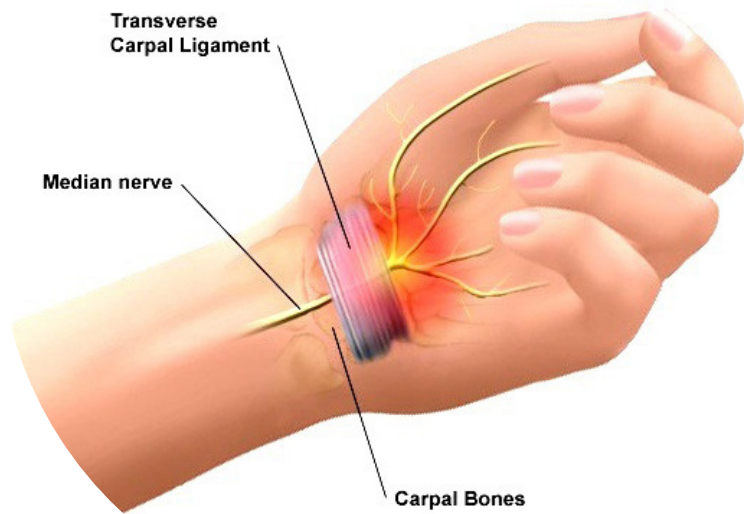


Your Guide to Carpal Tunnel Surgery

Brian J. Bear, MD

Carpal Tunnel Syndrome



ORTHOILLINOIS

Hand, Wrist, and Elbow Center of Excellence



Brian J. Bear, MD
Orthollinois
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Care Team and Contact Numbers:

Main Phone line 815-398-9491
Kailey - Lead Nurse 815-398-9491
Ronda - Surgery Scheduler 815-484-6969
Sadie - Office Scheduler 815-484-6996

TABLE OF CONTENTS

Learn about Dr. Bear 2
What is Carpal Tunnel Syndrome? 3
Description of Procedure
 ❖ Mini open carpal tunnel release surgery 3
Information to Keep in Mind Prior to Surgery 4
The Surgical Experience
 ❖ Pre-Admission Guide for Surgery 5
 ❖ Pre-operative Phase 6
 ❖ Intra-operative Phase 7
 ❖ Post-operative Phase 8
After Surgery
 ❖ Recovery at Home 9-10
Commonly Asked Questions 11-13





Learn More About Dr. Bear

I would like to take this opportunity to tell you more about myself and my experience in health care. Originally from Winnetka, Illinois, I attended Northwestern University graduating in 1987, cum laude, president of Mortar Board Senior Honor Society and a member of Phi Beta Kappa. I continued my studies at Northwestern University School of Medicine, receiving my medical degree in 1991 as a member of Alpha Omega Alpha honor society. Following my graduation, I pursued advanced orthopedic training at Cornell Hospital for Special Surgery, which is ranked as the top orthopedic hospital in the United States. In addition, I completed a specialized training fellowship program in elbow and hand surgery at the Mayo Clinic.

My practice is focused on shoulder, elbow, hand, microvascular, traumatic, and reconstructive surgery. It is my mission to provide you compassionate care with expertise comparable to any major university center. I am humbled by my inclusion in two prestigious quality health care listings: as a Castle Connolly Regional Top Doctor®, and the Best Doctors® list. Earning a place on either list is a result of being nominated by other physicians and a thorough review by the listing organization into my background, professional achievements, patient satisfaction and positive treatment record. Inclusion on the Best Doctor® list is a direct result of other doctors selecting me as the person they would choose to treat themselves or a family member. These are honors I take very seriously and I am committed to maintaining the high standards they represent with all my patients.

I am actively involved in continuing education, have given numerous lectures, and published many orthopedic articles. As Clinical Associate Professor of Surgery at the University of Illinois College of Medicine, I have been awarded the Golden Apple teaching award and the Excellence in Teaching award. I am a reviewer for the acclaimed Journal of Shoulder and Elbow Surgery and currently serve as a faculty member at the Orthopedic Learning Center, where I teach other surgeons the latest techniques of hand, elbow and shoulder surgery. I hold Associate and Assistant Clinical Professor of Orthopedic Surgery positions respectively at University of Illinois College of Medicine in Rockford and Rush University Medical Center in Chicago where I help train medical students, family practice residents, and orthopedic surgery residents.

Please let me know if there is anything I can do to further improve your experience at OrthoIllinois. My goal is to provide the best medical care available to help you return to an active and pain-free lifestyle.

Sincerely,
Brian Bear, M.D.

