

FACT SHEET

Carpal Tunnel Syndrome

What Else is it Called?

CTS, Median Nerve Compression

What Is it?

- Carpel tunnel syndrome (CTS) refers to a specific pattern of hand pain, paresthesias, or numbness that occurs along the palm and into the fingers and wrist.
- The median nerve, along with the tendons that bend (flex) the fingers, pass through a space inside the wrist called carpal tunnel.
- Inflammation or increased fluid retention compresses the nerve, causing pain and changes in sensation along the palm and often into the thumb, index and middle fingers
- Swelling and inflammation about the nerve may be caused by fluid retention related to:
 - The late stages of pregnancy
 - Menopause
 - Use of birth control pills
 - Hypothyroidism
 - Injury from trauma, such as a fracture of the wrist
 - Chronic inflammatory conditions such as rheumatoid arthritis
 - Increased body mass index
- Other causes may include highly repetitive wrist motion and sustained posturing with the wrist in awkward position. Keyboarding may unmask the presence of CTS but is not a cause of the condition.
- 10% of the population may have symptoms suggestive of CTS

It is more common in middle-aged women.

Additionally, carpal tunnel syndrome occurs in some individuals who have degenerative neck conditions (cervical spondylosis).

How Is It Diagnosed?

History:

- Individuals may describe pain, tingling, numbness, or feeling of weakness in the wrist, hand or fingers.
- In mild cases, pain is intermittent and often worse at night.
- Occasionally, pain may radiate into the forearm, shoulder, neck or chest.
- Individuals may be able to relieve their symptoms by shaking their hand.
- Pain, numbness and weakness may become constant in advanced cases.

What to look for:

- Changes in sensation are noted along the median nerve in the palm of the hand, thumb, and fingers.
- There may be localized welling in the wrist, as well as tenderness to palpation.
- In chronic or serve cases, palm may appear to be wasting away near the thumb (thenar eminence)

In many cases, no cause is readily apparent. In 50% of the cases where carpal tunnel syndrome occurs in one wrist, it also occurs in the other wrist.

What is the Expected Return to Work Time?

<p>Medical Treatment (including injection).</p> <p>Job Classification.....RTW Minimum – Maximum</p> <p>Sedentary Work.....0 days – 21 days</p> <p>Light Work.....0 days – 21 days</p> <p>Medium Work.....0 days – 28 days</p> <p>Heavy Work.....0 days – 42 days</p> <p>Very Heavy Work.....0 days – 63 days</p>	<p>Open or Endoscopic Surgery. Recovery time is variable and may take longer with open procedure by up to 50%</p> <p>Job Classification.....RTW Minimum – Maximum</p> <p>Sedentary Work.....0 days – 10 days (calendar days)</p> <p>Light Work.....0 days – 10 days</p> <p>Medium Work.....10days – 28 days</p> <p>Heavy Work.....42 days – 60 days</p> <p>Very Heavy Work.....42 days – 60 days</p>
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- Examination of neck and arm (to rule out other potential causes for the symptoms)
- Positive Tinel's signs – tapping on the medial nerve near the wrist, typically reproduces the symptoms
- Phalen's maneuver – flexing wrist against resistance & maintaining position for 30-60 seconds may reproduce pain and tingling
- These test have a high rate of false positive or false negative findings.

Tests:

- Plain film X-ray of the wrist are used to rule out bony abnormalities.
- Nerve conduction studies are performed to evaluate the nerve function and is the only objective test to verify the diagnosis.
- Blood tests for rheumatoid arthritis, diabetes, thyroid disease, etc., are frequently performed.

How is it Treated?

- Eliminating, as much as possible, the cause, such as repetitive of the wrist and fingers.
- Avoid the extremes of wrist bending (Flexion and extension)
- Other treatment may include anti-inflammatory medication, protective splints for work and/or sleep, stretching exercises, diuretics (if not contraindicated) and possibly corticosteroid injections into the carpal tunnel.
- In chronic or severe cases not related to pregnancy, surgical intervention may be required.
- The procedure involves cutting the ligament (roof of the carpal tunnel) and possibly removing inflamed tissue around the tendons to relieve the pressure on the nerve.

- This is generally an outpatient procedure; the procedure may be done under direct vision or with an endoscope.

What is the Predicted Outcome?

Symptoms may resolve with conservative management, including removal of the aggravating activities. If pain and tingling increase, or if weakness persists, surgery may be necessary, with an expected good outcome. Activity-related hand pain, if due to carpal tunnel syndrome usually resolves in one or two months. Tingling and numbness may last a few weeks or months. Grip strength returns to normal gradually over one to two years. Persistence of pain may reflect the presence of another condition.

What are the Work Restrictions and Accommodations?

- Work restrictions and accommodations must temporarily eliminate repetitive wrist motion and extremes of wrist bending (Flexion, extension).
- Protective wrist splints may be used during work and sleep to maintain neutral wrist positions.
- Few work restrictions for non-dominant hand

What Are the Common Prescriptions?

- Anti-inflammatories
- Steroid injection
- Analgesics

"A safe and timely return to work benefits the patient and his or her family by enhancing recovery and reducing disability."
Canadian Medical Association