

Trauma & Orthopaedics

Carpal tunnel syndrome



What is carpal tunnel syndrome?

Carpal tunnel syndrome is a condition where one of the main nerves to the hand (the median nerve) stops working properly. The nerve crosses the wrist into the hand from the forearm in a tunnel, which is called the carpal tunnel. The tunnel is a tight space surrounded by bones and a ligament. The nerve can become squashed in the tunnel, which leads to symptoms in the hand. Symptoms of carpal tunnel syndrome include pins and needles, numbness, or weakness in the hand.

What are the treatments for carpal tunnel syndrome?

Wrist splints

If you are having symptoms that come and go, for example pins and needles only at night, a simple treatment such as a splint can be enough.

Steroid injections

If your symptoms are more frequent or constant, then an injection of steroid into the carpal tunnel can help relieve your symptoms. This is done in the out-patient clinic.



Patient Information

Surgery

Most patients will need surgery for their carpal tunnel syndrome. The aim of surgery is to divide the ligament that forms part of the carpal tunnel so that there is more space for the median nerve. This reduces the pressure on the nerve and should improve your symptoms.

It is important to realise that we cannot guarantee that all of your symptoms will go after the operation. This is because if there is already scarring in the nerve before the surgery, this cannot be changed. However, the surgery should stop any further pressure damage to the nerve.

The tendons and the median nerve pass through the carpal tunnel in the wrist

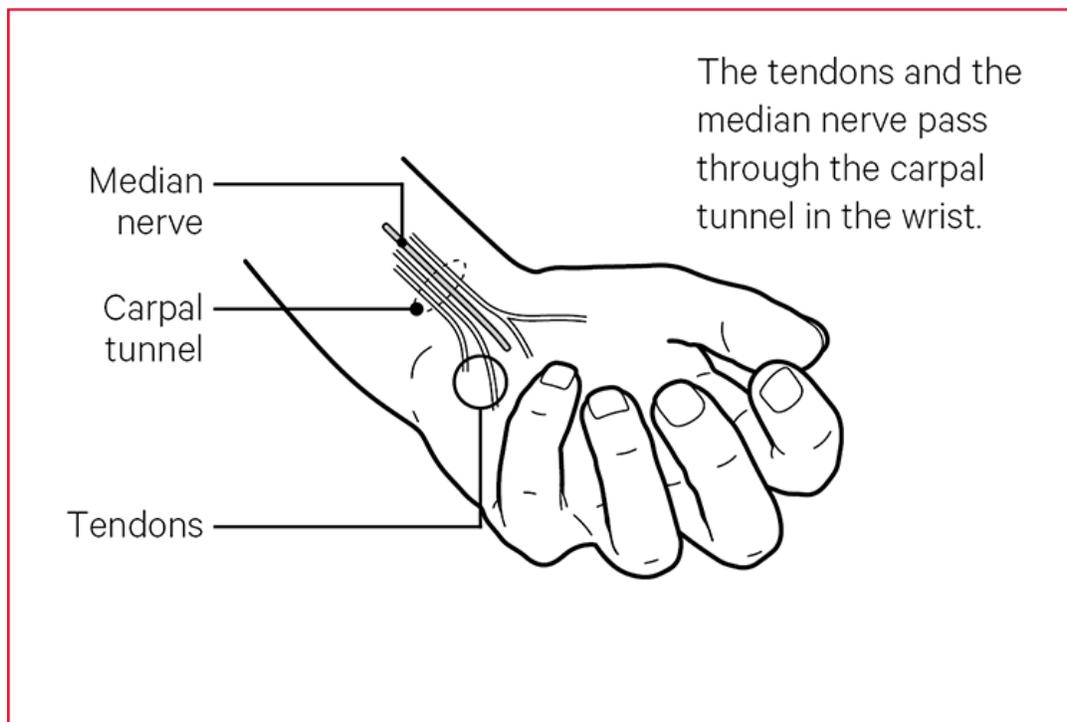


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What happens if I need surgery?

Surgery is usually performed as a day case procedure with you awake but with the area numbed with a local anaesthetic injection. The injection is a little

Patient Information

painful to begin with, but once it is working you don't feel any pain. Some surgeons may use a tight blood-pressure cuff around the upper arm, known as a tourniquet, to stop bleeding during the surgery. Other surgeons may mix adrenaline into the local anaesthetic mixture to prevent bleeding.

How is the surgery usually performed?

There are 2 types of surgery:

Open surgery method: A cut is made in the palm of the hand and may go a little into the forearm. The ligament is released and the skin is stitched. This is called an open carpal tunnel release.

Endoscope method: An endoscope is a medical device that allows us to look inside the body and perform surgery without having to make large cuts.

What is an endoscopic carpal tunnel release (ECTR)?

In an endoscopic carpal tunnel release (ECTR), the cut is made in the forearm, not the hand. An endoscope is used to see the ligament from inside the hand and it is divided without having to cut the skin on the hand.

