



Carpal Tunnel Syndrome

DESCRIPTION

A nerve disorder in the hand that causes pain and loss of feeling, frequently in the thumb and first three fingers. It involves the median and/or ulnar nerve at the wrist joint and the blood vessels and tendons of the hand.

FREQUENT SIGNS AND SYMPTOMS

- Tingling or numbness in part of the hand, especially while driving longer distances, or at night - classically awakening you and causing you to shake your hands to awaken them.
- Sharp pains that shoot from the wrist up the arm, especially at night.
- Burning sensations in the fingers.
- Morning stiffness or cramping of hands.
- Thumb weakness.
- Grip weakness with frequent dropping of objects.
- Inability to make a fist.

CAUSES

Pressure on the nerves at the wrist caused by swollen, inflamed or scarred tissue. The sources of pressure include:

- Inflammation of the tendon sheaths, frequently from inflammatory conditions like arthritis, poorly controlled diabetes, or pregnancy.
- Fracture of the forearm.
- Sprain or dislocation of the wrist.

RISK INCREASES WITH

- Diabetes mellitus.
- Hypothyroidism.
- Menopause.
- Raynaud's disease.
- Pregnancy - this is not an uncommon problem during pregnancy.
- Rheumatoid arthritis and gout cause inflammation in the tunnel.
- Ganglion cyst.
- Work that requires repetitive hand or wrist action or is vibratory in nature.

PREVENTIVE MEASURES

- Take regular breaks when doing repetitive work involving the hands.
- Avoid doing work with vibrating instruments.
- Wear a wrist brace at work if it involves doing repetitive motions with your hands.
- Do regular carpal tunnel exercises given to you by your doctor.
- Tightly control your diabetes as high blood sugars cause inflammation and swelling in the tunnel.

EXPECTED OUTCOMES

Carpel Tunnel is usually curable with conservative measures - it even sometimes resolves on its own, but occasionally will require surgery if muscle wasting or nerve changes have developed.

POSSIBLE COMPLICATIONS

- Permanent numbness and a weak thumb or fingers in the affected hand.
- Permanent paralysis of some of the hand and finger muscles.

TREATMENT MEASURES

- Conservative treatment is usually tried first - see Preventive Measures above, plus 1) anti-inflammatory medications by mouth, or 2) injected directly into the wrist tunnel to decrease swelling locally, 3) Vitamin B6 50 mg. three times daily is sometimes recommended, and has been beneficial in some individuals.
- Discomfort improves by shaking hands or dangling arms. If you awaken at night with pain in your hand, hang it over the side of the bed; rub or shake it. Physical therapy to help mobilize the wrist bones to open the tunnel.
- Wearing a carpal tunnel splint on the affected wrist will be recommended. Some wear it only at night and some all day though this may interfere with day-to-day activities.
- For work at a computer terminal, be sure desk, keyboard and chair are at the proper height. Take regular breaks, and ensure that you have a well-padded wrist rest available.
- Diagnostic studies may be indicated if conservative treatment measures fail. These include electrophysiologic nerve tests (records electrical activity of muscles) and in some rare cases X-rays of the wrist.
- Surgery to free the pinched nerve is usually a last resort after conservative management has failed, or if nerve damage is advanced. Surgery provides almost complete relief from all symptoms in 95% of patients. This procedure is usually done as an outpatient, and may be

done with an open incision or with a small laparoscope (telescope). Allow 2 weeks for healing of the wounds, this is usually quicker with the laparoscopic surgery than with open surgery.

ACTIVITY

Stay as active as your strength allows. Exercises may be prescribed for the hand.