

# The Inside-Out of Carpal Tunnel Syndrome

Many of us have probably heard of Carpal Tunnel Syndrome (CTS) but may not exactly understand what happens.

CTS occurs when a specific nerve, the median nerve, is pinched in the wrist. This nerve runs down the arm and forearm through the carpal tunnel, into the hand. The tunnel is made of tough connective tissue and bones; it cannot stretch nor expand. With carpal tunnel syndrome, the tunnel is no longer wide enough for the things passing through it. Symptoms include tingling and swelling with most symptoms occurring in the thumb, index, and middle fingers. Sleep can be interrupted because of the tingling.

CTS is commonly blamed on repetitive activities. It can be caused by use of power tools, masonry work, or excessive play of percussion and stringed instruments. Some people believe typing causes CTS. Traumatic events, fractures, dislocation, strong blunt force, or deformities resulting from abnormal healing of old bone fractures are all causes. However, the most common identifiable causes are diabetes, pregnancy, and thyroid diseases.

Often, people with CTS experience gradually increasing symptoms over a period of time. As the condition progresses, there may be difficulty gripping and making a fist, dropping objects, lack of coordination, and weakness.

## Diagnosis

Observing and listening to patients helps lead to diagnosis. Several clinical procedures can be followed to

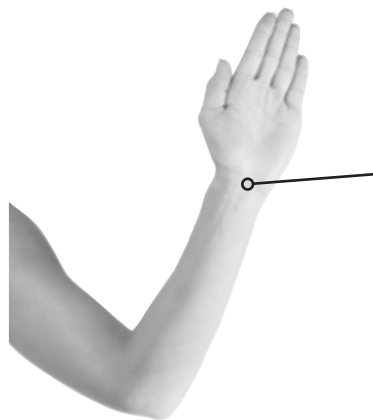
confirm Carpal Tunnel Syndrome which include: Tinel's sign, lightly tapping the area over the nerve to generate a sensation of tingling; Phalen's Test, flexing the wrist gently as far as possible, then holding this position in anticipation of symptoms; and Durkan's Nerve Compression Test, applying firm pressure over the tunnel to elicit symptoms. Numbness can be carefully measured and nerve conduction studies can also be used to diagnose CTS.

## Prevention and Treatment

The best prevention is to avoid repetitive use conditions. This can be as simple as taking frequent breaks to give hands and wrists a gentle stretch, alternating tasks, paying attention to form by not bending the wrist all the way up or

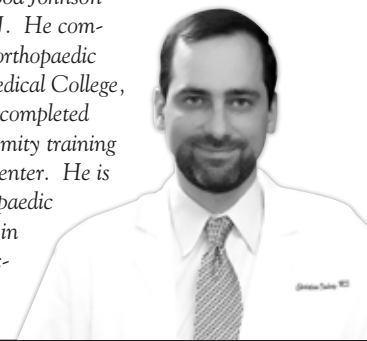
down, good posture, and keeping hands and wrists warm.

Challenging to treat, CTS offers a wide range of treatment options including modification of usage habits, exercise therapy, splint/braces, corticosteroid injections, anti-inflammatory medications, and surgery. The treatment plan for each patient is individualized, but commonly begins with activity modification, wearing a brace, and judicious use of non-steroidal anti-inflammatory pills. If this doesn't work, then we utilize physical therapy, followed by cortisone injections. After four to six weeks, many patients will see a marked improvement; however, a full recovery can take much longer. Unresolved CTS can be treated surgically, with a six to 12 week recovery period.



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