



[Home](#) → [Medical Encyclopedia](#) → Carpal tunnel release

URL of this page: //medlineplus.gov/ency/article/002976.htm

Carpal tunnel release

Carpal tunnel release is surgery to treat carpal tunnel syndrome. Carpal tunnel syndrome is pain and weakness in the hand that is caused by pressure on the median nerve in the wrist.

Description

The median nerve and the tendons that flex (or curl) your fingers go through a passage called the carpal tunnel in your wrist. This tunnel is narrow, so any swelling can pinch the nerve and cause pain. A thick ligament (tissue) just under your skin (the carpal ligament) makes up the top of this tunnel. During the operation, the surgeon cuts through the carpal ligament to make more space for the nerve and tendons.

The surgery is done in the following way:

- First, you receive numbing medicine so that you do not feel pain during surgery. You may be awake but you will also receive medicines to make you relax.
- A small surgical cut is made in the palm of your hand near your wrist.
- Next, the ligament that covers the carpal tunnel is cut. This eases the pressure on the median nerve. Sometimes, tissue around the nerve is removed as well.
- The skin and tissue underneath your skin are closed with sutures (stitches).

Sometimes this procedure is done using a tiny camera attached to a monitor. The surgeon inserts the camera into your wrist through a small surgical cut and views the monitor to see inside your wrist. This is called endoscopic surgery. The instrument used is called an endoscope.

Why the Procedure is Performed

People with symptoms of carpal tunnel syndrome usually try nonsurgical treatments first. These may include:

- Anti-inflammatory medicines
- Therapy to learn exercises and stretches
- Workplace changes to improve your seating and how you use your computer or other equipment
- Wrist splints
- Shots of corticosteroid medicine into the carpal tunnel

If none of these treatments help, some surgeons will test the electrical activity of the median nerve with an EMG (electromyogram). If the test shows that there's a significant problem with your median nerve, carpal tunnel release surgery may be recommended.

If the muscles in your hand and wrist are getting smaller because the median nerve is being pinched, surgery will usually be done sooner.

Risks

Risks of this surgery are:

- Allergic reactions to medicines
- Bleeding
- Infection
- Injury to the median nerve or nerves that branch off of it
- Weakness and numbness around the hand
- In rare cases, injury to another nerve or blood vessel (artery or vein)
- Scar tenderness
- Worsening pain after the procedure

Before the Procedure

Before the surgery, you should:

- Tell your surgeon what medicines you are taking. This includes medicines, supplements, or herbs you bought without a prescription.
- You may be asked to temporarily stop taking your blood-thinning medicines. These include aspirin, ibuprofen (Advil, Motrin), naproxen (Naprosyn, Aleve), and other medicines.
- Ask your surgeon which medicines you should still take on the day of your surgery.
- If you smoke, try to stop. Ask your provider for help. Smoking can slow healing.
- Let your surgeon know about any cold, flu, fever, herpes breakout, or other illness. If you do get sick, your surgery may need to be postponed.

On the day of surgery:

- Follow instructions about whether you need to stop eating or drinking before surgery.
- Take any medicines you're asked to take with a small sip of water.
- Follow instructions on when to arrive at the hospital. Be sure to arrive on time.

After the Procedure

This surgery is done on an outpatient basis. You will not need to stay in the hospital.

After the surgery, your wrist will probably be in a splint or heavy bandage for about a week. Keep this on until your first surgeon visit after surgery, and keep it clean and dry. After the splint or bandage is removed, you will begin motion exercises or a hand therapy program.

Outlook (Prognosis)

Carpal tunnel release decreases pain, nerve tingling, and numbness, and restores muscle strength. Most people are helped by this surgery.

The length of your recovery will depend on how long you had symptoms before surgery and how badly damaged your median nerve is. If you had symptoms for a long time, you may not be completely free of symptoms after you recover.

Alternative Names

Median nerve decompression; Carpal tunnel decompression; Surgery - carpal tunnel

References

Amadio PC. Surgery management of compression neuropathies of the wrist. In: Skirven TM, Osterman AL, Fedorczyk JM, Amadio PC, Feldscher SB, Shin EK, eds. *Rehabilitation of the Hand and Upper Extremity*. 7th ed. Philadelphia, PA: Elsevier; 2021:chap 52.

Patterson JMM, Novak CB, Mackinnon SE. Compression neuropathies. In: Wolfe SW, Pederson WC, Kozin SH, Cohen MS, eds. *Green's Operative Hand Surgery*. 8th ed. Philadelphia, PA: Elsevier; 2022:chap 28.

Weller WJ, Calandruccio JH, Jobe MT. Compressive neuropathies of the hand, forearm, and elbow. In: Azar FM, Beaty JH, eds. *Campbell's Operative Orthopaedics*. 14th ed. Philadelphia, PA: Elsevier; 2021:chap 77.

Zhao M, Burke DT. Median neuropathy (carpal tunnel syndrome). In: Frontera WR, Silver JK, Rizzo TD Jr, eds. *Essentials of Physical Medicine and Rehabilitation: Musculoskeletal Disorders, Pain, and Rehabilitation*. 4th ed. Philadelphia, PA: Elsevier; 2019:chap 36.

Review Date 4/24/2023

Updated by: C. Benjamin Ma, MD, Professor, Chief, Sports Medicine and Shoulder Service, UCSF Department of Orthopaedic Surgery, San Francisco, CA. Also reviewed by David C. Dugdale, MD, Medical Director, Brenda Conaway, Editorial Director, and the A.D.A.M. Editorial team.

Learn how to cite this page



A.D.A.M., Inc. is accredited by URAC, for Health Content Provider (www.urac.org). URAC's [accreditation program](#) is an independent audit to verify that A.D.A.M. follows rigorous standards of quality and accountability. A.D.A.M. is among the first to achieve this important distinction for online health information and services. Learn more about A.D.A.M.'s [editorial policy](#), [editorial process](#), and [privacy policy](#).

Health Content
Provider
06/01/2028

The information provided herein should not be used during any medical emergency or for the diagnosis or treatment of any medical condition. A licensed medical professional should be consulted for diagnosis and treatment of any and all medical conditions. Links to other sites are provided for information only – they do not constitute endorsements of those other sites. No warranty of any kind, either expressed or implied, is made as to the accuracy, reliability, timeliness, or correctness of any translations made by a third-party service of the information provided herein into any other language. © 1997-2025 A.D.A.M., a business unit of Ebix, Inc. Any duplication or distribution of the information contained herein is strictly prohibited.

National Library of Medicine 8600 Rockville Pike, Bethesda, MD 20894 U.S. Department of Health and Human Services

National Institutes of Health