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**A guide to...**

# ***Carpal Tunnel Release***

## ***Patient information***

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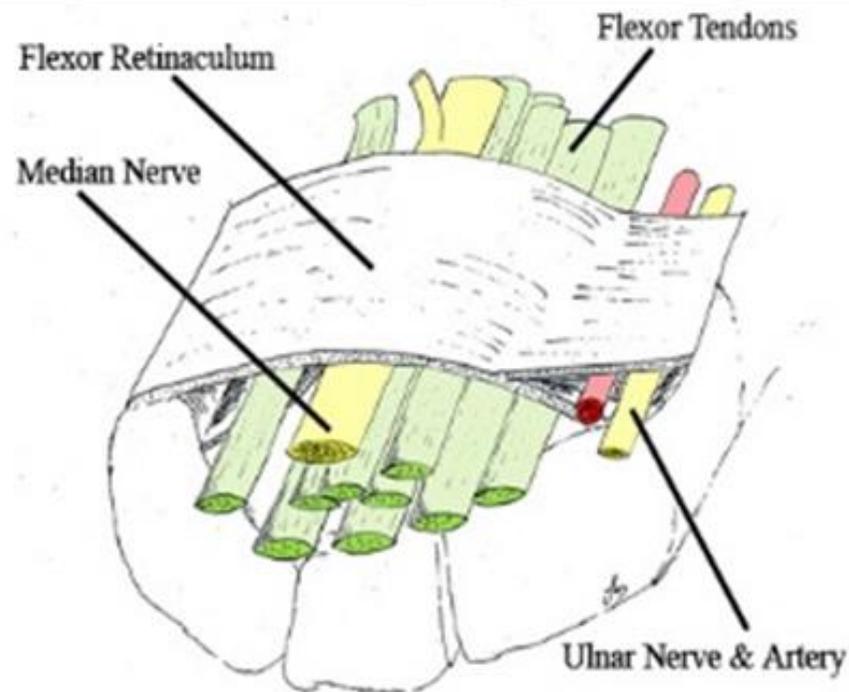
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## What is Carpal Tunnel?

Carpal tunnel syndrome (CTS) is a condition caused by compression of the median nerve as it passes through the carpal tunnel. The carpal tunnel is an arch formed by the bones of the wrist which has a fibrous roof called the flexor retinaculum. The carpal tunnel contains tendons that bend the fingers and thumb as well as the median nerve.

*See diagram below*

**NOTE:** Anything that reduces the space available in the tunnel will squash the softest thing in there, which unfortunately is the median nerve.



CTS may be related to pregnancy, thyroid disease, diabetes and rheumatoid arthritis. It can also be caused by trauma and other rarer conditions, though many people will have none of these.

Symptoms of CTS include tingling, pins and needles or numbness especially in the thumb, index and middle fingers. Clumsiness and pain in the hand and forearm can also occur. These symptoms are often worse at night, or with the hand raised, for example reading a book, driving or using a phone. With severe symptoms, wasting of the muscles at the base of the thumb can occur.

### **Making the diagnosis**

The diagnosis of CTS is normally made on the basis of the history (what you tell the doctor) and the clinical examination. Sometimes if it is not clearly CTS then it is necessary to perform further tests. These may include nerve conduction tests, ultrasound scan or blood tests.

### **What treatments are available?**

#### **No treatment**

Some cases of CTS, especially those related to pregnancy will resolve without treatment, particularly after the baby is born. Correcting thyroid problems can also improve CTS.

#### **Night splints**

A removable splint used at night can help relieve symptoms, in many cases without the need for further treatment.

## Carpal tunnel release

Carpal tunnel release is a surgical procedure to release the fibrous roof of the carpal tunnel. This relieves the symptoms by providing more space for the nerve and taking the pressure off it.

### What to expect from surgery?

In most cases carpal tunnel release (CTR) is performed as a day case under a local anaesthetic. This means that you will be awake during the procedure and should be able to go home shortly

afterwards. The local anaesthetic is normally given a few minutes before the procedure but may be earlier as the effects will last for several hours. The local anaesthetic used contains a small dose of adrenaline, this is to help control bleeding and avoids the need for a tourniquet.

In theatre your hand will be cleaned with an antiseptic solution and covered with sterile drapes. An incision will be made on the hand. *See diagram below.* The surgical procedure usually takes around 10 minutes but this can vary. At the end of the procedure the wound will be closed with dissolvable sutures. There will be a sticky dressing and then a big bulky dressing.



Following the operation you can go home as soon as you are comfortable. Your fingers will be free and you can use your hand but avoid heavy lifting.

The bulky dressing comes down after five days and then remove the sticky dressing at 10 days. Either you or your GP can do this. After this you can get the hand wet. The stitches will drop out in a few more days.

## After the operation

After the surgery you can use your hand almost immediately, but try to keep it dry and avoid heavy lifting for the first two weeks. You can drive when the bulky dressing comes down and **you can safely control the car.** You can return to sports such as tennis and golf after about five weeks. You will be contacted after six weeks to review your progress.

### What are the risks?

All operations carry some risk, these include, **infection** (fortunately low risk for this surgery), **bleeding**, and there will be a **scar**.

### Complex Regional Pain Syndrome (CRPS)

This can lead to a generalised pain, stiffness and swelling, can occur with any surgery. It can be identified in 2-5% of patients after CTR, though fortunately most of these are mild. Taking Vitamin C 500-1000mg per day for two days before and 50 days after the operation can help to reduce the risk.

There are some more specific risks:

**Pillar pain** is an aching pain, which is felt in the heel of the hand. This can be made worse with gripping and pressure, but you are not doing any harm by using the hand. This can go on for several months.

The operation relieves the compression of the nerve but if there is internal scarring there may be **only partial or no recovery**. As we are operating over the nerve and tendons there is a small risk of **nerve or tendon injury**. Nerve recovery may not be immediate and can take several months.

