



Carpal Tunnel Syndrome

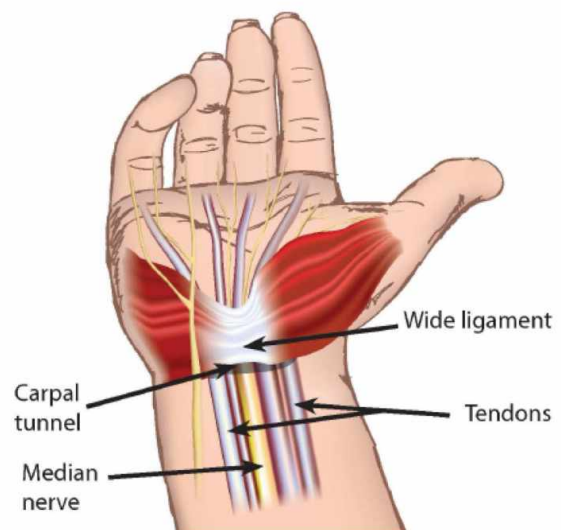
Information for patients from the Orthopaedic Hand Service

If you have been diagnosed with Carpal Tunnel Syndrome (CTS) this leaflet will explain what it is, the symptoms, and the causes. It will also explain how the diagnosis is made and the treatment options available.

What is Carpal Tunnel Syndrome?

CTS is a condition where pressure on one of the nerves to the hand (known as the median nerve) causes feelings of uncomfortable pins and needles in the hand and in more severe cases, numbness and weakness.

The median nerve runs from the neck, down the arm, and through a tunnel at the wrist (the carpal tunnel) and into the hand. The carpal tunnel is formed by the wrist bones in a 'u' shape and a wide ligament that sits across the top to the roof of the tunnel.



The carpal tunnel, and its surrounding ligaments, nerves, and tendons

What causes CTS?

CTS can happen as a result of increased pressure in the carpal tunnel, which compresses the nerve in this space. In most cases CTS can happen without any identifiable cause. However there are some factors that can be linked to its occurrence including diabetes, pregnancy, under active thyroid conditions, wrist fractures, and various forms of arthritis. Patients with CTS often say the symptoms get worse when they carry out heavy activities.

In the early stages of the condition, many people with CTS experience their symptoms mainly at night. But as the condition progresses symptoms develop during the day as well, and they start to happen more often.

How is it diagnosed?

Diagnosis of CTS is made from a combination of assessments, including the following.

- Taking a patient's history, so we can see the pattern of their symptoms.
- Clinical tests carried out by the patient's GP, consultant, or therapist.
- Carrying out nerve conduction studies (NCS). A NCS is where small metal wires called electrodes are placed on your skin. These electrodes release tiny electric shocks to stimulate your nerves. This can help your doctor or therapist see how bad your nerve compression is.

How can it be treated?

Different treatment options are available, but will depend on how bad your symptoms are and the results of the nerve conduction studies (see above).

- **Splint provision**

You may be provided with a splint (see photo), usually only to wear at night, to hold your wrist in a neutral position. This allows for maximum space in the tunnel, reducing the pressure on your median nerve. This is a very safe treatment and around one in three patients find these helpful, with no other treatment needed.



Wrist splint

- **Injections**

A local cortisone steroid injection can be administered into the carpal tunnel to give you some relief from your symptoms. There are some very rare complications with local injections such as infection or nerve damage from the injection itself. Approximately four in five patients will benefit from a steroid injection but in some cases the symptoms will re-occur.

- **Surgery**

If your CTS is quite severe and other treatments have not helped, surgery may be an option. This involves a small cut across the carpal ligament at the base of your palm to make more room for the nerve, easing the pressure within the tunnel. For most patients this surgery is done under local anaesthetic as a day case (you can go home on the same day as your surgery).

Most patients get very good and permanent relief from the symptoms following surgery. However, in some patients diagnosed with very severe CTS, even with surgery, there is a chance the nerve damage may be irreversible. This would be discussed with the surgeon before your operation.

What happens if I choose not to have the operation?

The symptoms of pain and numbness may stay the same, increase, or even become permanent. The muscles in your hand may become weak, causing problems with some activities. A small number of patients may improve even without any treatment.

What are the risks with surgery?

Serious complications are uncommon. However a small number of patients can experience complications, some of which resolve with time. These include:

- scar tenderness and hand weakness
- aching and pain especially on gripping; and
- wound infections, which can happen in around one in every 100 cases.

A very small number of patients will develop a serious reaction to the surgery and develop Complex Regional Pain Syndrome (CRPS) (/complex-regional-pain-syndrome-crps). This is a rare condition but can cause severe pain, swelling, and stiffness in the hand which can take several months to improve or may even continue.

The onset of CRPS can often be gradual and may not be noticeable for four to six weeks. If you have ongoing persistent pain and swelling throughout your whole hand after this period of time, please contact the consultant you were under for the surgery for a review, or visit your GP.

What happens before my operation?

You will be contacted by the preassessment clinic and a nurse will discuss your operation with you. Please feel free to ask questions and raise any concerns that you may have regarding your operation. You may need to undergo some routine tests before your operation such as a blood test. You will be asked some questions about your general health.

It would be helpful if you have a list of your medications ready; the nurse will need to know their names and the doses. This includes non-prescription medicines such as herbal / complimentary medicines.

Compared to non-smokers, smokers are more likely to have complications in tissue healing and infections after injuries or surgery. For free friendly support and medication to help you stop smoking, contact One You Kent Smokefree on telephone 03001 231 220, or email (kentchft.oneyoukent@nhs.net) or visit their web site (<https://www.kentcht.nhs.uk/service/one-you-kent/>).

