

# UNDERSTANDING Carpal Tunnel Syndrome

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Carpal tunnel syndrome is one of the most common problems we see affecting the hand and wrist in middle aged patients. It is more commonly seen in women, usually between the ages of 45 and 60, but can be found in any age group. If it is not treated, it can lead to permanent numbness, primarily of the thumb, index, and long finger as well as weakness of muscles that rotate the thumb.

The basic anatomic problem is that the carpal tunnel is narrowed. Carpal means wrist and the tunnel is the space between a thick ligament (called a transverse carpal ligament) and the wrist bones. In this tunnel lie nine tendons which allow the fingers and thumb to flex, and the median nerve, which gives sensation to the majority of the hand, but most commonly the long and ring fingers.

Symptoms usually include numbness and tingling of the entire hand. It commonly radiates all the way up into the forearm or even the shoulder. When symptoms become severe, it usually awakens patients up at night and will be aggravated by holding the wrist in a flexed position, such as with reading a newspaper or driving a car. Repetitive activities using the wrist also aggravate symptoms. Carpal tunnel syndrome is commonly seen in the last trimester of pregnancy when large amounts of fluid are retained.

When symptoms of numbness and tingling persist or awaken one from sleep, medical attention should be sought. There are several easy tests that can be done in the office. However, the most definitive test is a nerve conduction test, which needs to be done by a physical medicine doctor or a neurologist (nerve specialist).

## Treatment of early symptoms includes:

1. Avoidance of inciting activities;
2. Anti-inflammatory medicines, including ibuprofen, Aleve, or aspirin;
3. Wearing a wrist splint that minimizes wrist motion, especially at night;
4. Occasionally a steroid injection into the carpal tunnel may temporarily relieve symptoms.



If symptoms persist despite these simple measures, then surgery may be needed.

Surgery is done as an outpatient with minimal incision surgery using a scope or similar devices. The surgery is done without a general anesthetic, usually by anesthetizing the arm, but mild sedation is commonly used. The release of the ligament takes pressure away from the median nerve. In severe carpal tunnel syndrome, it dramatically improves the aching that often keeps one awake in the night.

The postoperative carpal release patient usually wears a splint, but can do activities of daily living immediately using the fingers to feed themselves, dress themselves, and brush their teeth. The disadvantage of carpal tunnel release is that one usually loses a small amount of grip strength. Occasionally some patients will have prolonged aching in the palm in the area of the transverse carpal ligament, which is called "pillar pain." The majority of patients are pleased with carpal tunnel release and are usually back to full activity within a month. ■