Working together to provide a higher standard of care. It is my goal as an orthopaedic surgeon to provide you the best possible care with compassion and respect. At OrthoIllinois, we utilize a team approach that allows

for the highest quality service and treatment. An integral part of the team is **Joseph Steiner, PA-C**. As a certified physician assistant (PA), Joe is an extension of my care and is highly trained to provide many office and hospital services as well as assist me in surgical procedures.



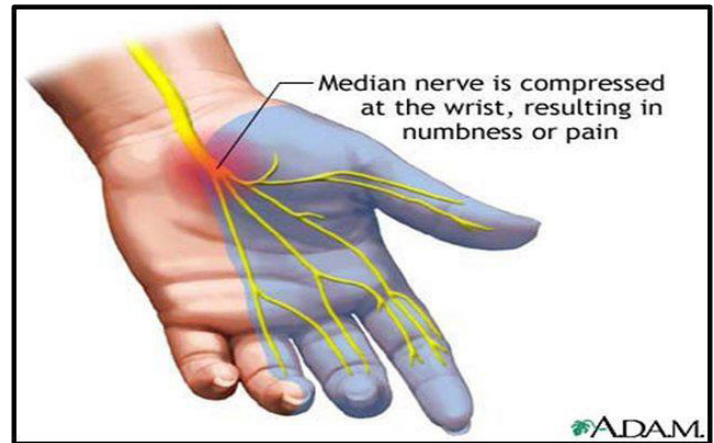
Joseph Steiner,
PA-C

From your first visit to the completion of your treatment you will be seen by me or by Joe. We work together to offer a comprehensive evaluation and treatment plan to quickly return you to a healthy, active lifestyle.



What is Carpal Tunnel Syndrome?

Carpal tunnel syndrome is a common condition that causes tingling sensation, burning feeling, numbness and discomfort in your wrist, hand and fingers. The numbness commonly affects the thumb, index, long and ring fingers. It occurs when a nerve in your wrist called the Median nerve becomes pinched as it passes through a tunnel between your lower forearm and palm of the hand. The structure that is pinching the nerve is called the “Transverse Carpal Ligament”. The symptoms are typically worse at night while sleeping, in the morning hours when you wake up, when driving a car, talking on the phone or reading a book.



Surgical Treatment

Carpal tunnel surgery is recommended for patients who have failed non-surgical treatment. The surgery is performed under a local anesthetic. Dr. Bear or his assistant will simply numb the palm of your hand with a very small needle. We use special techniques to minimize any discomfort. You do not need to have any sedatives, breathing tubes or general anesthetics. Once your hand is numb, a small incision (less than one inch) is made in the palm of your hand. A tight band called the Transverse Carpal Ligament is divided, releasing the pressure or “pinching” of the median nerve. Usually only 4 or 5 stitches are needed to close the incision. A soft dressing is placed.

Information to Keep in Mind Prior to Surgery

1. Please notify our office for any illness or conditions within one week prior to your scheduled surgery date. (E.g. skin abrasions, rashes, insect bites, pimples about the operative site, colds, and upper respiratory or urinary infections).
2. Please leave valuables (jewelry, contact lenses, etc.) at home.
3. If you are over 50 years of age, or if you have any significant medical problems including but not limited to heart disease, diabetes, lung disease, kidney disease, auto immune diseases, endocrine disorders, cancer, please ask Dr. Bear, his nurse Jessie or his surgery scheduler to determine if you need to see your medical doctor for written clearance prior to surgery. Patients with heart disease may need cardiac clearance from a Cardiologist. Ronda, our surgery scheduler can help you with this. Her phone number is 815-484-6969. Jessie, Dr. Bear's nurse's phone number is 815-398-9491.
4. If you have any disability forms or papers, please have these in our office at least one week prior to surgery. Do not bring them to the hospital. Allow approximately 5-7 business days to be completed.
5. Failure to arrive on time or the development of some medical problems may cause your surgery to be cancelled. This is for your safety.
6. Remember to wear loose fitting shirts or blouses that are able to fit over a bulky bandage that will be on your arm.

The Surgical Experience

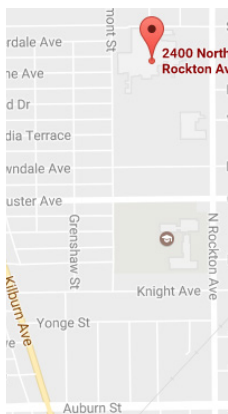
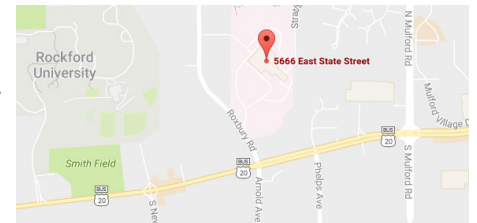
Your surgical experience includes three parts or phases. The first part or pre-operative phase is the time before your surgery. The second or intra-operative phase is the time you spend in surgery. The third or post-operative phase is the time immediately after your surgery and the first days following your surgery.

