



Andrew Carlone, MD
Hip and Knee Specialist

Total Knee Arthroplasty

Dr. Carlone's Comprehensive Surgical Guide

Your Complete Resource for Preoperative,
Intraoperative, and Postoperative Care



(423) 624-2696 | Sportmed.com

Introduction

A Message From Dr. Carlone

To my valued patients,

I want to sincerely thank you for trusting me with your joint replacement surgery. Choosing a physician is difficult and I am greatly honored to participate in your care. My team and I will do everything possible to make this an easy process for you and facilitate your recovery. I encourage you to read this packet thoroughly. It contains important information to help you navigate the process of joint replacement surgery. Please let us know if you have any questions.

Best regards,

Andrew Carlone, MD

Biography

Dr. Carlone is a fellowship-trained, board-certified total joint surgeon. Dr. Carlone is invested in providing patients with high quality, evidence-based care and is committed to helping them return to the activities they love. He has specialty training in:

- Complex Primary Total Hip & Knee Replacement
- Direct Anterior Total Hip Replacement
- Partial Knee Replacement
- Revision Total Hip & Knee Replacement

Dr. Carlone is a native of Stone Mountain, Georgia. He completed his undergraduate education at Emory University, majoring in Neuroscience and Chemistry. He earned his medical degree at Mercer University School of Medicine where he was inducted into the prestigious Alpha Omega Alpha Medical Honor Society. He then completed his five-year orthopedic surgery residency at the University of Kentucky where he gained a particular interest in hip and knee replacement.

Dr. Carlone then pursued a fellowship at Indiana University, gaining further subspecialty training in complex and revision joint replacement surgery. During his fellowship, Dr. Carlone trained with some of the nation's leading experts in outpatient and revision joint replacement.

Outside of his time taking care of patients, Dr. Carlone enjoys spending time with his family, fishing, skiing, and cheering on the Atlanta Braves. Dr. Carlone also plays various musical instruments, including bass guitar in a country music band. He and his wife, Andrea, are the proud parents of two sons.

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Patient Financial Responsibility

Center for Sports Medicine & Orthopaedic Surgery Center

If you are having surgery at CSMO Surgery Center, a Patient Financial Coordinator will contact you via text message or phone call with an estimated cost of the procedure. This estimate includes your financial responsibility for your provider's services and CSMO Surgery Center. These estimates are based on your current insurance benefits, including co-insurance, deductibles and out-of-pocket requirements. Payment for these estimated service costs are due 1 week prior to your surgery date. If payment is not received 48 hours prior to the surgery date, your surgery may be rescheduled.

You will also receive a separate bill for anesthesia services after your surgery with their cost.

CHI Memorial & Parkridge Medical Center

If you are having surgery at a hospital, a Patient Financial Coordinator will contact you via text message or phone call with an estimated cost for your provider's services. The hospital will contact you separately regarding their cost. These estimates are based on your current insurance benefits, including co-insurance, deductibles and out-of-pocket requirements. Payment for these estimated service costs are due 1 week prior to your surgery date. If payment is not received 48 hours prior to the surgery date, your surgery may be rescheduled.

You will also receive a separate bill for anesthesia services after your surgery with their cost.

If you have questions about your financial responsibility, please call Kim Kirk at (423) 664-5155.



Preparation Before Surgery

Preparing Your Home for Surgery

- Discuss with your family who will be available to assist you for the first several days when you return home after your surgery.
- Frequently used items should be placed on a surface that is easy to reach. Put a bag on the front of your walker so you do not have to carry items when walking.
- Put away any throw rugs and clutter so that you have less risk of tripping.
- Remove any other items that may be a tripping hazard such as electrical cords.
- Use non-skid mats or decals in the shower or tub, use a plastic non-slip shower stool if you need to sit down.
- Arrange for assistance with pets. Have someone else available to walk your dog, especially if they are leash-walked. Be aware of where your pets are, discourage them from jumping on you. Your assistive device, such as a walker or cane, can sometimes be a deterrent.
- Have a firm chair that has side arms. You will be taught in therapy how to use the side arms to stand up and sit down. Avoid soft or low chairs, as they are difficult to get out of at times. A good height for chairs and toilets is 18 inches from the floor.