Please remove all rings from your fingers before coming to hospital on the day of your surgery.

Will I have to stay in hospital?

No, the procedure is carried out as day surgery. You will need to be in hospital for approximately three to four hours.

What will happen when I arrive at hospital?

Please refer to your appointment letter for where to go when you arrive at the hospital. You will be greeted by a member of the ward staff and advice will be given regarding your care.

How will I feel after my operation?

You may be in a little discomfort after your surgery and this is quite normal, but it is not common to be in large amounts of pain. You may take simple painkillers such as paracetamol if you feel it necessary and you are able to take this kind of medication.

What should I do if I experience pain at home?

If you experience a large increase in pain after you are sent home, and certainly if you start to feel unwell in yourself, you can contact your GP for advice regarding further management and pain relief. If this is outside GP hours then go to your nearest Emergency Department or Urgent Treatment Centre. They may need to check your wound and can then advise on what to do next.

When can I drive / go back to work?

You will need someone to drive you home after your surgery. We recommend you return to driving when your hand feels comfortable when using it for general daily activities. This is often around one to two weeks after your surgery.

When you can return to work depends on the work you do. For example if your job involves light duties you can return after one to two weeks, whereas if your job involves more demanding work you may not be able to return for around three to six weeks.

When can I return to my normal activities?

You should return to normal everyday activities as your pain allows, often around two to three weeks after your surgery.

Will I need a follow-up appointment?

You may be offered an appointment following your carpal tunnel decompression at the therapy led surgical discharge clinic. The details of your appointment or who to contact in the event of a problem will be included in your post-operative discharge summary.

When will my dressing and stitches be removed?

You may remove the bulky dressing on your hand after 48 to 72 hours, leaving the small dressing over your wound; it is very important to keep this clean and dry. If you experience any excessive pain, swelling, or tenderness around your wound it might mean you have an infection and we advise you to visit your GP or Urgent Treatment Centre to have your wound checked.

Avoid any excessive weight bearing activities for the first four weeks following your surgery, such as pushing up from a chair or heavy gripping.

In some cases dissolvable stitches are used and will start to fall out after 10 to 14 days. Others will need to be removed by your GP, practice nurse, or consultant. You will be advised of this at the time of your surgery.

How do I care for my scar?

The length of the scar will vary on a case by case basis. The number of stitches also varies but the surgeons aim to make the scar as cosmetically acceptable as possible.

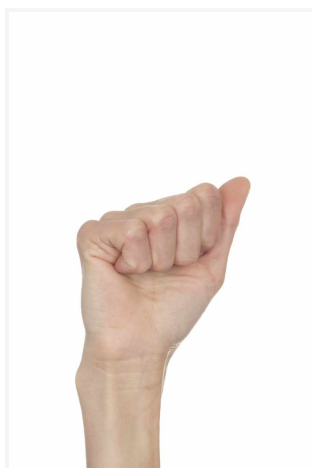
Your scar may become sensitive to touch while it heals, so it is very important to massage your scar with a small amount of water based hand cream for up to eight weeks after surgery. This will help to soften the scar tissue and reduce its sensitivity.

Rehabilitation after surgery

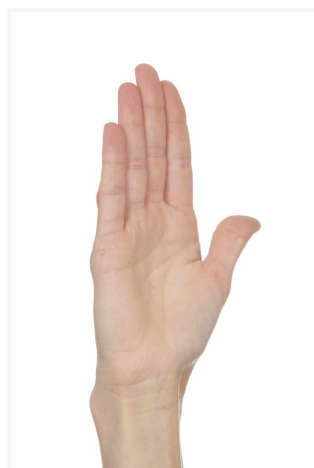
For the first 48 hours after your surgery keep your hand elevated (raised) to reduce the swelling and stop stiffness in your fingers. Do not walk with your hand dangling down.

Exercises

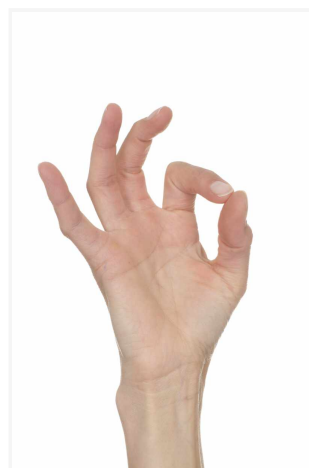
It is important to start these exercises on the day of your surgery. They may be uncomfortable but should not be painful.



1. Make a full fist.



2. Straighten your fingers out again.



3. Touch your thumb to the tip of all your fingers



4. Spread your fingers out as far as possible and back again.

5. Reach as high into the air as you can.

Further information

If you have any further questions, please ask your consultant or therapist.

You can get further information from this web site (<https://www.carpal-tunnel.net/>).

This leaflet has been produced with and for patients.

If you would like this information in **another language, audio, Braille, Easy Read, or large print** please ask a member of staff. You can ask someone to contact us on your behalf.

Any complaints, comments, concerns, or compliments please speak to your doctor or nurse, or contact the Patient Advice and Liaison Service (PALS) on 01227 783145 (tel://+441227783145), or email ekh-tr.pals@nhs.net (ekh-tr.pals@nhs.net)

Patients should not bring large sums of money or valuables into hospital. Please note that East Kent Hospitals accepts no responsibility for the loss or damage to personal property, unless the property has been handed into Trust staff for safe-keeping.

Further patient leaflets are available via the East Kent Hospitals website (<https://www.ekhuft.nhs.uk/information-for-patients/patient-information/>).

Reference number: RK/EKH066

First published:
August 2009

Last reviewed:
January 2022

Next review date:
October 2024



Illustrations and Photographs created by the Medical Photography Department.

Copyright © East Kent Hospitals University NHS Foundation Trust.