Pre-Admission Guide for Surgery

❖ OrthoIllinois Surgery Center (346 Roxbury Rd. Rockford 61107)- If your surgery is scheduled at OrthoIllinois Surgery Center a nurse will contact you prior to the surgery date to go over instructions, your medications, your medical history, and answer any questions you may have.

❖ OSF St. Anthony Medical Center* (5666 E. State St. Rockford 61108) - If your surgery is being done at one of the hospitals listed here, you will not receive a call if your surgery is scheduled with a local anesthetic. For questions regarding any instructions prior to your surgery with OSF, please call **815-227-2707**

❖ SwedishAmerican Hospital* (1400 Charles St. Rockford 61108)- You can call **815-489-4921** with any questions you may have regarding instructions prior to your surgery if done under local anesthetic.



❖ Mercy Rockford Hospital* (2400 N Rockton Ave. Rockford 61103) You can call **815-971-5803** with any questions you have may have regarding instructions prior to your surgery if done under local anesthetic.

***If your surgery is scheduled at one of the hospitals listed above under any anesthesia other than local for any reason, then you will receive a pre-anesthesia call from a nurse at the hospital to go over instructions, your medications, your medical history, and answer any questions you may have.

Pre-operative Phase (Once arrived at the hospital or ambulatory surgery center)

1. An admission healthcare provider will take your information that is relative to your hospital or surgery center stay. A health care provider will discuss your medical history and you will sign a surgery consent form. This gives us permission to operate on your arm.
2. Since Carpal tunnel surgery is performed under a local anesthetic, laboratory testing is not needed in most patients unless you're on a blood thinner call Warfarin or Coumadin or have a medical condition that affects blood clotting. In some cases labs may be required. Pre admission laboratory testing is typically performed prior to the day of surgery. All women of child bearing age who are undergoing general or regional anesthesia are required to take urine pregnancy test.
3. You will be taken into a room where you will wait for your time in surgery. This is called the pre-operative holding room. Nurses assigned to you will ask you some of the same questions the Admission Health Care Provider asked you. You will hear these questions over and over during your pathway to the operating room. This is for your safety. Hearing the answers from you personally assures each health care provider of accurate information. Medications, IV's etc. may be taken care of during this part of your stay.
4. You will need to change into a hospital gown. You may leave your underwear on.
5. The operating room will send for you about 15-30 minutes before your surgery. Although we make every attempt to run on schedule, for various reasons the operating room can be delayed. Your nurse will notify you if the operating room is on time or delayed. You may have 1-2 family members accompany you to this area. Your surgeon will see you in this area and write his initials on the extremity that being operated on. If you have hair on your arm in the area of surgery, your arm will be shaved with an electric hair clipper in this location.
6. In over 90% of patients CTS surgery is performed under a local anesthetic. On occasion, a general anesthetic may be used. If you are scheduled to have a general anesthetic (where you are put completely asleep with a breathing tube) and if you have not met your anesthesiologist prior to this time, you will meet him/her here. The Anesthesiologist will be able to answer any questions regarding the type of anesthesia you will be having for your surgery.
7. If you have any last questions, regarding the surgical procedure, this is the last time you will be able to ask the nurse, Dr. Bear's physician assistant or Dr. Bear.

Intra-operative Phase (During your surgery)

1. One of the nurses from your operating room will speak to you and will transport you to the operating room. You will see a lot of equipment and other team members when you enter the operating room. Do not be alarmed. All the staff is there to make sure that you have a positive experience.
2. You will be asked to move from your stretcher to another bed, called the operating room table. This room may be slightly chilly feeling and the nurse will provide you with a warm blanket.
3. A blood pressure cuff will be placed on your arm. An EKG pad (used to monitor the heart during surgery) will be placed on your back and an oxygen monitor will be placed on your finger. A safety strap will be placed across your legs above your knees. All of this is for your safety.
4. If an IV is needed, either your nurse or anesthesiologist will start an IV in your hand if it has not already been done. Your anesthesiologist or nurse will give you fluids and medications through this IV.
5. Your hand will be numbed at this time. Dr. Bear or his assistant use the smallest needles available and special techniques to minimize any discomfort. Once your hand is numb, a tight band called a tourniquet is inflated on your upper arm to prevent any bleeding. This is typically on for only a few minutes.
6. When your surgery is over you will be moved from the operating room table to another bed and taken to the second stage outpatient recovery room.



