

Carpal Tunnel Release Surgery: What You Need to Know

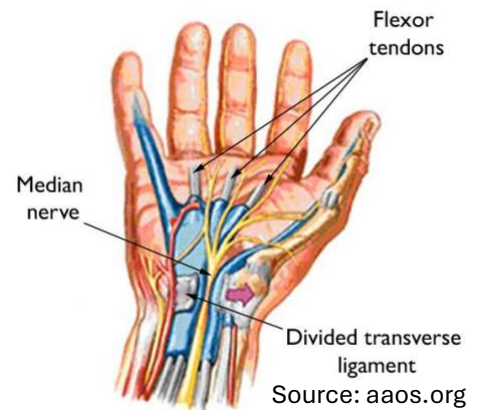
Carpal tunnel syndrome occurs when the median nerve, which runs through the wrist, becomes compressed, leading to symptoms like pain, numbness and tingling in the hand and fingers, and weakness. When non-surgical treatments (such as splinting or injections) fail to provide relief, carpal tunnel release surgery may be recommended. This procedure relieves pressure on the median nerve by cutting the transverse carpal ligament. Below, we explain the surgery, recovery, potential complications, and expected outcomes to help you feel informed and prepared.

Description of the Surgery

Carpal tunnel release can be performed using two main techniques: **open surgery** or **endoscopic surgery**. Your surgeon will discuss which option is best for you based on your condition and medical history.

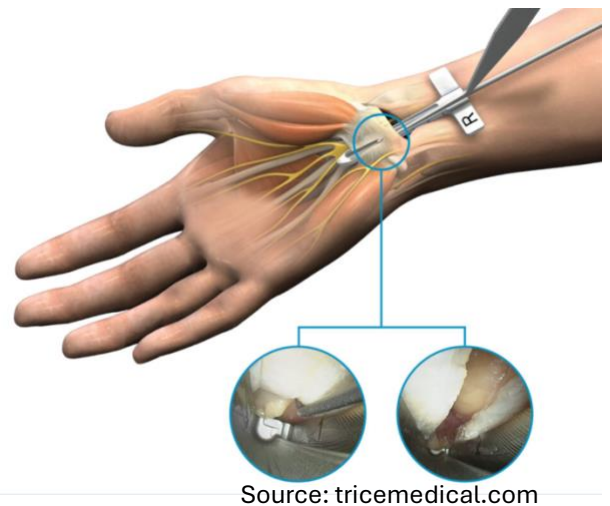
- **Open Carpal Tunnel Release:**

In this traditional approach, the surgeon makes a small incision (about 1 inch) in the palm near the wrist. Through this incision, the transverse carpal ligament is cut to relieve pressure on the median nerve. The incision is then closed with stitches, and a bandage is applied. This method allows the surgeon a clear view of the ligament and surrounding structures.



- **Endoscopic Carpal Tunnel Release:**

This minimally invasive technique uses a tiny camera (endoscope) and specialized tools. The surgeon makes a small incision (a quarter to half inch) in the wrist below the palm. The endoscope allows the surgeon to view and cut the ligament without opening the entire area. This approach typically results in smaller scars and a potentially faster recovery.



Both procedures are usually performed under local anesthesia (numbing the hand and wrist) with sedation, although local anesthesia only or general anesthesia may be offered depending on your needs and the surgeon's recommendation. The surgery typically takes 10 to 15 minutes and is done as an outpatient procedure, meaning you can go home the same day.

What to Expect During Recovery

Recovery from carpal tunnel release varies depending on the technique used and your individual healing process. Here's what you can generally expect:

- **Immediately After Surgery:**

Your hand will be bandaged for 48 hours. Mild discomfort, swelling, or stiffness is normal. Most patients only require over-the-counter medications, such as ibuprofen or Tylenol, however prescription pain medications may be offered.

- **First Few Days:**

Keep your hand elevated (above heart level) to reduce swelling. Avoid heavy lifting or gripping objects. You should work on moving the fingers from a complete fist to full extension to avoid finger stiffness. You may notice some numbness or tingling as the nerve begins to heal – this is temporary for most patients.

- **First 1-2 Weeks:**

Stitches are typically removed within 10-14 days. You'll be encouraged to continue moving your fingers gently to prevent stiffness and you may gradually resume your normal activities.

- **Weeks 3-6:**

Grip strength and comfort gradually improve. Most people return to normal daily activities within 4-6 weeks, though some soreness in the palm may persist for a few months.

- **Full Recovery:**

Complete healing, including regaining full strength and elimination of soreness in the palm, may take 2-6 months. Open surgery may require slightly longer recovery than endoscopic surgery due to the larger incision. In severe cases of carpal tunnel syndrome, patients may notice that their numbness, tingling, and weakness lingers after the surgery. In these severe cases, it can take several months or even up to a year to experience full recovery of the nerve function. In some very severe cases, the nerve may not be able to recover full function even after surgery – however, partial nerve recovery and prevention of continued nerve damage can still be expected benefits from the surgery.

Follow your surgeon's instructions carefully, including any restrictions on driving, work, or sports during the early recovery period.

Potential Complications

Carpal tunnel release is considered a very safe and effective procedure, but like any surgery, it carries some risks. These are rare and can often be managed with proper care:

- **Infection:** Redness, swelling, or drainage at the incision site may indicate an infection, treatable with antibiotics.
- **Nerve or Blood Vessel Injury:** Damage to the median nerve or nearby structures is rare but could cause persistent numbness or weakness.
- **Scar Sensitivity:** Some patients experience tenderness or discomfort around the scar, which usually improves over time.
- **Incomplete Relief:** In rare cases, symptoms may not fully resolve if the nerve was severely damaged before surgery or if another condition is present.
- **Recurrence:** In some cases, symptoms can return in the future if new scarring and compression develops around the median nerve at the carpal tunnel. However, for most patients the benefits from carpal tunnel release are permanent.

- **Complex Regional Pain Syndrome (CRPS):** A very rare condition causing chronic pain and swelling, which requires specialized treatment.

Contact your doctor immediately if you experience severe pain, fever, or signs of infection after surgery.

Expected Outcomes

Carpal tunnel release has a high success rate, with the vast majority patients experiencing significant relief from symptoms. Here's what you can expect:

- **Symptom Relief:** Numbness, tingling, and pain typically improve within days to weeks. Nighttime symptoms often resolve quickly.
- **Improved Function:** Grip strength and dexterity return gradually, allowing you to resume daily tasks, work, and hobbies.
- **Long-Term Results:** Over 90% of patients report lasting relief, especially when surgery is performed before permanent nerve damage occurs. Recurrence is uncommon.

While outcomes are generally positive, results depend on factors like the severity of your condition, how long symptoms were present, and your adherence to recovery guidelines.

Final Notes

Carpal tunnel release is a proven solution for restoring comfort and function to your hand. If you have questions about the procedure or your specific case, don't hesitate to discuss them with your surgeon. We're here to support you every step of the way!