

Acute Services Division



Information for patients

Carpal Tunnel

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Introduction

Carpal tunnel syndrome (CTS) can cause the symptoms of pain, pins and needles and, or numbness in the hand. It is caused by pressure on the median nerve as it passes into the hand at the level of the wrist.

This guide will help you understand:

- The location of the carpal tunnel
- How carpal tunnel syndrome may develop
- What are the treatments for carpal tunnel
- Care after the operation.

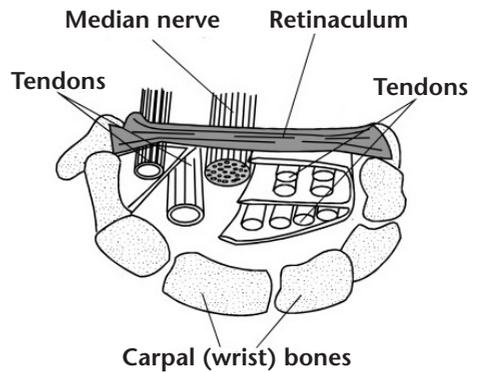
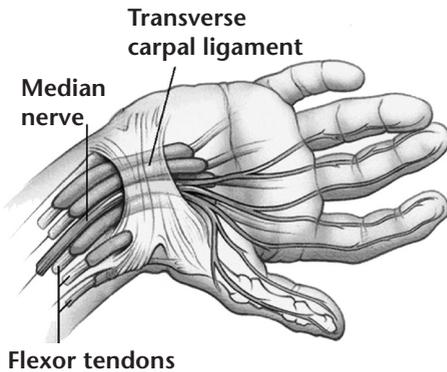
What is carpal tunnel?

There are 8 small bones in the wrist called the carpal bones. A ligament (also called retinaculum) lies across the front of the wrist.

The space between the bones and the ligament is called the carpal tunnel. The tendons that attach the forearm muscles to the fingers pass through the tunnel.

The main nerve to the hand (the median nerve) also goes through this tunnel before dividing into smaller branches in the palm. The median nerve gives feeling to the thumb, windex and middle fingers and half the ring finger.

A small motor branch also controls the movement of the small muscles at the base of the thumb.



What caused Carpel Tunnel?

Unknown

In a lot of cases it is not exactly clear why it occurs. Any inflammation or swelling in the narrow tunnel, where there is little space to expand will put pressure on the nearby median nerve.

Wear and tear

The synovium (fluid) around the tendons may become thicker and more swollen due to normal wear and tear of the ageing process or through repetitive hand movements, thus pressing the nerve against the tunnel.

Bone or arthritic conditions

Rheumatoid arthritis or a previous fracture (broken) bone may narrow the tunnel and put pressure on the nerve.

Various other conditions

Other conditions can be associated with carpal tunnel e.g. pregnancy, obesity, diabetes and the menopause.

Rare causes

This can include cysts, growths and swelling arising from the tendons.

Symptoms

Symptoms vary from mild to severe, depending on how squashed the nerve has become. One or both hands can be affected. Symptoms may come and go at first and are typically worse at night and may wake you up. Pain may spread up your arm. As the condition progresses the small muscles around the thumb can weaken, making the hand feel clumsy.

Diagnosis

We will ask you questions and examine your hands.

We may recommend a test which measures the speed of the nerve impulse through the carpal tunnel (nerve conduction test).

A slow speed of impulse down the median nerve confirms the diagnosis. Sometimes the symptoms are so typical or have been present for less than 3 months and in these cases you may not require a test.

Treatment Options

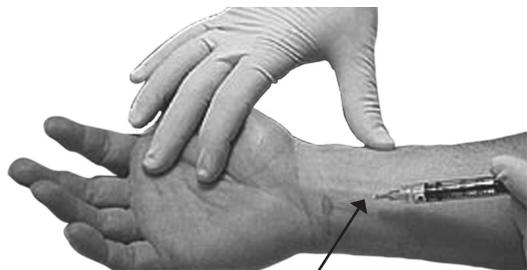
1. Conservative treatment

You may need to change or stop some activities that may be aggravating your symptoms. You must try not to do repetitive hand motions, heavy grasping, wringing, squeezing etc.

- A wrist brace will sometimes decrease the symptoms especially in the early stages. This flattened brace keeps the wrist in a resting position, (not bent too far back or forward). When the wrist is in this position, the tunnel is as big as it can be, so the nerve will have as much room as possible. The splint should be worn at night as it can be especially helpful overnight preventing your hand curling under and increasing your symptoms which then waken you up. The wrist brace may also be worn during the day to calm symptoms.



