

Carpal Tunnel Syndrome

Carpal tunnel syndrome (CTS) is a condition brought on by swelling and pressure inside a "tunnel" made up of bones (carpal bones) and a ligament (transverse carpal ligament) in your wrist. Several tendons and the median nerve pass through the carpal tunnel. It is the compression of the median nerve that causes the symptoms of CTS.

The September 11, 2002, issue of JAMA includes a study comparing 2 treatments for CTS: use of a wrist splint and carpal tunnel release surgery.

SYMPTOMS OF CARPAL TUNNEL SYNDROME

- Pain, frequent tingling, or numbness in the fingers that can sometimes disturb sleep
- Cramping in the hand or wrist
- Feeling of fingers being swollen, although there is no swelling
- Weakness, with difficulty making a fist or squeezing objects in the hand
- Symptoms of CTS may be variable and are often felt in the thumb, index, middle, and part of the ring finger.

RISKS FOR CARPAL TUNNEL SYNDROME

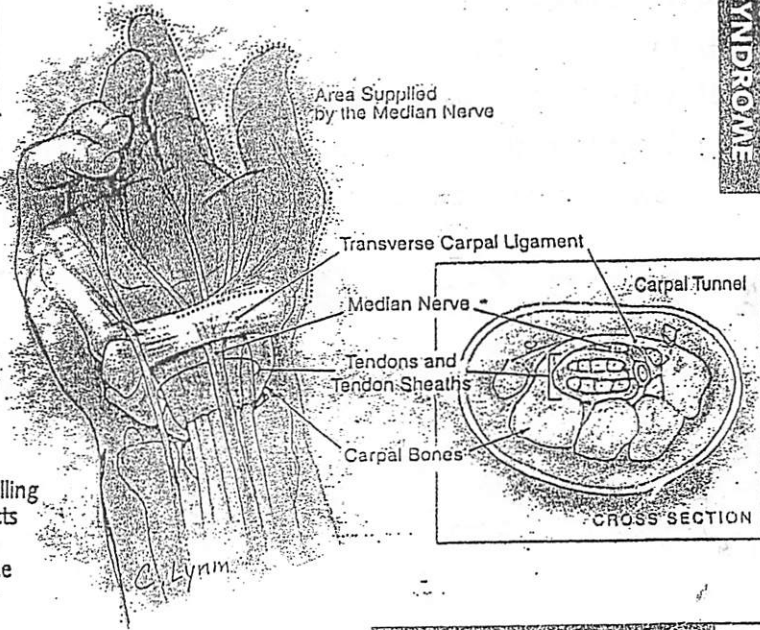
People who type, work in manufacturing, use vibrating machinery, play sports involving hand movements, knit, or do any kind of repetitive motion involving the hand may be at risk of developing CTS. However, sometimes there is no definite cause, and there are many other risk factors, including

- Arthritis or fracture near the wrist
- Injury of the wrist causing swelling in the carpal tunnel
- Pregnancy
- Diabetes
- Thyroid disease, particularly an underactive thyroid

TREATMENT

Treatment usually begins with a wrist splint to be worn mainly at night. Anti-inflammatory drugs can help relieve pain and numbness. Your doctor may also recommend a corticosteroid shot to help reduce swelling. It may be important to modify your workplace to ensure that your wrist stays in the neutral position (wrist joint straight, not down) while you perform your job.

If your CTS symptoms are severe or do not improve using the above treatments, your doctor might recommend carpal tunnel release surgery to release pressure on the median nerve. This surgery is usually performed through an incision in the wrist or palm. It may take several months for strength in the hand and wrist to return to normal. Unfortunately, CTS may not go away completely after surgery in some cases.



FOR MORE INFORMATION

- American Society for Surgery of the Hand
847/384-8300
www.assh.org
- National Institute for Occupational Safety and Health
800/356-4674
www.cdc.gov/niosh

INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page Index on JAMA's Web site at www.jama.com. A Patient Page on carpal tunnel syndrome was published in the July 14, 1999, issue.

Sources: American Society for Surgery of the Hand, Harvard Medical School's Consumer Health Information, National Institute for Occupational Safety and Health

