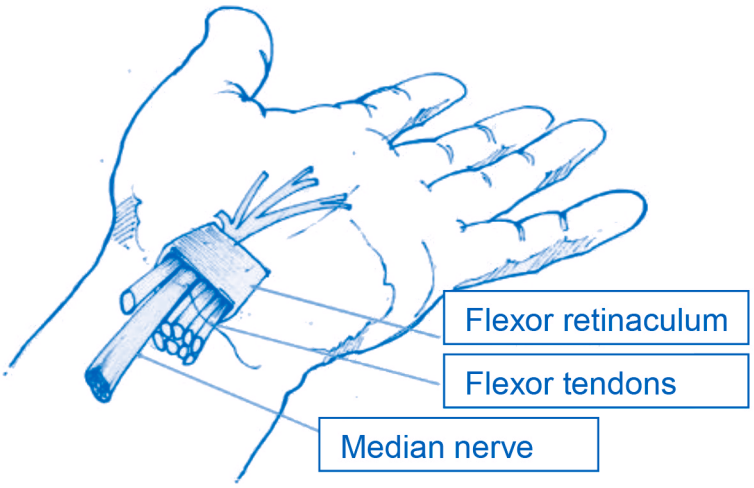
Carpal tunnel syndrome

What is carpal tunnel syndrome?

- Carpal tunnel syndrome affects 4 - 5% of the population usually occurring in people aged 30 - 50 years.
- It is more common in females than males.
- The carpal tunnel is in your wrist and has a base and sides formed by two rows of carpal bones.
- The roof of the tunnel is made of a strong ligament (the transverse carpal ligament).
- Carpal tunnel syndrome is thought to be due to increased pressure or stretching on one of the main nerves to the hand called the median nerve (yellow in diagram) which runs through the carpal tunnel (see rectangular box in diagram).



What causes it?

There is no proven cause for carpal tunnel syndrome.
Some people find it runs in their families although there is no ‘carpal tunnel’ gene.

Carpal tunnel syndrome is generally not associated with any specific risk factors but there are some factors which increase the risk, over the background level, of developing carpal tunnel syndrome although they do not apply to the majority of patients. These include:

- Diabetes
- Hypothyroidism
- Rheumatic disease
- Renal failure
- Cervical spondylosis
- Rarely: lipomas / tumours
- Repetitive manual work
- Previous trauma
- Obesity
- Pregnancy
- Menopause

Symptoms

- Uncomfortable tingling in the affected hand often at night is the first and most common symptom. This is often relieved during the day when the hand is in use. Many people will describe shaking the hand like a hand bell to alleviate the night-time symptoms.
- Numbness: Over time the tingling in the fingers will become more pronounced and turn to actual numbness.
- Weakness of grip is a late effect of carpal tunnel syndrome and we would hope to treat it before this occurs.

How is the diagnosis confirmed?

- Often the description of your problems with the hand, and some simple questions, will be enough to allow the doctor to make the diagnosis.
- Usually, however, the doctor will need to examine your hand and may ask you to move your hand into certain positions or push on certain areas to see if the nerve is working normally.
- Sometimes the doctor will still not be sure about the diagnosis and want to perform some more tests. These may include x-rays, nerve conduction studies and blood tests. Many of these tests can be done on the same day but certain more complex tests may need to be booked and you will be sent an appointment.

What treatments are available?

Clinic-based

- Wrist splints: For patients whose problems are mainly at night, splints can be very helpful and may provide either a complete cure or at the very least significant improvement.
- Steroid injections: A single steroid injection is often used to confirm the diagnosis or as the main treatment. Some doctors will give up to 3 steroid injections. Our general view in the Hand Unit is that if the problem comes back within 6 months of the first injection then surgery is a more sensible option. However this can be discussed with your surgeon.

Surgery: Carpal tunnel decompression (open or endoscopic)
This is usually carried out as a day case under local anaesthetic (you are awake for the procedure) given by injection at the wrist. The wound is approximately 3 - 4cms in length running down the palm and is closed using non-absorbable stitches at the end of the procedure. The hand is then bandaged and you are encouraged to elevate your hand above the level of your heart to prevent swelling and throbbing for the first 2 days after the operation.

There is another way of doing the surgery, using a very small incision at the wrist, called endoscopic surgery. Not all surgeons believe that this is better than open surgery but people probably get back to usual activity 2 weeks earlier. If it is very important to you to be able to return to work or some other activity as soon as possible, you should discuss this with your doctor.

What should I expect after the operation?

Usually patients have relief of the night pain and tingling within a few days after the operation. If you have had the condition for a while, the numbness and weakness may unfortunately not resolve completely.

Most patients require a couple of doses of over the counter pain relief such as Paracetamol or Ibuprofen. You will be expected to provide this yourself.

You will then be asked to contact your GP practice nurse to arrange a wound inspection and removal of your sutures at about 10 days after the operation.

If you are instructed to remove the dressing, you can then wash the wound under warm running water and this is helpful in reducing infection. Gently pat the area dry or use a hairdryer to dry the area.

Driving

You will need to be collected from hospital after the operation or arrange alternative means of transport home.

You should allow a period of 2 - 4 weeks before driving.

Time off work

Your return to work will depend on your job. Light manual workers can return to work in 2 - 3 weeks. Heavy manual workers should not return for 6 weeks depending on the type of work.

What are the risks and consequences associated with surgery?

Specific risks of carpal tunnel decompression are:

- Injury to the median nerve.
- Recurrence of carpal tunnel syndrome (approximately 10%).
- Tender or sensitive scar.

A very small percentage of patients may develop a severe reaction after hand surgery, with lifelong permanent pain and stiffness which is unresponsive to treatment.

It is necessary to allow a period of about 6 - 12 weeks or more for the scar sensitivity to gradually resolve and to regain full grip strength.

If you are concerned about any of these risks, or have any further queries, please speak to your consultant.

If you have any queries or require further information,
please contact your consultant's secretary on the number on the enclosed leaflet

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