Dental Services

- Have dental work and teeth cleanings taken care of at least 3 weeks prior to your surgery. Infected teeth and/or gums can cause your new total joint to become infected. IF YOU ARE CONCERNED, SEE YOUR DENTIST PRIOR TO SURGERY TO DISCUSS.

Rehab Education

- Plan on attending a rehab education class before surgery, commonly called prehab. This class will provide you with education and prepare you for recovery. The surgery scheduler will arrange this class when you pick your surgery date.
- You will be provided with information on machines to help ice your knee after surgery. These devices are HIGHLY encouraged with knee replacement. A machine that performs icing and compression is recommended. Dr. Carlone believes it is very helpful to reduce pain and swelling in the postoperative period. There are three options: purchase an ice machine directly from our office, rent a machine for four weeks through Cold Co, or purchase a machine on Amazon. Insurance does not cover the cost of these machines.

Medical Clearance

- You may be required to obtain medical clearance from your primary care physician or other specialists based on your past medical history. Medical issues that have not been treated for a while can potentially lead to complications or delay your surgery.



- If you are having surgery at **CSMO Surgery Center**: Please enter your medical history online by completing the ONE MEDICAL PASSPORT, located at <https://sportmed.com/pre-registration/>. All information is kept confidential and will be thoroughly reviewed by your medical team.
- **Diabetic Patients**: A1C will need to be less than 7.5 to be considered a surgical candidate.

Pre-Testing

- At least one week prior to surgery, the CSMO Surgery Center or the hospital pretesting department will contact you. They will discuss your past medical history and set up your appointment for pretesting. Pretesting will consist of lab work and other testing such as an EKG, chest x-ray, urinalysis, etc. This is mandatory prior to surgery. You will be contacted if your results are abnormal.
- If you have not heard from pre-testing seven days prior to surgery – please contact them:

CSMO Surgery Center: 423-698-6871, option #1

Memorial Pretesting: 423-495-4417

Parkridge Pretesting: 423-493-6923

Holding Medications Prior to Surgery

Prior to surgery, certain medications will be stopped. The exact timing depends on several factors, but if they are not held, your surgery will potentially be delayed, rescheduled or cancelled. This list is not comprehensive, therefore please contact us with any specific medication questions. Typically, at the preoperative call or visit, all your medications are reviewed, and medication recommendations are made. Recommendations for certain medications will be coordinated with the prescribing provider.

Four weeks prior to your surgery date these drugs need to be stopped:

- Rheumatoid Arthritis Medications
Humira Remicade Enbrel Methotrexate Others

We will coordinate these medications with your rheumatologist

Two weeks prior to your surgery date these drugs need to be stopped:

- All Herbs
- All Joint Supplements (Glucosamine, Omega Oils)
- Multi-Vitamins, Vitamin E, Fish Oils/Omega Oils, Tumeric
- All Diet Pills

8 Days prior to your surgery date, these drugs need to be stopped. These injections can cause a build-up of stomach contents, raising the risk of aspiration during anesthesia.



- **Weekly Injections - Stop 8 FULL days BEFORE the scheduled procedure.**

- Generic: Semaglutide; Brand: Ozempic, Wegovy
- Generic: Dulaglutide; Brand: Trulicity
- Generic: Exenatide; Brand: Bydureon
- Generic: Tirzepatide; Brand: Mounjaro, Zepbound

- **Daily Injections-Stop 1 FULL day before scheduled procedure:**

- Rybelsus

Five days prior to your surgery date these drugs need to be stopped:

- Anti-inflammatories (Ibuprofen, Aleve, Aspirin, Mobic, Celebrex, etc)

Diabetic Medications BEFORE surgery:

Many diabetic medications need to be taken differently in the days leading to your surgery. You will receive instructions from pretesting on how to hold these types of medications. If these instructions are not followed, your surgery will be CANCELLED.

