Carpal Tunnel Syndrome

Information for Patients

Gateshead Upper Limb Unit
What is the carpal tunnel?

The wrist consists of 8 small bones called carpal bones. A ligament (also called retinaculum) runs across the front of these bones forming a tunnel. The tendons which help move your fingers and an important nerve (median nerve) lie within the tunnel. The median nerve gives sensation to the thumb, index, middle and part of the ring finger. It also supplies the muscles forming the bulk of your thumb.

![Diagram of the carpal tunnel](image)

What is carpal tunnel syndrome?

Carpal tunnel syndrome is a very common condition caused by pressure on the nerve within the carpal tunnel. Though it can happen at any age it is commoner between 30-50 years. Women are more likely to get it. In most cases the cause is not clear.

What are the symptoms?

- **Pins and needles.** This is typically the first symptom and can be a tingling or burning sensation in the shaded area of the picture below.

![Diagram showing pins and needles](image)
- **Numbness** in the same shaded area shown above. This can typically get worse in the night and wake you up with a numb hand
- **Pain** is less common but can spread up your forearm
- **Weakness** may develop in severe cases and may cause difficulty gripping and holding objects. The thumb muscles may look thinner (wasted) than before.

Initially the symptoms come and go and are typically worse in the night. Symptoms might come whilst reading a book/ typing on a keyboard or driving a car.

**Do I need any tests?**

Diagnosis is usually obvious after a thorough clinical examination. Most surgeons would request a special test called a nerve conduction test. This test measures the speed of nerve impulses across the wrist and elbow. Occasionally this test can be normal even in patient with carpal tunnel syndrome. This test will be requested by your surgeon unless your GP has already organised it for us.

**What are my treatment options**

- **No treatment** is an option if the cause is temporary. If associated with pregnancy it tends to settle after the baby is born.
- **General measures** like avoiding activities with bring on the symptoms might be appropriate in milder cases. Other measures like pain killers, weight loss and treatment of an underlying medical condition might control your symptoms
- **Wrist splint.** This is usually a removable splint with Velcro straps. The aim is to keep your wrist straight as symptoms tend to be worse with wrist bent forwards ( whilst reading a book or driving , for example) Many patients find this useful in the night.
- **Steroid injection** into the carpal tunnel has variable success rates. Your surgeon may offer this option to you if they feel it is appropriate.
- **Surgery.** You will be offered surgery if you have failed to respond to other treatments; including rest, splintage and steroid injections.
What does the operation involve?

The operation consists of having an anaesthetic which “numbs” the affected hand. This involves an injection at the wrist, which is the site of the surgery. The surgical procedure involves dividing the ligament which forms the roof of the carpal tunnel. This relieves the pressure on the median nerve inside the carpal tunnel. You will have a small scar on the palm side of the wrist. After surgery the affected hand will have a bulky bandage for the first 48 hours. You will need to keep the hand elevated in a high sling, to reduce the risk of bleeding or swelling. Finger movements are encouraged to promote circulation and reduce swelling.

What happens before the operation?

Prior to admission you may need to have a pre-operative assessment. This is an assessment of your health to make sure you are fully prepared for your admission, treatment and discharge. If you are undergoing a general anaesthetic you will be given specific instructions about when to stop eating and drinking, please follow these carefully as otherwise this may pose an anaesthetic risk and we may have to cancel your surgery. You should bath or shower before coming to hospital. Please make sure your hands are clean and the nails have been trimmed. Also please take off any rings you may have on the affected hand.

The surgeon and anaesthetist will visit you and answer any questions that you have. You will be asked to sign a consent form. A nurse will go with you to the anaesthetic room and stay with you. A cuff will be put on your arm, some leads placed on your chest, and a clip attached to your finger. This will allow the anaesthetist to check your heart rate, blood pressure and oxygen levels during the operation.

How long will I be in hospital?

This operation is usually carried out as a day case. This means that you will usually spend approximately half a day in hospital. It is usual for you to attend your GP surgery to have your stitches removed 10-14 days after your surgery. On the day after your operation, please remove the outer dressings until you come to a small dressing at the level of your wrist. Please leave this dressing alone and do not allow it to get wet. If you feel your dressing needs changing before your stitches are removed, please contact your GP or practise nurse.

