Carpal Tunnel Syndrome

You have been diagnosed with carpal tunnel syndrome, and your surgeon has suggested open surgery to release pressure on the median nerve. This document explains the condition, why surgery may be needed, and what to expect after the operation.

What is the Median Nerve?

The median nerve is one of the main nerves of the hand.
It controls:

- Feeling in the **thumb, index, middle finger**, and **half of the ring finger**.
- Muscles that help the thumb move and grip objects (especially the "opponens" and "abductor" muscles of the thumb).

What is the Carpal Tunnel?

The carpal tunnel is a narrow space in the palm side of your wrist.
It is surrounded by:

- Wrist bones underneath and a thick ligament (called the **flexor retinaculum**) on top.

Inside this tunnel pass:

- The **median nerve** and **Nine flexor tendons** that bend your fingers.

If the tunnel becomes narrower (often due to swelling of the tendon linings, called **tenosynovitis**), the median nerve gets compressed — causing **pain, numbness, or tingling** in the fingers.

Diagnosis is usually confirmed with an **EMG (electromyogram)** and sometimes an **ultrasound**.





Why Consider Open Surgery?

Surgery is usually considered when:

- Night splints and **steroid injections** no longer help,
- Or the condition is **severe** (muscle weakness, nerve damage starting).

Without treatment, the nerve may suffer **permanent damage**, leading to:

- Numb fingers,
- Thumb muscle shrinkage,
- Weakened grip strength.

What Happens During the Surgery?

- Done with **local or regional anesthesia** (only the hand is numbed).
- A small cut is made on the palm near the base of the thumb.
- The thick ligament pressing on the nerve is cut, releasing the pressure.

Other surgical options include:

- **Endoscopic surgery** (with a camera),
- **Ultrasound-guided surgery**.

If there is tendon inflammation (**tenosynovitis**), the surgeon may also remove the inflamed lining (**synovectomy**).

Possible Complications

During surgery:

- Nerve injury (very rare).

After surgery:

- Bruising (**hematoma**),
- Infection (rare),
- Long-term: scar tenderness, temporary loss of hand strength, or complex regional pain syndrome (CRPS) – a rare painful hand condition.

What to Expect After Surgery

- Your hand will be placed in a **sling** to reduce swelling.
- A **light dressing** is kept until the stitches are removed.
- You can **move your fingers** the same day, but keep the wound **clean and dry**.

✅ **Goal of Surgery**

To **relieve pressure** on the median nerve, prevent **permanent nerve damage**, and restore the **function and feeling** in your hand.