



Learn More About Symptoms and Treatment of Carpal Tunnel Syndrome

Are you one of the many people who suffer each day from carpal tunnel syndrome? If you are not sure, you may want to ask yourself these questions. Do you feel numbness or a tingling sensation in your hand or hands at night? Do you sometimes experience pain in your wrist and hand particularly at night? Do you have difficulty holding objects without dropping them? If you have answered "yes" to any of these questions, you may be experiencing symptoms of carpal tunnel syndrome.

Carpal tunnel syndrome is a common problem that ultimately affects the use of your hand. It most often occurs when the median nerve in the wrist becomes inflamed after aggravation from repetitive movements such as typing on a keyboard or playing the piano.

"The condition may cause progressive compression (squeezing) on the median nerve in the carpal tunnel canal," said Stan Pelofsky, MD, past president of the American Association of Neurological Surgeons. "Any repetitive motions that cause significant swelling of the median nerve in the carpal tunnel alter transmissions of sensations from the hand up to the arm and to the central nervous system."

Diseases or conditions that may cause the development of carpal tunnel syndrome include pregnancy, diabetes, and broken or dislocated bones in the wrist. Some of the main causes include repetitive and forceful grasping with the hands, bending of the wrist, and arthritis.

Finger numbness or wrist pain may be most significant during the night, when it can actually awaken a patient from sleep. During the day, it may occur during any activities that involve bending of the wrist. Symptoms can include hand and wrist pain, a burning sensation in the middle and index fingers, thumb and finger numbness, or an electric-like shock through the wrist and hand.

It is important to seek medical advice when you first notice persistent

symptoms. Do not wait for your pain to become intolerable. Before your doctor can recommend a course of treatment, he or she will perform a thorough evaluation, including a medical history, physical examination and diagnostic tests. Your doctor will ask about the extent to which your symptoms affect daily living.



The main objective of conservative (non-surgical) treatment is to reduce or eliminate repetitive injury to the median nerve. In some cases, carpal tunnel syndrome can be treated by placing the wrist in a splint to minimize irritation to the nerves. If that does not work, patients are sometimes prescribed anti-inflammatory medications or cortisone injections in the wrist to reduce swelling. Also, hand and wrist exercises may be recommended both during and after work hours. In addition to exercises, treatment for carpal tunnel syndrome may include rest, the use of a wrist splint during sleep, or physical therapy. Conservative treatment methods often continue for up to six or eight weeks.

If conservative treatment such as medication or physical therapy does not provide sufficient relief, your doctor may perform diagnostic studies

to determine if surgery is an effective option. These diagnostic tests include x-rays and electromyogram and nerve conduction studies. X-rays may show the bones of the wrist and determine if any abnormalities may be contributing to carpal tunnel syndrome. Electromyogram and nerve conduction studies can reveal significant compression on the median nerve in the carpal tunnel.

If patients suffer from severe pain that cannot be relieved through rest, rehabilitation or non-surgical treatment, there are several surgical procedures that can be performed to relieve pressure on the median nerve. Neurosurgeons are well qualified to perform these operations, as they are trained to treat disorders affecting the entire nervous system. According to a report from the American Association of Neurological Surgeons, neurosurgeons performed over 25,600 carpal tunnel procedures in 1999 alone.

The most common procedure is called a carpal tunnel release, which can be performed using an open incision or with endoscopic techniques. The open incision procedure or carpal tunnel release, involves the neurosurgeon making an incision in the wrist or palm and then releasing the ligament that is compressing and placing pressure on the median nerve. The endoscopic carpal tunnel release procedure involves making a smaller incision and using a miniaturized camera to assist the neurosurgeon in viewing the carpal tunnel. Risks of carpal tunnel surgery are minimal. The majority of individuals recover completely.

A neurosurgeon's primary role in treatment of carpal tunnel syndrome is diagnosis, interpretation of test results, and when necessary, surgery. However, there may be other medical professionals involved in the treatment process, including physical therapists and other specialists.

"We see a variety of patients who suffer from carpal tunnel syndrome including pianists, concert violinists, assembly line workers, hair dressers, computer operators, artists and sculptors, to name a few," said Dr. Pelofsky. "The results of surgery are usually exceptional, with most patients receiving nearly full relief of their symptoms. The earlier you get a diagnosis and treatment, the better the outcome."

To learn more about carpal tunnel syndrome, or to locate a neurosurgeon in your area, visit the Web site of the American Association of Neurological Surgeons at www.aans.org.

