



## **ASK THE DOCTOR**

### **CARPAL TUNNEL SYNDROME**

By Gunnar W. Zorn, III, M.D.

Carpal Tunnel Syndrome (CTS) is a nerve compression syndrome characterized by hand and wrist pain and/or numbness. It most commonly occurs because of repetitive stress or overuse, as with certain jobs, but it may also be caused by trauma to the wrist. Women are affected three times more than men. Fifty-eight percent of cases occur in obese, middle-age persons but it is also associated with pregnancy (from swelling) and many rheumatological (arthritis) conditions and diabetes. The most common symptoms of CTS include hand pain with numbness, especially of the first three digits. The pain often wakes the person up at night. The symptoms are worsened by repetitive flexion actions of the wrist such as with keyboarding and hand crafts. Vibrations may also cause it as with jackhammering. The symptoms have been seen commonly in material and food processing workers who use forceful, repetitive gripping movements of their hands and wrists.

Diagnosis depends on a careful history and physical examination by a physician. Electrodiagnostic testing may be necessary to confirm the diagnosis. These tests include nerve conduction studies (NCS) and electromyography (EMG) which are used to help identify the location and the severity of the problem. Treatment should be aimed at identifying and eliminating or modifying the precipitating factors. Psychiatrists and occupational therapists can work to change the action that is causing the stress. Splinting exercises and positioning techniques can be helpful. Heating modalities such as ultrasound and iontophoresis in combination with massage and manipulation have been beneficial to patients. Medical acupuncture has also been used.

Medications such as anti-inflammatories, diuretics and certain vitamins may help. Certain types of pain caused by CTS have been successfully treated with antidepressants and anticonvulsants. Local anesthetic injections, with or without steroids, have been used for diagnostic and therapeutic benefit offering long-lasting symptom relief. Underlying conditions should be treated. If these methods are unsuccessful, surgery to reduce the pressure may be necessary. Surgical intervention has been reported successful in up to 90% of patients. Complications occur in approximately 2% of surgical cases. Therapy intervention postoperatively is often helpful in these cases.

CTS is a common condition. If you think you may be suffering from it, consult your physician. Your regional medical center, Peninsula Regional Medical Center, has recently developed a special program for the evaluation and treatment of carpal tunnel syndrome.

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