Carpal Tunnel Syndrome

What is Carpal Tunnel Syndrome?

Carpal tunnel syndrome (CTS) is common. It results from the compression of the median nerve, within the carpal tunnel in the wrist. The median nerve travels from the forearm into your hand through a tunnel in your wrist. The tunnel is formed by wrist bones and the top of the tunnel is covered by a strong band of connective tissue called a “retinaculum”. This tunnel also contains the tendons that bend your fingers and thumb.

What are the symptoms?

Carpal Tunnel Syndrome results in numbness or tingling in your hand, especially in the early hours of the morning, when perhaps you are lying in the foetal position with your wrists flexed. This brings the edge of the flexor retinaculum that forms the roof of this tunnel against the blood supply to the median nerve. At first the pins and needles is temporary and you can wake shake your wrists and it is relieved. Latterly, as the nerve damage progresses, you may also experience permanent numbness, clumsiness and weakness in handling objects and sometimes develop pain up the arm to the elbow and rarely as high as the shoulder.

Anything that causes swelling, thickening or irritation of the tissues in the carpal tunnel can result in pressure on the median nerve. The condition is more common in people between 30 and 60 years old and is more common in women than in men. Some common causes and associated conditions include:

1. Obesity
2. Excessive growth hormone
3. Broken or dislocated bones in the wrist
4. Arthritis, especially the rheumatoid type
5. Underactive thyroid
6. Diabetes
7. Hormonal changes associated with menopause
8. Pregnancy

While any of the above may be present, most cases have no known cause. Compression on the nerves in the neck may simulate the condition. Your general practitioner may suspect this condition if you have the symptoms described above.

The signs of carpal tunnel syndrome include swelling, weakness of the thumb, rapid onset of pins and needles when the consultant puts your wrists in a particular position and loss of sensation in the hand.

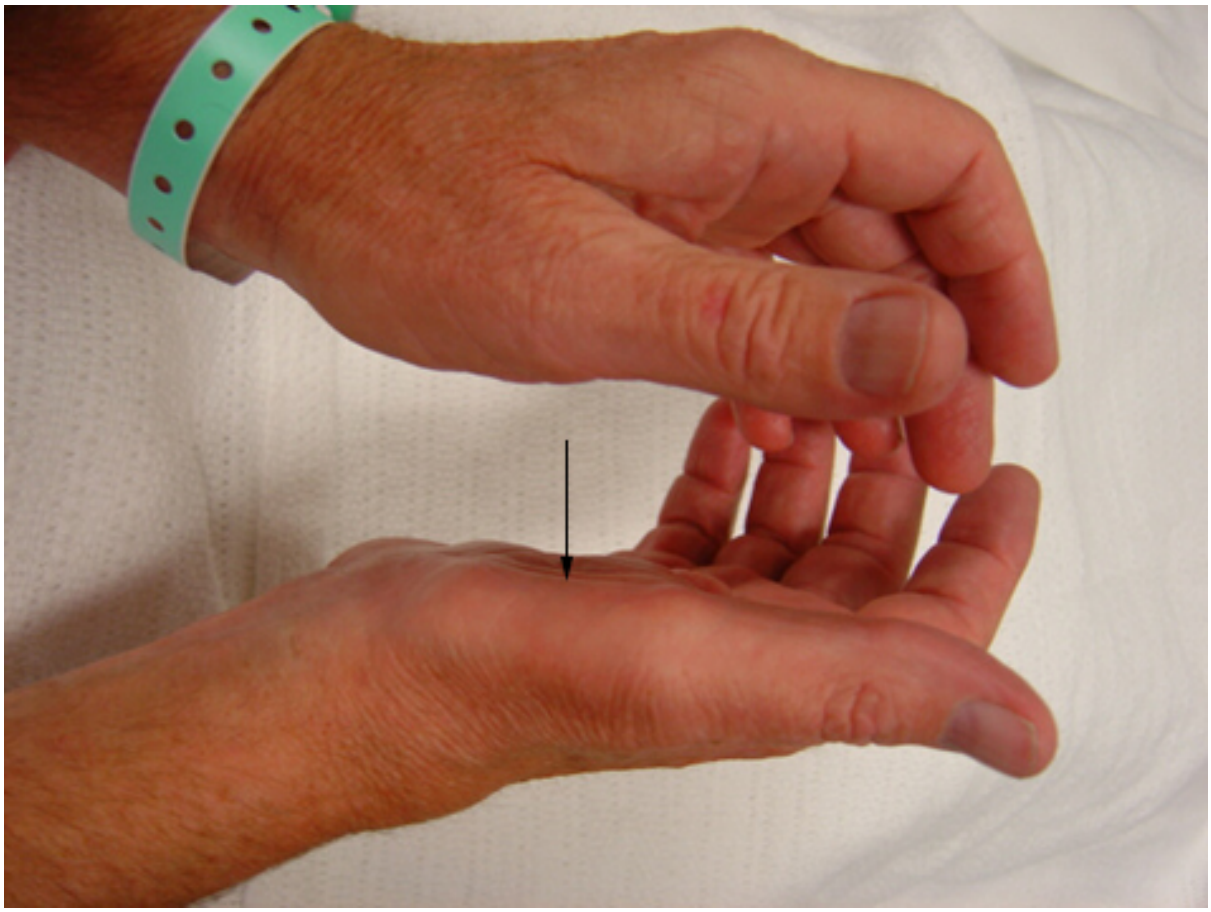

Figure 1. Wasting of the muscle at the base of the thumb (arrow)

What tests will you need?