The wound is stitched using either dissolvable or non-dissolvable stitches, and your hand will be bandaged.

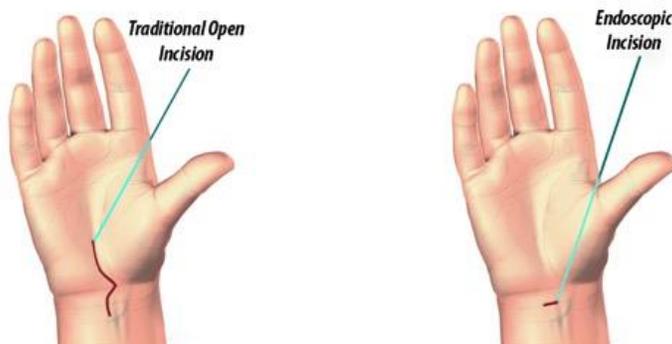


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Patient Information

For both types of surgery, you will not be able to drive yourself home.

What should I remember before my surgery?

- Please call the relevant contact number below if you are unable to attend or if you are unwell (you have a cold, flu, diarrhoea, high temperature, urine infection, or chest infection).
- Please also contact us beforehand if you have had a recent injury, wound, burn or insect bite on the hand or arm being operated on.
- Please continue your normal care of your hands (washing and moisturising).
- Try to avoid any heavy manual work just before your surgery or any activities where you might hurt your hands or damage your skin.
- Please have a shower or bath on the morning of or the night before coming into hospital. Your hands should be clean on the day of surgery including under the tips of your nails.
- Loose, false nails and nail polish should be taken off. If you choose to keep them on, be aware that they may be damaged during the course of surgery.
- **All rings and bracelets must be taken off from the hand being operated on.** Soap or grease may help with this, but if they are too tight and cannot be removed, please make arrangements with a local jeweller to have them cut off professionally and resized.
- You can continue taking all your regular medications, including oral contraceptives, medicines for diabetes and blood thinning agents, unless instructed otherwise.
- Please be aware that if you are on blood thinning agents and normally have your INR checked at regular intervals, this should be under 3 on the day of surgery. While this can be checked on the day of surgery, please talk to the healthcare team that look after your blood levels and ask if they can arrange an INR test for the day before surgery. If your INR is above 3, you will need to discuss this with your surgeon, and should contact us using the numbers below.
- Unless your hand surgeon or specialist has given you different instructions, you can eat and drink normally before coming to hospital for

Patient Information

carpal tunnel surgery. It is best not to eat a big meal or have fizzy drinks, in case you feel uncomfortable lying down for surgery.

- Please bring all your medication and inhalers, a dressing gown, slippers, a small amount of money and something to pass the time, such as a book or some music and headphones.
- Please do not bring alcohol or cigarettes/ vaping machines into hospital. You should try to stop smoking before surgery, as smoking can double your chances of a complication. We recommend you do not smoke or have any alcohol on the day of surgery.
- Do not bring valuables (including jewellery) or large amounts of money. The hospital cannot be held responsible for any losses or damage to valuables.

What happens after surgery?

- After a local anaesthetic it may take several hours before feeling comes back into your wrist and hand.
- After surgery, your hand will be heavily bandaged for 2 to 3 days. You need to keep a small dressing over the wound and the wound should stay covered and dry for 14 days.
- You can wash and shower from the first day but avoid getting your wound wet. Put a new dressing on if it becomes soggy. Avoid soaking the hand, baths, and swimming for the first 2 weeks or until the wound has completely healed
- After 14 days you can leave the wound uncovered. Dissolvable stitches will dissolve on their own and rub away as you use your hand more and more. If your surgeon has chosen to use non- dissolvable stitches, we will ask you to arrange for them to be taken out by your GP practice nurse or local NHS walk-in centre.
- In a small number of cases, the nerve endings may become oversensitive. This means that normal touch is more intense and uncomfortable. After 14 days, or after stitches have been removed, massaging the area lightly with cream or rubbing the area with different textures or materials can help this.
- Our hospital's Day Surgery Unit staff will give you some advice about caring for your healing wounds before you go home. Look out for your skin becoming very hot, swelling, redness, discharge, or fever as signs of a

Patient Information

possible wound infection. If you are concerned, please contact us using the details below, or contact your GP.

- For the first week, you should use your hand whenever you can as long as it is not too painful. It is good to move your hand but avoid any heavy gripping or loading of the hand until the stitches have been removed. The palm of your hand might feel tender inside for several months. This is because the tissue under the skin takes longer to heal in this part of the body.
- You may need painkillers during this time. Your surgeon can talk to you about this, but usually simple paracetamol or ibuprofen is enough.
- It is usual for the pain and pins and needles to stop quickly after surgery. It usually takes about 4 to 6 weeks to recover from carpal tunnel surgery, but you may still have some discomfort around the site of the surgery for a few months. If your symptoms were severe before surgery, your recovery may take much longer, and you may be left with permanent symptoms.
- We do not routinely arrange a follow up appointment. It is important that you carry out the exercise below and use our online resources to help your recovery. If you have any problems or concerns, you can arrange a remote-virtual or face-to-face appointment using the contact card provided on the day of surgery.