- Glucophage Metformin Glucovance Janumet

Blood Thinners BEFORE surgery:

Recommendations on how to discontinue these medications prior to surgery will be coordinated with the prescribing provider. If the instructions are not followed, your surgery will be CANCELLED.

- Coumadin Warfarin Jantoven Xarelto Eliquis
- Effient Pradaxa Aspirin & Plavix (may be continued at times)

Bowel Management before surgery

- Pain medication used after surgery can cause constipation. You may start stool softeners 1-2 days prior to surgery. It is recommended to continue taking them as long as you are taking narcotics
- Try to have a bowel movement the day before surgery.

Prevention of urinary retention (male patients)

You will be screened preoperatively to determine if you are at risk for urinary retention. If indicated, Dr. Carlone will prescribe Flomax (tamsulosin hydrochloride) 0.4mg to start 7 days prior to surgery and continue 7 days after.



The Evening Before Surgery

- You will receive a call sometime between 2pm-5pm from the Surgery Center or hospital to receive your actual arrival time for your surgery. If not, check your phone messages.
- Do not eat or drink anything after midnight, EVEN WATER, unless otherwise instructed.
- If you are having surgery at the **CSMO Surgery Center or Parkridge**: You will have been instructed to drink a preoperative carbohydrate drink 2 hours before arrival time on the morning of surgery. Please follow your pretesting nurse's instructions regarding this drink.
- If you are having surgery at **Memorial Hospital**: You will be instructed NOT to drink a carbohydrate drink.
- Do not take medications unless you have been instructed to do so during your preoperative assessment at the surgery center or hospital.
- Take a shower with an anti-bacterial soap that is either given to you at Pretesting or purchased at a pharmacy or store. Common brands of the Chlorhexidine soap may be Hibiclens, Dynahex, or others.
- Post-operative medications will be sent to your preferred pharmacy at least 2 days prior to surgery. If your pharmacy does not have your medications 48hrs prior to your surgery, please contact our office.

The Morning of Surgery

- Take a shower with an anti-bacterial soap that is either given to you at Pretesting or purchased at a pharmacy or store. Common brands of the Chlorhexidine soap may be Hibiclens, Dynahex, or others. Wash with the soap 3 times prior to your surgery – the morning and evening day prior, and morning of surgery. Wash your entire body with this soap and do not use any other soaps or products afterwards. Scrub gently and pay special attention to the area of the surgery.
- Suggested items to take to the hospital: Personal hygiene (toothbrush, toothpaste, deodorant), Watch, Phone and charger, Loose fitting or athletic clothing, Slippers with non-slip soles or tennis shoes, **Photo ID, an up-to-date list of medications, Insurance card**, Rolling Walker (front wheel only, rollators are not recommended), CPAP. You will need a walker to get into the home you are staying in.



After Surgery

Discharge

- **CSMO Surgery Center Patients:** You will be discharged from the surgery center the same day. You must have someone remain with you until you are discharged and drive you home. You must have arrangements made for someone to stay with you at home for at least the first 24 hours after surgery, longer is better though.
- **Parkridge and Memorial Patients:** You may be discharged home from the hospital the same day or you may stay overnight at the hospital. You must have arrangements made for someone to stay with you at home for the first 24 hours after surgery.
- You will leave the hospital using a walker, and transition to a cane as guided by therapy.
- Use ice for pain relief at least three times daily for 20 minutes, and more as needed. Always use ice after your exercise program.
- Your appetite may be poor at first but will return.
- Drink plenty of water to stay hydrated.
- As you recover, your energy level may be low for a while after surgery.
- Walk every 2 hours while awake, continue to increase the distance that you walk as you heal.
- If you are not staying at your own home after surgery, please inform our office where you will be staying and the best phone number to contact you at.