What complications can occur?

Despite there being some risk attached to having carpal tunnel decompression, it is for the majority of people a successful operation. Only serious or more common complications are mentioned here.

- The risk of infection is quite low. It is very important to keep the dressings clean and dry and/or renew them when necessary until the stitches are removed.
- The scar can remain sensitive to pressure for up to 3 months after surgery. Some patients can have deep seated pain over the scar when the heel of the palm is pressed hard. This usually resolves on its own.
- The operation involves working very close to the median nerve. There could be an accidental injury to the nerve or one of its branches. Injured nerves can be surgically repaired and can recover although the rate and extent of recovery are not predictable.

**What may I experience after my operation?**

- After the operation you may find that a little swelling or bruising occurs around the wound and that some bleeding may occur. It is therefore important to keep your hand elevated for the first few days following surgery to minimise any swelling. You should also monitor the wound for any excessive bleeding. There may be some discomfort and/or pain following surgery to the wrist but this can usually be controlled with simple painkillers. However, if your pain is severe and continuous you should contact your GP.
- Pins and needles tend to resolve very quickly but persistent numbness before surgery may never completely resolve.
- The wasting of the thumb muscles may improve but this takes months to years.
- Nerve recovery may continue for up to 2 years following surgery although after this length of time further recovery is unlikely. Both the speed of your recovery and how much your symptoms will improve are difficult to predict, and in some cases recovery may not be complete. Although most patients will notice an improvement in their condition with time following surgery.

**When can I resume normal activities?**

You may start to use your hand for light activities 48 hours after your operation providing these activities are comfortable and you don’t get your wound wet.

**Lifting**  
You should not attempt to lift anything heavy until directed by your Doctor; this is usually about 3 months after your operation.

**Driving**  
Generally you are safe to drive when your wound is healed and you are free of dressings, providing you can move your fingers, make a fist and your hand is not too painful or tender.

**Work**  
Manual workers will be unable to return to work for a period of 6-8 weeks following the operation. Sedentary or office workers should be able to return within 1-4 weeks. This should be discussed with your Consultant.

**Swimming**  
If you are going on holiday then avoid swimming, especially in the sea, until the wound is fully healed. It is important to resume normal function as soon as possible; however, you should be aware that your hand will feel weak and uncomfortable initially.
Exercises

It is important that you practice the following exercises for approximately 5 minutes every hour during the day in order for your hand to heal with maximum movement following the operation.

Slow, controlled exercises are more effective and more comfortable than quick movements.

The exercises should be started as soon after your operation as possible.

1) stretch your arm above your head
2) bend and straighten your elbow
3) bend your wrist backwards and forwards
4) stretch your fingers and thumb as far apart as possible
5) bend your fingers to touch the palm of your hand as if to make a fist
6) try to touch the tip of each finger with your thumb

Where can I get further information?
Your Consultant and GP will be able to answer most of your questions, as will the Orthopaedic Nurse Practitioners who will see you prior to your admission.

Telephone numbers

<table>
<thead>
<tr>
<th>During the hours of 8am -8pm contact the Day Surgery Unit, North East NHS Surgery Centre, Queen Elizabeth Hospital</th>
<th>0191 4453009</th>
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<tbody>
<tr>
<td>During the hours of 8pm -8am contact Level 1, North East NHS Surgery Centre, Queen Elizabeth Hospital</td>
<td>0191 4453005</td>
</tr>
<tr>
<td>Main switchboard</td>
<td>0191 4820000</td>
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Data Protection

Any personal information is kept confidential. There may be occasions where your information needs to shared with other care professionals to ensure you receive the best care possible. In order to assist us improve the services available your information may be used for clinical audit, research, teaching and anonymised for National NHS Reviews. Further information is available in the leaflet Disclosure of Confidential Information IL137, via Gateshead Health NHS Foundation Trust website or the PALS Service

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This leaflet can be made available in other languages and formats upon request