



## CARPAL TUNNEL SYNDROME

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Carpal tunnel syndrome (CTS) is the name for the condition in which the median nerve gets trapped in the carpal tunnel at the wrist. This causes pain, numbness and weakness in the hand.

The median nerve is a nerve of the arm which originates from a plexus of nerves near the neck called the brachial plexus. It travels down the arm to reach the carpal tunnel, which it then travels through. The most common site of compression is at the carpal tunnel. The carpal tunnel is a compartment surrounded by hand bones through which the median nerve and many of the tendons of the hand run through. If the tunnel becomes smaller or tighter from any cause, the median nerve may be compressed.



### **Causes**

Common causes of carpal tunnel syndrome are fluid retention (often seen in pregnancy), injuries to the wrist, arthritis, some repetitive activities using the hands, obesity and diabetes. In most cases there is no obvious identifiable cause. Women are about 3 times more likely to develop the condition than men, probably due to carpal tunnel size.

### **Symptoms**

Symptoms can be very mild or disabling. Sensory change is usually the first symptom. This may consist of numbness, burning/tingling or pain, and is felt over the thumb, index and third fingers. In many cases, there may be discomfort of the whole hand and sometimes further up the arm. Patients often wake at night with these symptoms. In severe cases, hand weakness may develop, particularly of the thumb, and the thumb muscles (thenar eminence) may shrink.

### **Investigations**

Mild sensory symptoms, especially if associated with pregnancy, do not necessarily need any tests. Some patients may need electrical tests to confirm the diagnosis, especially if any treatment is planned.

### **Treatment**

In many cases, symptoms will subside on their own, especially when there is an obvious remediable cause. If treatment is required; stretching exercises and a wrist brace to keep the wrist straight at night for several months would usually be tried first. When there are more severe symptoms, steroid injections or surgery may be needed.