Post-Operative Medication

Pre-Op – begin at home 2 days prior to surgery and continue after

- Tylenol 1000 mg (3 times per day)
- Docusate-Senna 50/8.6mg (2 times per day)

Post-Op

Scheduled Pain Medications – Takes these medication as instructed below

- Tylenol 1000 mg (3 times per day)
- Celecoxib 200 mg (2 tabs daily for 2 weeks, then 1 tab daily for 2 weeks)
 - Meloxicam 15 mg (Once daily) (If Celebrex not approved or tolerated)
- Prednisone – Take as prescribed (do not take if you are diabetic)
- Cold therapy
- Elevation

As Needed Pain Medications

- Oxycodone IR 5 mg (1-2 tab every 4-6hrs AS NEEDED)
- Gabapentin 300mg (Every 12hrs AS NEEDED, if prescribed)

DVT Prophylaxis - Blood thinner to prevent blood clots

- ASA 81mg (2 times per day for 30 days)
- Some patients may be started on a different blood thinner (or resume their previously prescribed blood thinner) and you will be given specific instructions if this applies to you.

Stool Softener

- Docusate-Senna 50/8.6mg (2 times per day)

Prophylactic Antibiotic

- Cefadroxil 500mg (Every 12hrs for 7 days)



Gastric Reflux (Heart Burn) Prevention

- **Omeprazole 20mg (Once per day)**

Narcan 4mg nasal spray - WE ARE REQUIRED BY LAW TO SEND THIS FOR OVERDOSE REVERSAL. YOU ARE NOT REQUIRED TO PURCHASE IT.

Please note that you may not receive all these medications. We will review your allergies, medical problems, and home medications and may avoid some of these medications if there are allergies or potential interactions.

*We try to wean off stronger prescription medications as soon as is reasonable and use non-prescription pain relievers. It is important that you take your prescriptions as directed.

Do not take more than prescribed and do not take it if you do not need it. When it is time to consider taking another pill and you are not experiencing pain, it is entirely reasonable to take your pain medications less frequently than prescribed.

Bowel Management After Surgery

Surgery, anesthesia, limited mobility, and the use of certain medications may slow your bowel function and cause constipation. In the event you experience bowel issues, the following are recommendations that may be helpful.

- Take OTC stool softener of choice daily, and laxatives as needed (good choices - Stool Softeners: Miralax, Colace, Laxative: Senekot or Senna).
- Drink extra water every day (at least 64 ounces).
- Drink juices, especially prune juice and apple juice, which promote stool softening.
- Drink a hot beverage about 30 minutes before your usual time for a bowel movement. Caffeinated drinks such as coffee or hot tea can help.
- Increase dietary fiber: whole grain breads, cereals, pasta; fresh/dried fruits, fresh vegetables, beans; use a fiber supplement.
- Increase probiotic foods: yogurt, sauerkraut, kombucha, etc. Use a probiotic supplement.
- Walk every day.
- Reduce narcotic pain medication use as pain level allows.



Over the Counter Options for relief of severe constipation:

- Dulcolax 5mg tabs (this medication is sent in by us before surgery)
 - Magnesium Citrate
 - Suggested constipation mixture: Mix 2 tablespoons Milk of Magnesia with 2 tablespoons WARM Prune Juice and 2 tablespoons Sprite; Drink. If no results within 2-3 hours, repeat dose. If no additional results in another 2-3 hours, you may repeat dose one more time.
 - Fleets enema, if above mixture not successful.
- * For Severe Constipation: Call CSMO if no BM within 3 days after surgery. Notify CSMO if you have tried any of these and still do not have a bowel movement.

Post-Operative Blood Clot Prevention

Aspirin 81mg - 1 tab twice daily for 30 days after surgery to prevent post-operative blood clots

- * If you are already taking a blood thinner daily, do NOT take Aspirin. You will need to resume your prescribed blood thinner the day after surgery.

