

Dr. Tom Sartor, Chiropractor

Box 370, 517 Main Street, Port Dover, Ontario N0A 1N0

Ph: (519) 583-0552, Fx: (519) 583-0645

Web: www.northshorehealthassociates.com

“All Hands On Deck...”

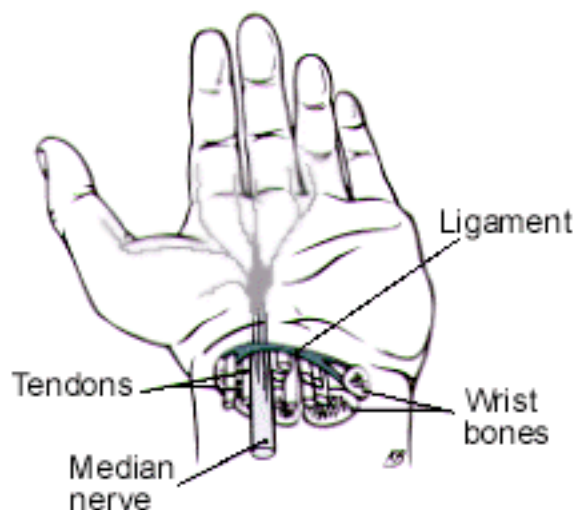
Published in The Maple Leaf, November 2006

Question

I have worked as a data entry clerk for several years and recently experienced tingling and numbness in my fingers. My colleague suggested I may have carpal tunnel syndrome. What is it and how is it treated?

Answer

Carpal tunnel syndrome is North America's most commonly reported problem in the workplace. According to the U.S. Bureau of Labour Statistics, repetitive stress injuries, including carpal tunnel syndrome, generate up to 60 per cent of all non-trauma work related accidents and injury claims. The correlation between CTS and job function is thought to be related to frequent, repetitive use of the same or similar movements of the hand or wrist, tasks requiring generation of a high force by the hand, regular or sustained tasks requiring awkward hand positions, use of vibrating hand-held tools, and prolonged pressure over the wrist or base of the palm on the affected side. Individuals at risk include computer operators, hairstylists, butchers, garment and assembly line workers. Other causes include wrist fractures, hyperemia (excess of blood) during pregnancy, thyroid involvement and diabetes.



Anatomy of the hand

The term carpal tunnel describes an opening into the hand that is made up of the bones of the wrist on the bottom and the transverse carpal ligament on the top. The median nerve and the flexor muscle tendons run into the hand through this opening. The flexor tendons allow us to move the hand and are covered by a material called tenosynovium. The tenosynovium is slippery, and allows the tendons to glide against each other as the hand is used to grab objects. Any condition which causes irritation or inflammation of the tendons can result in swelling and thickening of the tenosynovium. As the tendons

begin to swell and thicken, pressure increases in the carpal tunnel because the bones and ligaments that make up the tunnel are not able to stretch in response to the swelling. Increased pressure in the carpal tunnel squeezes the median nerve against the transverse carpal ligament. Eventually, the pressure reaches a point when the nerve can no longer function normally. Pain and numbness in the hand occurs. Symptoms vary and include pain and swelling in the hand, weakness or clumsiness when using the hand, and altered sensations such as numbness of the thumb, index finger and radial (thumb side) part of the ring finger. Symptoms are worse at night and often wake the patient. Muscle atrophy (wasting) and loss of function are generally late findings. Once diagnosed, it is important that the work-relatedness of the CTS be recognized, for if job modification or ergonomic (study of man and his work) intervention does not occur, the condition is likely to recur. Ultrasound (high frequency sound waves) and low voltage electrical therapy aid in reducing inflammation and edema and provide pain control. Trigger point therapy involving the flexor muscles of the forearm improves circulation and dissipation of scar forming adhesions. A standard treatment is rigid splinting of the wrist to reduce the pressure within the carpal tunnel. Surgery to depress the median nerve by releasing the transverse carpal ligament should only be considered after conservative treatment is attempted.