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# **Carpal Tunnel Syndrome**

## **What is Carpal Tunnel Syndrome?**

Carpal Tunnel Syndrome (CTS) is a very common condition that causes persistent or frequent pains in the wrist and hand, especially after protracted use of the typewriter or computer keyboard, and resulting from months or years of prolonged and repeated extension and flexion of the wrist, or making the same hand/wrist movements over and over.

## **What is a Carpal Tunnel?**

Carpal Tunnel is an anatomical space within the wrist, much like a tunnel, comprised of a semicircle of wrist bones on one side and bounded on the other by transverse carpal ligament. Through this confined and unyielding channel pass nine tendons, the median nerve, and tenosynovial tissue. When these tissues swell (from chronic and repeated trauma of extension and flexion of the wrists), the median nerve is pinched, causing the syndrome. One or both hands/ wrists may be involved, frequently the one that is most often used.

## **What are the signs and symptoms of CTS?**

Pain in the wrist, palm or forearm is common, which may also involve the shoulder, back and the neck in some cases. There may be numbness, tingling of hand or fingers, weakness of the hand, loss of grip, the hand may “fall asleep” on waking up in the morning, during the night, or while driving, or following any activity that requires elevation of the hands. The pains are usually more at night and may even wake the patient up. In women, more pains before menstrual period, in the third trimester of pregnancy, and the first few months after delivery (all these due to edema or fluid retention during these times).

## **Who are most prone to CTS?**

CTS is most common among those whose work requires constant gripping, pinching, typing, with the wrist held in flexion (bent), like chronic computer users, typists, meat packers, violinists, mechanics, assembly-line workers, grocery checkers, carpenters, etc. Canoeing, playing golf, needlework can cause the CTS symptoms. Fracture of the wrist could also cause the syndrome. Women between the age of 40 to 60 are the most frequent target. CTS could also be due to diabetes,

thyroid disease or rheumatoid arthritis.

## **Is CTS serious?**

No, usually CTS is not a serious condition. With prompt and proper treatment, the symptoms are alleviated and no permanent damage develops.

## **How is CTS diagnosed?**

The patient usually describes the typical symptoms when seeking medical consultation. The physician will also ask the type of job the patient does, and what illnesses he/she may have. Some of the tests include tapping the inside of the wrist to elicit pain or a sensation of an electric shock in the wrist or hand, bending the wrists down for 60 seconds to see if symptoms of CTS develop, or ordering nerve conduction velocity test or an electromyography. Without all the above tests, the condition is often missed and not diagnosed accurately.

## **Does using a wrist support band help?**

Elastic wrist support band may offer some help in minimizing the onset and the symptoms of CTS, unless the cause is one of the diseases mentioned above. Also, if the person does not reduce the hand and wrist repetitive movements, support band will not help. The anatomical size of the patient's carpal tunnel is obviously an important factor.

## **Can playing mahjong cause CTS?**

Yes, but the prevalence of CTS among mahjong player is low. This condition is not common among this type of activity.

## **How can one prevent CTS?**

Taking care of health and the way the hands and wrists are used allow one to prevent the development of Carpal Tunnel Syndrome. Attendant medical diseases must be treated. Those who are overweight should lose weight. Stop smoking. Cut down on alcohol and caffeinated drinks. Be conscious not to bend, extend or twist the hands (wrists) for a long time. Do not rest the wrists on hard surface for a long time. Switch hands. Hold objects instead of pinching them. Avoid or minimize using tools that vibrate a lot. Do not stand or sit in the same position the entire day; take a break from repeated hand /wrist movements to give them a rest. Prop up the arms with pillows when lying down. For computer or typing work, adjust the height of the chair so that the forearms are on the same level as the keyboard to allow you type without flexing the wrists.

## **What is the initial treatment for CTS?**

If the Carpal Tunnel Syndrome is caused by a disease, then the particular illness is treated first. If it is not, then the patient is advised to rest the wrist involved and to change the manner in which the hand and the wrist are used. A splint on the wrist may also be recommended to rest the wrist while use of the hand is allowed. The splint also eases the pain, especially at bedtime. Application of ice pack, massaging the wrist and some stretching exercises may also help.

## **How about pain medications?**

For control of pains, acetaminophen, aspirin, ibuprofen, naproxen or ketoprofen may be used as directed by the physician. In some situations, local injection of corticosteroid may help in reducing the swelling and inflammation and ease the pains.

## **When is surgery needed?**

Surgery is indicated if all those conservative measures fail and do not alleviate the symptoms.

## **What surgery is performed for CTS?**

The basic principle of surgery for CTS is dividing the overlying ligament to release the constricting effect of the tunnel over the nerve and underlying structures in the tunnel. This can be done by open method where a cut is made on the wrist to expose the ligament, which is then divided. The close method is one where an endoscope is used (like a small telescope with a light) and the ligament is cut through tiny holes in the skin, which can later be closed without sutures.

## **What is the prognosis?**

When diagnosed promptly and treated properly, the prognosis of CTS is very good. In majority of cases, with appropriate therapy, the cure is usually permanent and no residual damage occurs.

## **Is surgery for CTS available in the Philippines?**

Yes, surgery for Carpal Tunnel Syndrome is available in Cebu and in other

**major cities in the Philippines. Under surgical experts, the results have been most gratifying.**

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