Sharon Parmet, MS, Writer

Cassio Lynn, MA, Illustrator

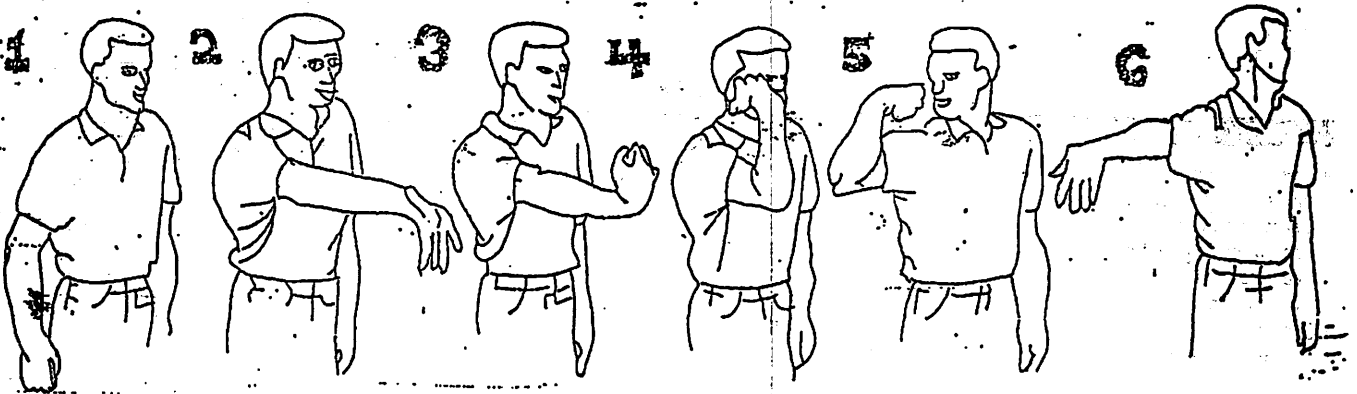
Richard M. Glass, MD, Editor

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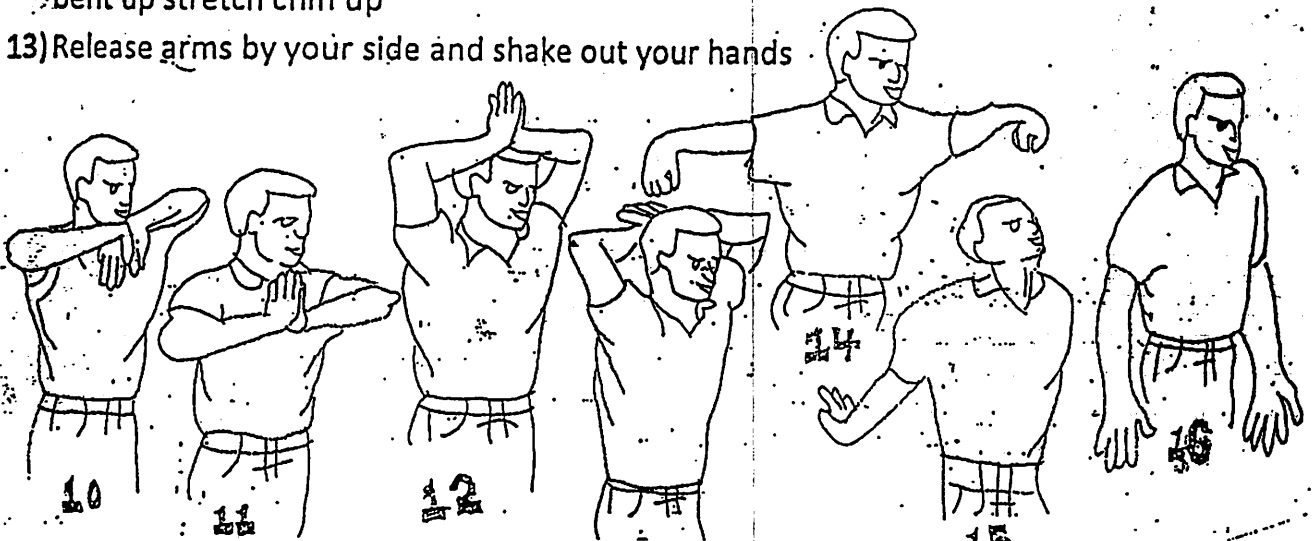


Carpal Tunnel Exercises

- 1) Stand with arms relaxed at your side.
- 2) Lift right arm out in front until level with shoulder, palm facing up. Spread fingers and bend wrist until fingers point to the floor.
- 3) Bring fingers and wrist up forming a tight fist. Flex wrist toward you.
- 4) Bend elbow pulling fist toward the shoulder
- 5) With arm still bent and fist held, rotate arm out towards side. Turn head toward fist
- 6) Straighten elbow and fingers; bend wrist pointing toward the floor. Slowly turn head toward opposite shoulder (repeat steps 1-6 with left arm)

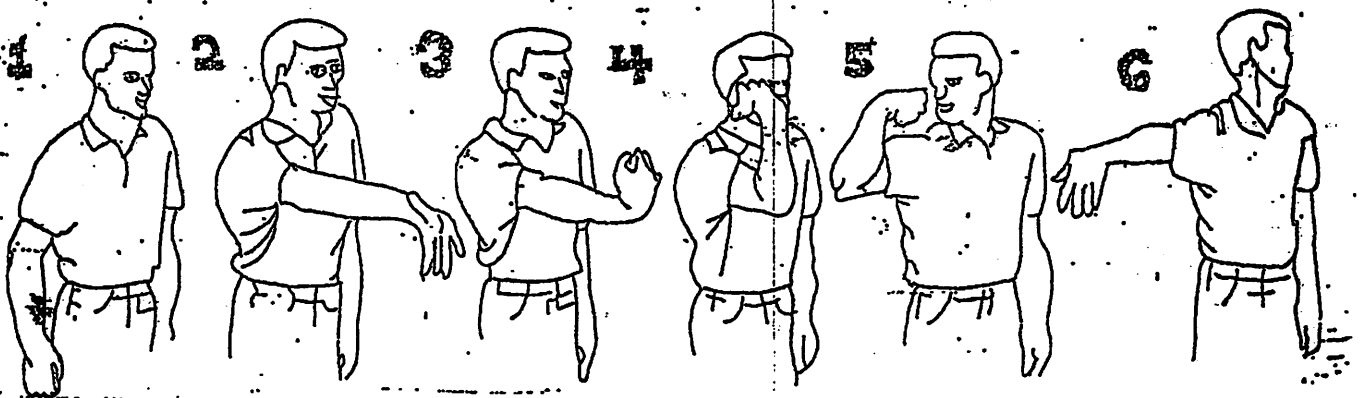


- 7) Bring both arms up to shoulder level and bring the back of your wrists together, fingers pointing toward the floor, pull shoulders back
- 8) Bring hands up like a prayer position. Push palms together and shoulders inward
- 9) Keeping palms together, raise hands above your head
- 10) Bring hands behind your head, pulling shoulders back
- 11) Stretch both arms out to the side, shoulder level, bending wrist down and fingers in a fist
- 12) Straighten fingers, bring arms down to your side and then back behind you with wrist bent up stretch chin up
- 13) Release arms by your side and shake out your hands



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