

# Carpal tunnel syndrome

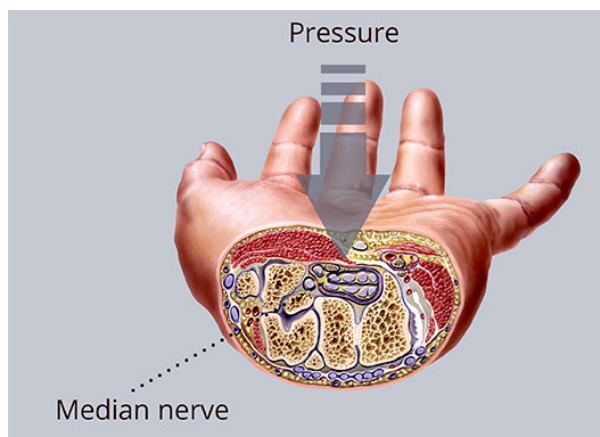


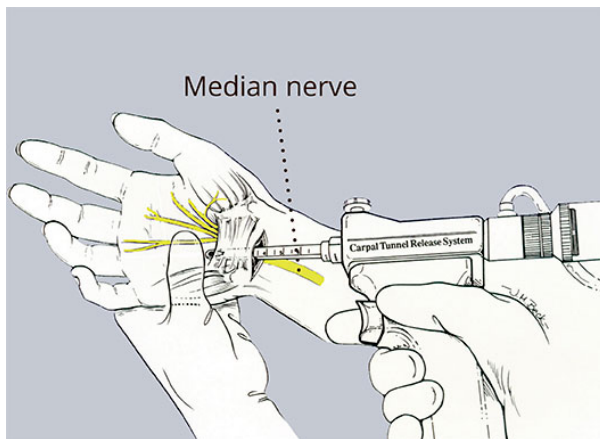
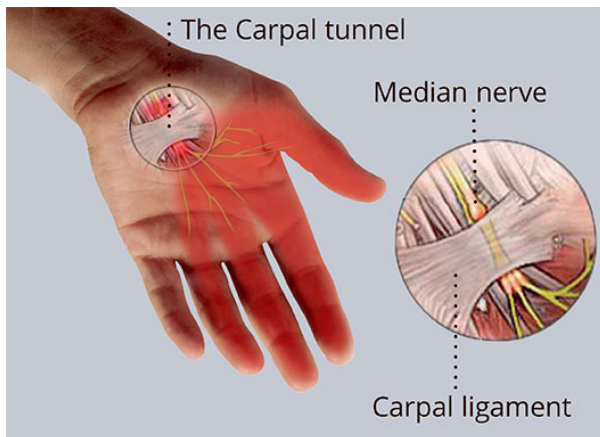
## “Finger numbness”

**The most common signs of carpal tunnel syndrome are numbness and tingling the fingers, pressure and sometimes pain around the wrist - often during nights.**

## What is carpal tunnel syndrome?

Carpal tunnel syndrome (CTS) is a medical condition caused by compression of the median nerve as it travels through the wrist.





Together with the digital flexor tendon, the median nerve runs in a narrow passageway in the wrist called the carpal tunnel. The “floor” in the tunnel consists of the carpal bones and the “roof” is a strong band of connective tissue - called a ligament.

CTS occurs when the tunnel becomes narrowed as tissues surrounding the flexor tendons swell, putting pressure on the median nerve. These tissues are called the synovium. Normally, the synovium lubricates the tendons, making it easier to move your fingers.

It is a common condition and in Denmark (5.5 mill inhabitants) about 3500 patients are operated a year.

## What causes carpal tunnel syndrome?

In most cases it is not clear what causes CTS. The condition can occur during pregnancy, long time exposure to vibrating tools, hand and wrist fractures, rheumatoid arthritis and other diseases. Symptoms can also appear after unaccustomed activity such as gardening, painting etc.

## Symptoms

### The most common symptoms are

- numbness and tingling of the fingers
- disturbed sensation in the thumb and index, middle and ring fingers
- pressure and sometimes pain in the wrist
- pain in the fingers and the wrist that may travel up the forearm toward the shoulder

Symptoms can occur separately or combined in one or both hands and the condition tends to worsen during night-time. After a while the night-time symptoms may decrease and a continuing numbness in the fingers is dominating during daytime. Occasional weakness in the thumb may occur.

## Diagnosis

During the first examination the hand surgeon will decide if it is CTS. In cases of doubt a neurophysiological test of your nerve conduction is relevant. Mølholm Private Hospital can perform this test as well.

## Treatment

If symptoms are caused by overwork the first step is to relieve the hand. A wrist brace can reduce the night-time discomfort. In cases where an operation is not possible or wanted a steroid injection can relieve pain and symptoms. However in most cases the best solution is an operation.



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## In what cases do you need a surgical treatment?

If the night-time symptoms are severe or the numbness is occurring during all day surgery is recommended to prevent irreversible damage of the median nerve.

## What is the purpose of surgery?

The purpose is to increase the size of the carpal tunnel and decrease pressure on the median nerve by cutting the strong ligament that forms the roof of the tunnel. During a couple of months the ligament gradually grow back together and during that time you will experience soreness in the palms.

## Endoscopic surgery

For the last 30 years it has been possible to perform the surgical procedure by using a thin tube with a camera attached (endoscope). However it requires special equipment and training. The hand surgeons at Private Hospital Mølholm all have several years of experience in this method and a special operation theatre for the operation at their disposal.

The endoscope is guided through a small incision in the wrist and only the transverse carpal ligament is cut. This releases pressure on the median nerve. You can expect a shorter recovery and start using the hand earlier after endoscopic surgery than after open surgery because the procedure does not require cutting the palm open and disturbing a large area of the hand. Depending on your profession your sick leave can be reduced by half. In case of symptoms in both hands this gentle method allows you to operate on both hands at one time.

The endoscopic carpal tunnel surgery is done with local anaesthesia. The operation takes about five minutes and you can feel something is happening but you feel no pain. The whole procedure takes about one hour.

## After surgery

The incision is closed with surgical/wound tape and water resistant band-aid. On top of that you get a foam compressive dressing and an elastic bandage. After three days you remove the compressive dressing and after a week the plaster. You will get some painkiller immediately after the operation to help you when the local anaesthesia subside after a couple of hours. Pain after surgery can be relieved with paracetamol. Two weeks after surgery the surgeon or the surgical nurse will call you. In case of any problems please contact us.

## What can you manage after surgery?

You can use your hand immediately after the operation but it is important to keep the hand elevated above heart for the first day and exercise your fingers like shown below.

Avoid heavy lifting for the first three weeks (ex. a shopping bag with 10 kilos).



For using toilets and showering we recommend transparent single use plastic gloves to prevent the dressing and later band-aid from getting wet.

You are not allowed to drive yourself home after the operation. You can start driving when the compressive dressing is removed after three days.

If you have surgery on both hands at one time you might need help with cooking etc. for the first three days.

## What can you expect?

Most patient experience that night-time symptoms disappear immediately. If you have had a continuing numbness this will, in most cases, not disappear until after some weeks, even months, depending on for how long you have suffered from numbness.

You will feel a soreness in the palm for two or even several months after the operation. The recovery time for grip-strength is 2-3 months. If the thumb muscles have been strongly affected your hand strength and function may be limited even after surgery. Symptoms rarely come back again.

Yours sincerely

**PRIVATE HOSPITAL MOLHOLM**

Hand Surgery Clinic