

## PATIENT INFORMATION LEAFLET

### CARPAL TUNNEL SYNDROME (CTS)

The carpal tunnel is a canal formed between the small bones of the wrist called carpal bones and a ligament (fibrous tissue) that lies across the front of the wrist. A large nerve (the median nerve) along with the tendons that attach the forearm muscles to the fingers pass through this canal. The nerve supplies sensation to the palm of the hand, the thumb, index, middle and ring fingers. It also supplies some of the hand muscles, especially those at the base of the thumb.

In CTS the nerve becomes compressed within the canal (causing symptoms). About 1 in 1,000 people develop this syndrome each year. Most cases occur in people aged in their 40s and 50s, but it can occur at any age. It is also common during pregnancy. Women are affected 2-3 times more often than men.

### WHAT CAUSES CTS?

In most cases it is not clear why it occurs. Increase in pressure is thought to compress and restrict the blood supply to the median nerve.

CTS is more common in manual workers, especially with jobs using a lot of wrist movement such as scrubbing or wringing. So, overuse of the hand may be a factor in some cases to trigger the changes in the structures in the carpal tunnel, leading to this condition developing.

**Bone or arthritic conditions of the wrist** such as osteoarthritis and rheumatoid arthritis or wrist fractures may lead to carpal tunnel syndrome.

**Genetic component** There seems to be some hereditary (genetic) factor. About 1 in 4 people with CTS has a close family member (father, mother, brother, sister) who also has or had the condition.

**Associated conditions-** The following are associated with CTS: pregnancy, obesity, an underactive thyroid, diabetes, the menopause.

### WHAT ARE THE SYMPTOMS OF CTS?

- **Pins and needles.** This is tingling or burning in the parts of the hand supplied by the median nerve. This is typically the first symptom to develop. The index and middle fingers are usually first to be affected.
- **Pain** in the same fingers may then develop. The pain may travel up the forearm.
- **Numbness** of the same finger(s), or in part of the palm, may develop if the condition becomes worse.
- **Dryness of the skin** may develop in the same fingers.
- **Weakness** of some muscles in the fingers and/or thumb occurs in severe cases. This may cause poor grip and eventually lead to withering of muscles at the base of the thumb.
- **Morning Symptoms:** People often find the symptoms worse in the morning or wake them during the night

## HOW IS IT DIAGNOSED?

In many cases the symptoms are classical and so the diagnosis can be made with the need for special tests.

A scoring questionnaire has been developed which is very sensitive at picking up cases. This on the website and also attached at the end of this leaflet. If the diagnosis is not clear then a test to measure nerve impulses (nerve conduction test) can be performed.

## HOW CAN MY CTS BE TREATED?

**General measures:** If there has been a specific trigger such as a work related or sporting activity then modification of this activity can help settle symptoms. Avoiding over-use of your wrist by excessive squeezing, gripping, wringing, etc. is important. Losing weight may be helpful if you are overweight. Simple painkillers may be used to ease the pain e.g. paracetamol or co-codamol. There is no evidence that anti-inflammatories such as ibuprofen are of any benefit. If the condition is part of a more general medical condition (such as arthritis) you're your GP can advise which medicines may be best.

**Not treating may be an option:** In up to 1 in 4 cases the symptoms go without treatment within a year or so. (In about 2 in 3 cases that develop during pregnancy the symptoms go after the baby is born.) This may be suitable if the symptoms are only mild.

**Wrist splints** aimed at keeping the wrist in a neutral position are the usual first step in treatment. Worn for 2-3 months (usually overnight) many patients get a good improvement or full resolution of symptoms if used for a few weeks.

**Steroid injections:** Injection of cortisone (steroid) into the carpal tunnel around the nerve can be beneficial in some patients.

**Surgery:** A small operation can cut the ligament over the front of the wrist and ease the pressure in the carpal tunnel. This usually cures the problem. It is usually done under local anaesthetic. You will not be able to use your hand for work for a few weeks after the operation. A small scar on the front of the wrist will remain. There is a small risk of complications from surgery. For example, following surgery there is a small risk of infection and damage to the nerve or blood vessels.

**Please see next page for the Carpal Tunnel Syndrome Diagnostic Questionnaire**

## CTS DIAGNOSTIC QUESTIONNAIRE

CARPAL TUNNEL SYNDROME DIAGNOSTIC QUESTIONNAIRE	YES	NO	N/A
Has pain in the wrist woken you at night?	1	0	
Has tingling and numbness in your hand woken you during the night?	1	0	
Has tingling and numbness in your hand been more pronounced first thing in the morning?	1	0	
Do you have/perform any trick movements to make the tingling, numbness go from your hands?	1	0	
Do you have tingling and numbness in your little finger at any time?	0	3	
Has tingling and numbness presented when you were reading a newspaper, steering a car or knitting?	1	0	
Do you have any neck pain?	1	0	
Has the tingling and numbness in your hand been severe during pregnancy?	1	Subtract 1	0
Has wearing a splint on your wrist helped the tingling and numbness?	2	0	0
<b>TOTAL</b>			

- A score of <3 is unlikely to be indicative of Carpal Tunnel Syndrome
- A score of 3-4 suggests Carpal Tunnel Syndrome is possible cause of symptoms
- A score of 5 or more is strongly suggestive of Carpal Tunnel Syndrome