Frequently the diagnosis is obvious and tests to confirm the diagnosis are not necessary.

X-rays, MRI, nerve conduction testing, and muscle testing (electromyogram) occasionally help to document the presence and degree of nerve damage and whether complicating factors like ganglion and arthritis are also present.

I think I might have it. What should I do?

If you think you have Carpal Tunnel Syndrome and want to see one of our hand consultants to confirm your suspicion telephone Jane our practice manager to make an appointment **0044 (0)117 3171796**

How is it treated?

Mild cases may be treated by non-surgical methods such as weight loss, wearing a wrist brace or wrist support at night. Medications taken by mouth called non-steroidal anti-inflammatories may also reduce swelling and compression on the nerve. The effectiveness of non-surgical treatment may be short lived but it is worth a try especially in pregnancy.

Surgical treatment is reserved for those who have severe pain, persistent symptoms after medical treatment, or who have developed or are at risk of permanent nerve damage. The aim is to reduce pressure in the carpal tunnel by releasing the retinaculum forming the roof of the tunnel. This is done by dividing the “retinaculum”.

There are two types of surgical procedure: Open and Endoscopic. All in all both take somewhat less than an hour. There are no known advantages for one method over the other.

Would the surgeon offer to do both hands at the same time?

It is highly unlikely that any of the surgeons at SOC would offer this, except in the circumstances where the patient has an understanding carer who would help with toileting for one to two weeks after surgery.

How do I prepare for surgery?

Carpal Tunnel Decompression is often performed as a day case under local anaesthetic. Please make arrangements to be accompanied home by a responsible adult after surgery. Do not eat or drink anything after midnight the night before the procedure unless you are instructed otherwise.

If you are a smoker try to give up. Smoking slows the healing process.

Wash your arm the night before surgery and do not apply hand creams. Use Hibiscrub antiviral and antibacterial wash to shower in, if you can get it from Boots, on the morning before you come in to hospital.

Your operation will take place in the most modern facility by a trained Consultant surgeon who will explain each step of the procedure to you as it takes place. At surgery a local anaesthesia injected into the wrist and hand so you don't feel pain during surgery. Rarely, a general anaesthetic may be given. After skin preparation and draping a tourniquet is inflated around your upper arm to reduce bleeding during the operation.

An incision is made down the centre of your palm. The ligament is then divided to relieve the pressure on the nerve in the carpal tunnel. Diathermy seals any vessels. The skin is then closed with

sutures. And the wound is dressed. It is helpful to keep the wound covered and dry for the first week after surgery. SOC Consultants recommend waterproof cast protectors from BLOCCS the British company to keep the dressing dry.

What are the benefits and risks?

The benefit is to halt the progress of nerve injury in your hand and prevent pins and needles, permanent numbness or weakness.

The risks are that pre-existing symptoms of permanent numbness and weakness, which is a sign of death of the nerve cells, may not be relieved even over time. There may be bleeding and haematoma. If the haematoma wants out the wound may open (dehiscience). However, it will heal after this. Swelling of the whole hand can occur. This often settles with elevation. Bacterial infection occurs in an average 6% of patients because we all have bacteria on our skin and if these bacteria get into the cut they can multiply to produce infection. Infection can be surmised if you develop more severe pain, swelling, redness or increased temperature after the first 24 hours. In these circumstances please contact your GP immediately. Rarely, nerve damage occurs. More commonly scar pain can occur. However, read on to find a way to try and avoid this. Finally, the condition can recur over years if the retinaculum heals. The effects of peripheral neuropathy for example from diabetes cannot be treated by carpal tunnel decompression although in diabetes there is a mixed picture of nerve injury from compression and neuropathy from diabetes.

What about after surgery?

Immediately after surgery your hand will be bandaged. You should elevate it at the level of your shoulder for 72 hours and maintain the elevation after you are taken home. Keeping it elevated to keep the swelling down is best along the back of a sofa so the elbow and shoulder are in line and the veins unkinked. Extending the wrist to draw the nerve away from the scar is better than flexing the wrist. Keep your wrist back (as if you were stopping traffic) for the first three days and then as much as possible during the first week as this prevents the nerve from sticking to the scar which can be a cause of a painful scar. You may be given pain relief medications. Dark blue or brown discoloration of the hand and wrist after surgery is normal and due to bruising. You will be told about exercising your hand by opening and closing your fingers and squeezing exercises. You will probably be able to start light activities in one to two days.

Avoid bending your wrist far forward or backward, and try not to bump the area around the sutures.

We will arrange follow-up appointments so that we can remove your sutures and make sure you are healing properly after surgery. The standard with us is for two appointments after your operation.

How long will it take to…

- be pain free? Be sure you take an anti-inflammatory type painkiller in the first few hours after operation, as your local anaesthetic will not last long. Pain can take 6 weeks to settle.

- get the dressing off? Leave the dressing and sticking plaster until you have your sutures removed between 7 and 14 days after operation. Be sure you have made arrangements with me to have your sutures removed between 7 and 14 days after operation. Do not worry about any dried blood on the sticking plaster. Do not get the dressing wet until the sutures are removed.
- find the scar is comfortable? After your scar has healed and the scabs are off please massage it regularly with hand cream so that the scar is desensitised and softened. begin driving again? You should be able to return to driving after 14 days.
- return to work? This might take longer than a few weeks depending on the type of work you do.