Post-operative Phase (After your surgery)

1. Your wrist will have a bandage on it. Your hand will still feel numb from the local anesthetic. Ice packs may be provided to help decrease postoperative pain and swelling. If you are experiencing pain, notify your nurse and pain medication will be administered to control the discomfort. Most patients have minimal pain after carpal tunnel surgery. Although we prescribe some narcotic containing pain medication, most people require minimal pain medication and only take it for 1-2 days after surgery.
2. In the second stage recovery area, your family will be able to see you. Once you are feeling well you will get dressed in your own clothes and be discharged to home from this location. Prescriptions for some mild pain medicine can be called into your pharmacy by the nursing staff. Federal law no longer allows phoning in prescriptions for Schedule II narcotic medication. This list includes Norco, Vicodin, Percocet, and OxyContin. Written prescriptions need to be given to you by the nursing staff for these types of medications before you leave the surgery center or hospital.
3. After surgery you will be encouraged to keep your hand elevated above your heart and to fully open and close your fingers to decrease swelling and to avoid finger stiffness. Finger stiffness is a serious complication that can occur if you do not follow Dr. Bear's instructions to fully open and close your fingers after surgery.
4. Dr. Bear or his physician assistant will be seeing you in the office 10 -14 days after surgery. An appointment should already be scheduled for you. If you do not have a post surgery appointment scheduled, please call Sadie Carlton, Dr. Bear's office scheduler at 815-484-6996 to schedule a post surgery appointment

While You Recover at Home

1. You can eat normally if you have had a local anesthetic. If you have had a general anesthetic, the first meal should be clear liquids or broth.
2. An ice bag should be applied to your wrist for at least 20 minutes 4 times a day or more for the first 72 hours. **DO NOT USE HEAT**-this may increase swelling and discomfort.
3. If you have painful swelling, temperature above 101 degrees, redness around your incision or yellow drainage from your incision call Dr. Bear's office immediately at 815 -398-9491.
4. You have two options for managing the dressing on your wrist:
Option 1. You can keep your dressing on until you see Dr. Bear or his Physician Assistant at your first post-operative visit 10-14 days after surgery and it will be removed at that time by Dr. Bear's team members.

Your dressing must be kept clean and dry the entire time it is on. Showering can be performed but a plastic bag sealed around your arm with duct tape or a commercially available waterproof cast protector will be effective in keeping your bandage dry while showering.

Waterproof cast protectors can be purchased from our Medical Supply Store in the front of the Roxbury office or at most drug stores (see image at right). Another economical option is to purchase artificial insemination gloves from Farm and Fleet which, when properly sealed, can keep the bandages dry.



Commercially available cast protectors may be purchased at The Store at our Roxbury clinic, at FitRight at Mulford and Riverside, or at most drug stores.

Option 2. You may remove your dressing 10 days after surgery if you have not yet been seen by our office and will be allowed to shower but no soaking of the hand (no hot tubs, baths, dishes without a glove). If you wish to proceed with this option you must take extra precautions as to your activities and making sure the incision is kept clean. Although the chance is very low and risks are minimal, removing your dressing prior to your office visit can increase the chance of wound complications.

While You Recover at Home (Continued)

5. Finger Stiffness is a potential serious complication after carpal tunnel surgery. **YOU SHOULD FULLY OPEN AND CLOSE FINGERS TO PREVENT FINGER STIFFNESS AND TO DECREASE HAND SWELLING. FULLY OPENING AND CLOSING YOUR FINGERS IS RECOMMENDED TO PREVENT STIFFNESS.**
6. Symptoms of numbness and tingling will typically start to improve after surgery. In patients with mild or moderate CTS the symptoms often improve within the first few weeks after surgery. For patients that have severe CTS the symptoms can take 9-12 months to improve.
7. Swelling and bruising may develop after surgery. This is normal; just remember to keep your arm elevated in a proper position as shown below.

PROPER sling position showing the hand above the heart.



IMPROPER sling position showing the hand **NOT** above the heart.



Commonly Asked Questions

1. ***Will I need assistance at home?***

*Yes. You may need assistance with meal preparation. Putting on and taking off a water proof bandage protector to shower is easier with help but can be done alone.

2. ***Do I have to pre-certify my surgery or will Dr. Bear's office do it?***

*Ronda, (815-484-6969) Dr. Bear's Surgery Scheduler will help arrange pre certification from your insurance provider. Call her for any questions. Surgery cannot be scheduled until pre certification is obtained from your insurance provider.

