is also associated with pregnancy, post-menopausal state as well as patients on hemodialysis.

What are the Symptoms of Carpel tunnel syndrome?

- Tingling, numbness, weakness, pain in your hand, except for the little finger.
- Shooting pain from your hand up your arm to shoulder
- A swollen feeling in your fingers
- Symptoms are worse at night and early in the morning
- Hands feel stiff in the morning
- You have trouble grasping objects
- In severe case, atrophy of the muscles at the base of the thumb may be noted

The Diagnosis of Carpel tunnel syndrome

The physician can often make the diagnosis from detailed medical history, and one or all of the following tests:

- Tinel's sign: tap the front of your wrist to check for tingling/pain
- Phalen's sign: bend wrist down and hold then release to check for tingling/pain
- Nerve conduction velocity study: measures nerve's ability to send electrical impulses to confirm the diagnosis and determine severity



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- Blood test and X-rays: to check for other medical conditions
- Ultrasound and Magnetic Resonance Imaging are rarely used

Medication

- Diuretic
- Non-steroidal anti-inflammatory drugs (NSAID)
- Local injection of corticosteroid

Treatment

1. Occupational therapy
 - Initial treatment generally involves resting the affected hand and wrist for at least 2 weeks, avoiding activities that may worsen symptoms, and immobilizing the wrist in a splint to avoid further damage from twisting or bending.
 - Stretching and strengthening exercises can be helpful in people whose symptoms have abated.
 - An occupational therapist may help find ways of modifying work activities to reduce risk of recurrence.
2. Surgery
 - If symptoms last for 6 months or more, doctors may recommend Carpal tunnel release to reduce pressure on the median nerve.

Suggestions

Recurrence of carpal tunnel syndrome following treatment is rare. The majority of patients recover completely. To prevent workplace-related carpal tunnel syndrome, workers can do on-the-job conditioning, perform stretching exercises, take frequent rest breaks, wear splints to keep wrists straight, and use correct posture and wrist position.