

# Detecting carpal tunnel syndrome

Typing, knitting, or needlework; carpentry work or cutting — if you engage in any of these activities on a daily basis, for work or pleasure, you could be at risk for developing **carpal tunnel syndrome** (CTS), a repetitive strain injury caused by a pinched nerve in the wrist.

Computer keyboard use is one source of the increase in work-related repetitive strain injuries in recent years. Other jobs requiring repetitive wrist or finger motions, such as those in meat, fish, and poultry processing, construction trades, electronics assembly, logging and sawmill

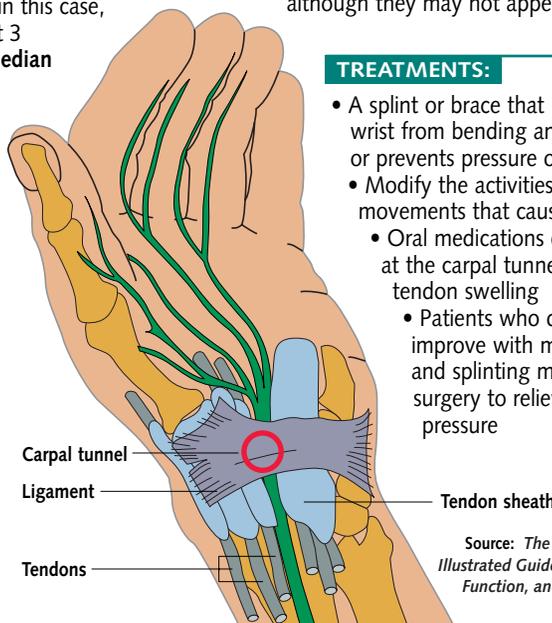
operation, supermarket cashiering and scanning, and some activities of hairdressers, farm and factory workers, and mechanics, also are responsible.

A study in the July 14, 1999, issue of JAMA reports that pain, numbness, and tingling in the thumb and first 3 fingers — the primary symptoms of CTS — are common in the general population of Sweden. The researchers believe that as many as 1 in 5 people with these symptoms could have CTS.

The good news is that about 90% of people with mild CTS can recover fully with appropriate treatment.

## WHAT IS CARPAL TUNNEL SYNDROME

Small bones at the base of the hand called the **carpals**, and a connecting tissue spanning them, form a tunnel-like structure. **Tendons**, the connective tissue between the muscles and the bones they move (in this case, the thumb and first 3 fingers), and the **median nerve** that carries signals between the hand and spinal cord pass through this tunnel. If the tendons become swollen, as can happen with overuse, the swelling can pinch the nerve, causing the pain, numbness, and tingling of **carpal tunnel syndrome** (CTS).



Source: *The Human Body: An Illustrated Guide To Its Structure, Function, and Disorders*, 1995

## SYMPTOMS:

- Numbness, tingling, and pain in the thumb, index, middle, and/or ring fingers that often gets worse at night
- Pain that shoots from the hand up the arm as far as the shoulder
- A swollen feeling in the fingers — although they may not appear swollen

## TREATMENTS:

- A splint or brace that keeps your wrist from bending and minimizes or prevents pressure on the nerve
- Modify the activities or movements that caused the CTS
  - Oral medications or injections at the carpal tunnel to reduce tendon swelling
    - Patients who do not improve with medication and splinting may need surgery to relieve the pressure

## PREVENTION:

- Stretch or flex your arms and fingers before beginning to work and take frequent breaks to flex and stretch.
- Alternate tasks, if possible, to reduce the amount of repetitive movements.
- Modify or change your daily activities (including work and hobbies) that put pressure on your wrists.
- Modify your work environment if possible. A healthy computer workstation includes an adjustable keyboard table and chair, and a wrist rest.

## FOR MORE INFORMATION:

- National Arthritis and Musculoskeletal and Skin Diseases Information Clearinghouse  
1 AMS Circle  
Bethesda, MD 20892-3675  
301/495-4484  
301/565-2966 (TTY)
- National Institute of Occupational Safety and Health  
800/356-4674  
E-mail: [pubstaff@cdc.gov](mailto:pubstaff@cdc.gov) or [www.cdc.gov/niosh](http://www.cdc.gov/niosh)
- American Academy of Orthopaedic Surgeons  
Self-addressed, stamped business-size envelope to:  
*Carpal Tunnel Syndrome*  
American Academy of Orthopaedic Surgeons  
P.O. Box 2058  
Des Plaines, IL 60017 or [www.aaos.org](http://www.aaos.org)

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Additional Sources: National Institute of Neurological Disorders and Stroke, National Institute of Occupational Safety and Health, American Academy of Neurology, American Academy of Orthopaedic Surgeons, AMA's Encyclopedia of Medicine

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