3. ***What are some of the warning signs of an infection?***

*Fever over 101 degrees, the incision becomes red or swollen, or yellow or green drainage is coming out of the wound. If any of these symptoms occur **IMMEDIATELY CALL DR. BEAR'S OFFICE AT 815-398-9491 TO BE SEEN AS SOON AS POSSIBLE BY DR. BEAR OR HIS PHYSICIAN ASSISTANT.**

4. ***Are there any complications from surgery?***

*Complications are not common. Some complications can include, but are not limited to, surgical failure, infection, stiffness, blood vessel or nerve injury, blood clots.

5. ***Will I need physical therapy?***

*Yes. The majority of your therapy can be performed at your home with a detailed home exercise program. Formal hand therapy may be needed if finger stiffness develops or if excessive scar tenderness develops.

6. ***Is swelling and pain normal?***

* Yes. It is normal to experience some swelling and pain after your surgery. Applying ice will decrease the amount of pain and swelling you may have. Taking your pain medicine as directed should control the pain. It is recommend to take the prescribed pain medicine as soon as you start to feel uncomfortable rather than waiting for the pain to become unbearable. This is called staying ahead of your post surgical pain rather than reacting to it. The pain after surgery should decrease each day after surgery. Depending on the surgery performed, most patients are off narcotic pain medication by a maximum of 7 days after surgery. If you have no contra indications to anti-inflammatory medication like heartburn, reflux, stomach ulcers, or kidney abnormalities, anti-inflammatory medication can be taken for 2- 4 weeks after surgery.

7. ***How long and often should I apply ice?***

* An ice bag should be applied to your wrist for 20 minutes 4- 8 times a day. More frequent applications with ice bags should be performed in the first 72 hours after surgery. Make sure the ice bag is well sealed to avoid getting your cast wet with melted ice.

Commonly Asked Questions (Continued)

8. **What if I am on a blood thinner?**

* Blood thinners will need to be stopped prior to surgery. Common blood thinners include Coumadin, Warfarin, Lovenox, Plavix, Xarelto, aspirin. If you are on a blood thinner you will need to contact the prescriber of this medication to discuss stopping prior to surgery. The COMMON recommendations are listed below but you still will need to **CONTACT YOUR PRESCRIBER TO VERIFY**

- **Coumadin / Warfarin** must be stopped a minimum of one week prior to surgery. A Prothrombin time has to be obtained a day or two prior to surgery to make sure your blood is not too thin.

- **Plavix** must be stopped 6 days prior to surgery. No lab testing is needed

- **Xarelto** should be stopped 5 days before surgery. No lab testing needed

- **Lovenox** should be stopped 24 hours before surgery. No lab testing needed.

- **Aspirin** should be stopped 10 days prior to surgery. No lab testing needed.

9. **What vitamins and supplements should be stopped?**

- Vitamin E can thin the blood. This should be stopped 7 days prior to surgery

- Fish oil can thin the blood. This should be stopped 7 days prior to surgery.

10. **What can I do after surgery?**

At Home:

0-5 days after surgery:

A one pound weight limit is allowed on the affected hand. Light stuff around the house. Getting dressed, preparing meals, eating with the affected hand is OK.

5 days - 2weeks after surgery:

3lbs weight restriction. No power gripping or vibrating tools

2weeks - 4 weeks after surgery:

5lbs weight restriction. No power gripping or vibrating tools.

4weeks to 6 weeks after surgery:

15lbs weight restriction. No power gripping or vibrating tools.

(Continued on page 13)

Commonly Asked Questions (Continued)

6 Weeks after surgery:

Most patients are allowed to perform all activities without restrictions. Common sense should be utilized. Activities that require pounding with the palm of your hand over your incision should be avoided.

*The surgical incision and the area on each side of the surgical incision may become tender and mildly swollen after surgery. You will feel some swelling and firmness about the incision during the healing phase. This is normal. The mild tenderness and swelling will resolve between 3-6 months after surgery.

Return to work restrictions:

0-4 days after surgery:

No work.

5 days after surgery:

One handed work allowed with the unaffected extremity.

2 weeks:

5 lbs. weight restriction. No power gripping or vibrating tools.

4 weeks to 6 weeks after surgery:

15 lbs. weight restriction. No power gripping or vibrating tools.

6 Weeks after surgery:

Most patients are allowed to perform all activities and work without restrictions. Common sense should be utilized. Activities that require pounding with the palm of your hand over your incision should be avoided.

11. ***Can I take a shower or get my hand wet?***

* Please refer to above section *While You Recover At Home*

