

Carpal Tunnel Syndrome

Overview: Carpal tunnel syndrome is a disorder affecting the middle nerve of the wrist. This nerve is important because it helps operate our hand and supplies sensation to the skin of the hand. This nerve can get pinched where it passes over the bones of the wrist and underneath a strong ligament through an area called the carpal tunnel. The tunnel and surrounding tissues can get inflamed from repetitive use. This inflammation causes the tissues to swell, which puts pressure on the nerve and results in nerve damage. This compression of the median nerve is called carpal tunnel syndrome. Carpal tunnel syndrome is common in people who use their hands for repetitive activity, such as meat packers, computer keyboard operators, mechanics, carpenters and hairdressers. It is associated with diabetes, pregnancy and rheumatoid arthritis.

Diagnosis: The symptoms of carpal tunnel are numbness, pain and tingling in the hand, which is confined to the thumb, index finger and middle finger. This pain can occasionally shoot up the arm as far as the shoulder. The patient may also complain of weakness in the hand and decreased grip strength. There are certain physical signs the doctor will look for when he examines the patient with possible carpal tunnel syndrome. These are called Tinels and Phalens. During both of these tests, the doctor will stress the median nerve by either tapping it or bending the hand. He will look for increased symptoms and pain. The diagnosis can be confirmed with a nerve conduction study, in which the electrical potential of the nerve is recorded with a fine needle. The neurologist will look for a decreased velocity of conduction in the median nerve. If this is present, the diagnosis is confirmed.

Treatment: The mainstay of treatment with carpal tunnel syndrome is to avoid the activities causing the disorder. In addition, splints are prescribed to keep the hand and wrist straight, especially during sleep because the middle nerve is compressed when we bend our wrist. Many of us bend our wrists unconsciously at night while we sleep especially when we grasp a pillow. That is why it is so important to wear the splint at night. Injections of anti-inflammatory drugs into the middle nerve can help as well. If it is impossible to change our daily activities or if carpal tunnel syndrome does not respond to injections and splinting, surgery becomes an option. During surgery, the doctor will splint the ligaments that are binding the nerves. This is called a carpal tunnel release, which is done as an outpatient procedure under local anesthetic. The patient can be back home within a few hours. Carpal tunnel syndrome can be readily treated if it is diagnosed early. The results of treatment are usually good. It is important to work closely with your doctor when managing carpal tunnel syndrome.