What are the possible complications?

There are no differences between the rates of complications whether you have endoscopic or open carpal tunnel release.

Complications specific to carpal tunnel surgery can include:

- Risks with local anaesthesia– the injection may sting a little, but risks are very rare and are to do with local anaesthesia leaking out of your hand and into your blood vessels.
- Swelling and stiffness of the wrist, fingers, or thumb.
- Continuing pain and numbness – it can sometimes take several months for discomfort to disappear.
- Infection – this can be treated with antibiotics.

Patient Information

- Carpal tunnel coming back (recurrence) – it is possible for symptoms of carpal tunnel syndrome to return at any time, even many years later
- Damage to nerves, blood vessels or tendons in the wrist which may need surgery to repair.
- Loss of strength when pinching or gripping objects, although this usually improves with time. This may cause pain, but again usually settles over time (pillar pain).
- A pain syndrome – rare but may require a long-term hand therapy.
- There may be tenderness around the scar. This normally gets better after 6 weeks, but it may stay for up to 6 months. Massaging the scar can be helpful to relieve these symptoms. You may find the video on our web site useful <https://www.uhcwhand.org/multimedia> - carpal tunnel surgery

If you have any concerns, please talk to us when you come for surgery.

Exercises

You should try to move your elbow and shoulder regularly to loosen your joints. Please try to complete exercises 1-3 three times a day until the stitches are removed. Exercise 4 and 5 can be started after 14 days (or after any stitches have been removed), but only if it is not too painful.



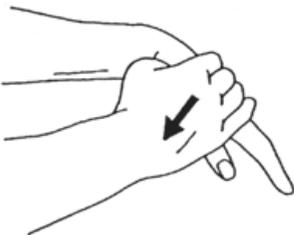
1. Open and close your fingers to make a fist, stretching as far as you can and making sure you include your thumb.

Repeat 10 times.

Patient Information



2. Sit with your forearm supported on a table. Bend your wrist up and down and side to side as far as you can. Repeat 10 times.



3. With your forearm on a table, or elbow by your side, turn your palm over to face the ceiling as far as you can. Then turn down towards the floor as far as you can. Make sure you keep your elbow still throughout both. Repeat 10 times.

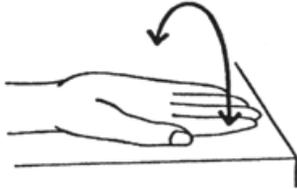


4. Sit with your forearm supported on a table, and your hand over the edge (palm facing down). Hold just below your wrist joint.

Patient Information

Bend the wrist, then using the other hand, add pressure to increase the downward movement of your wrist. Hold for 5 to 10 seconds.

Repeat 10 times. This exercise should then be repeated as above in the opposite (palm facing up) direction.



5. Sit or stand, forearms straight out (horizontally) in front of you and palms together. Push palms together for five seconds. Relax. Repeat 5 times.

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How long will I be off work and when can I drive?

It is your responsibility to ensure you are safe to drive. You can talk to your surgeon if you are unsure. Please arrange for someone to bring you as you we advise that you do not drive yourself home after surgery.

It is not recommended that you return to driving until you have a pain free hand and can comfortably make a fist to ensure you are in full control of the vehicle.

Returning to work will depend on your type of job. You should be able to perform most everyday activities with any splints or strapping that may have been provided. Again, please speak to your treating clinician about this, and do not take part in any sport until you are told that it is safe to do so.

Patient Information

Further information

For any routine queries or further information please visit our hand service's web site at www.UHCWhand.org, or contact your consultant's secretary using one of the phone numbers below:

Mr David's secretary 02476 965974

Mr Fowler's secretary 02476 965092

Mrs Hedley's secretary 02476 965093

Mr Jones' secretary 02476 965092

Ms Langley's secretary 02476 965064

Mr Mahon's secretary 02476 965095

- The day surgery unit at Hospital of St. Cross, Rugby on 01788 663264
- The day surgery unit at University Hospital, Coventry on 02476 966861 or 966868
- Hand Therapy at University Hospital, on 02476 966016
- Hand Therapy at Hospital of St. Cross, Rugby on 01788 663257

The Trust has access to interpreting and translation services. If you need this information in another language or format, please contact 02476 966861 and we will do our best to meet your needs.

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We would like you to tell us what you think about our services. This helps us make further improvements and recognise members of staff who provide a good service.

Have your say. Scan the QR code or visit:

www.uhcw.nhs.uk/feedback

