

Informational Guide to Carpal Tunnel Syndrome

Introduction

Carpal tunnel syndrome (CTS) is a common problem affecting the hand and wrist. Symptoms begin when the nerve traveling through the palm-side of the wrist, called the median nerve, gets squeezed inside the space called the carpal tunnel of the wrist, a medical condition known as nerve entrapment. The median nerve gives sensation to the thumb, index finger, long finger and half of the ring finger. It also controls some muscles of the thumb.

Any condition that decreases the size of the carpal tunnel or enlarges the tissue inside the tunnel can produce the symptoms of CTS. These conditions include traumatic wrist injuries, arthritis or medical conditions such as pregnancy and diabetes.

The way people use their wrists to perform tasks can also put them at risk (i.e., force, posture, wrist alignment, repetition, temperature, and vibration).

Symptoms

One of the first symptoms of CTS is gradual tingling and numbness in the areas where the median nerve gives sensation. This is typically followed by dull, vague pain in these same areas. The hand may begin to feel like it's asleep, especially in the early morning hours after a night's rest.

Sometimes pain may spread up the arm to the shoulder. If the condition progresses, the muscles of the thumb can weaken, causing the hand to be clumsy when picking up a glass or cup. If the pressure keeps building in the carpal tunnel, the muscles may begin to shrink or atrophy.

Diagnosis

A thorough physical examination may reveal weakness of the thumb, weakened grip strength, lack of sensation on the palmer portion of the thumb and first three fingers, and pain.

If your symptoms started after a traumatic wrist injury, X-rays may be warranted. Electrical studies (such as nerve conduction velocity) may also be performed to test how well the median nerve is functioning.

Treatment

If possible, the activities that are causing your symptoms need to be changed or eliminated. Avoid repetitive hand motions, heavy grasping, holding onto vibrating tools, and positioning or working with your wrist bent down and out.

In the early stages a wrist brace will sometimes decrease the symptoms. The brace keeps the wrist in a resting position so the nerve has as much room as possible inside the carpal tunnel. A brace may be

especially helpful for easing the numbness and pain felt at night because it can keep your hand from curling under as you sleep.

Anti-inflammatory medications may also help control and reduce symptoms and swelling of CTS. Occasionally, a cortisone injection may be suggested. This is used to reduce the swelling and may give temporary relief of symptoms.

If all attempts to control your symptoms fail, surgery may be suggested to reduce the pressure on the median nerve.

Rehabilitation

Physical therapy will focus on reducing or eliminating the cause of pressure in the carpal tunnel. You will receive instructions for a home exercise program including flexibility and strengthening as well as other forms of self-management. Your therapist may provide you with suggestions for setting up your work area to minimize strain on your wrists and promote healthy body alignment.

You will also receive treatments such as ultrasound, electrical stimulation or iontophoresis to reduce inflammation and to encourage normal gliding of the tendons and median nerve within the carpal tunnel.

More Information...

For more information please contact any of our three clinics in Roseville, Spring Lake Park, or Blaine where a knowledgeable therapist will be happy to assist you with your recovery needs.