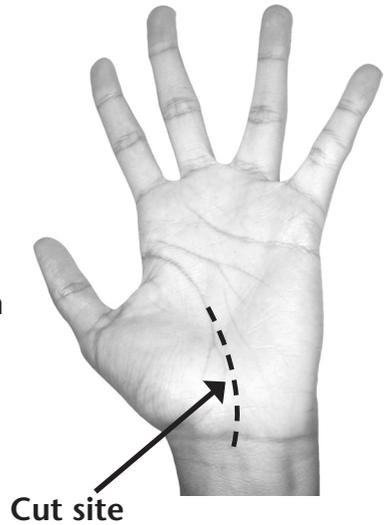
- We may decide to inject some steroid into the carpal tunnel. This can be used to reduce the swelling and if you get relief from the symptoms, will actually confirm the diagnosis. The relief from this injection may be temporary.



Cortisone injection

2. Surgery

A small operation, which cuts the ligament over the front of the wrist, will open up the carpal tunnel and ease the pressure on the median nerve. By releasing the pressure on the nerve the blood supply will improve and you will get relief from the symptoms. However, if the nerve pressure has been going on a long time, the nerve can be thickened and scarred to the point that recovery is much slower.



After releasing the ligament (fig. 1), the loose ends of the ligament are left apart (fig. 2) and the gap will eventually fill with scar tissue resulting in a larger tunnel and therefore will put no pressure on the nerve.

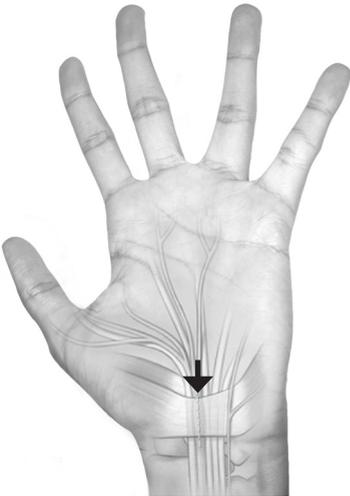


Figure 1.

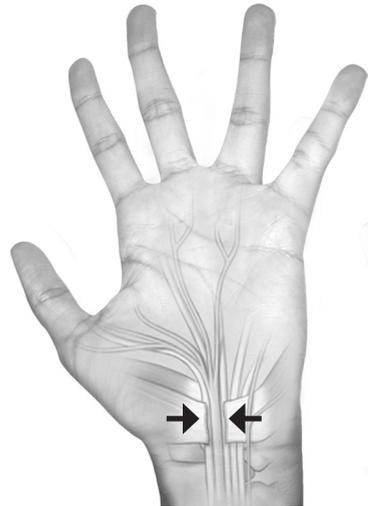


Figure 2.

The surgeon will then stitch the skin closed and your hand will be wrapped in a bulky bandage. The cut in your hand will be approximately 3-4 cm (1 ½ inches) long. You will go home on the same day.

You should start gently 'wiggling' your fingers within the confines of your bandage. We may give you pain relieving medication to help with the pain.

This is a minor operation with a low risk of complications. These complications will be discussed with you should you require an operation.

Driving

You can return to driving when it is comfortable to do so. You should feel that you are in complete control of the car and able to carry out an emergency stop safely. You may want to check with your insurance company before returning to driving.

Time off work

This will depend on what you do. Light manual workers may be off work for 2-3 weeks whilst heavy manual workers will need at least 6 weeks. This is because you **must avoid** all heavy gripping, pinching etc. for at least 6 weeks.

What should I expect after surgery?

You or your practice nurse can remove the bulky dressing two days after your surgery.

A small dry dressing should be worn over the wound until your stitches have been removed (10-14 days following surgery).

It is important that you start gentle exercises e.g. bending and straightening the fingers and wrist. This is important to encourage the gliding of the flexor tendons which share the carpal tunnel with the median nerve and will prevent scarring which could limit the movement in your fingers.

The wound will continue to be tender over the next few months, massaging the wound will help to make it less sensitive. Tingling in your hand may persist for a short period following surgery.

If it continues after 3 months make an appointment to come and see your Consultant.

Make an appointment for your practice nurse to remove your stitches 10-14 days after the surgery. After removal of the stitches you can start to use your hand normally.

Routine follow up appointments are not made from the hand clinic however should you need an appointment or have any questions you can contact us on the numbers below.

Contact telephone numbers are:

Appointments: 0141 211 4608

Clinic Line: 0141 211 4496 or 5987

Adapted with thanks from original leaflet designed by:
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