Xarelto (Rivaroxaban) 10mg - 1 tab daily for 30 days after surgery to prevent post-operative blood clots

- * If you are determined to be at high risk for bloods clots or are unable to take Aspirin, Xarelto will be prescribed for to be taken daily for 30 days after surgery.

Physical Therapy

- You will begin therapy 1-2 days after surgery.
- Therapy will guide you on the transition from a walker to a cane around the 2-week mark.
- Therapy will be 2- 3 times a week for at least 4 weeks.
- It is recommended to take your pain medicine at least 45 minutes prior to physical therapy appointments. Do not drive while on pain medication.
- Walk every 2 hours while awake, continue to increase the distance that you walk as you heal. Continue home exercise programs twice daily for 6 weeks.



Home Equipment

ROMTech

ROMTech is a specialty therapy bike that Dr. Carlone prescribes for all knee replacement patients (total, partial, and some revision). It is a small stationary bike that will supplement your therapy and help you with pain, strength, and knee range of motion. The representative will deliver the ROMTech to your home and instruct you on how to use it.

You will be contacted by the representative or the company prior to your surgery (check your voicemail). They will contact your insurance company to ensure that they will cover it. Some insurance plans may not cover this device. If your insurance does NOT cover the ROMTech, you do not need to pay out of pocket. It is a supplement to therapy and not essential for a good outcome. You may instead acquire the floor pedal device below.

ROMTech Contact

Kyle Heineman

Phone: 770-403-9433

Email: kyle@heinemanhealth.com

Please contact Kyle with any questions or for technical assistance.



Floor Pedal Exerciser

Pedal exercises completed twice daily are recommended as part of your home exercise program after a total knee replacement. This active range of motion exercise allows your knee to bend and stretch, and reduces the risk of scar tissue formation during healing. Begin pedal exercises the day after surgery. You may begin pedaling according to tolerance at first. For example, you may only be able to do 25 revolutions forward and 25 backwards. Or, you may only be able to rock back and forth at first until you can begin to do full revolutions. You will gradually increase your revolutions as your knee heals. The pedal exerciser is shown below.

This device can be purchased for \$30, if the ROMTech is not approved.

Instructions

- Sitting upright at back of chair, place both feet inside pedal straps.
- Pedal bicycle 100 times forward.
- Pedal bicycle 100 times backward.
- Do this each morning and evening for at least six weeks.



Surgical Dressing

Depending on multiple factors, you will have one of the three dressings below.

Dressing 1- Standard Dressing/Vacuum Dressing:

The standard dressing and vacuum dressing will be removed after 7 days. At this time, if the wound is clean and dry, you may leave the wound open to air. If there is drainage or any concern about the appearance of the wound, please cover it with dry gauze and contact the clinic.

The standard dressing and vacuum dressing are water resistant, and you may shower the day after surgery. Avoid water spraying directly on the dressing, and if water gets under the dressing, please remove, place dry gauze, and contact the clinic. Do not submerge the dressing (no baths, pools, hot tubs, etc.) until cleared. Avoid excessive sweating (strenuous exercise, saunas, etc.).



Dressing 2 – Gauze and Tape

This dressing can be removed after 24-48 hours (tape and soft white gauze). Under the dressing, you will notice a piece of mesh that is tinted purple (you may see the incision through the mesh). This is a special dressing that is water resistant, and you may shower once you remove the soft white gauze and tape. Avoid water spraying directly on the mesh. Do not submerge the dressing (no baths, pools, hot tubs, etc.) until cleared. Avoid excessive sweating (strenuous exercise, saunas, etc.).

The mesh will be removed in clinic at your 2 week appointment. After the soft white gauze and tape are removed, there is no need to cover the mesh – leave it open to air. If there is drainage or any concern about the appearance of the wound, please cover it with dry gauze and contact the clinic.

- * No ointments or creams should be applied to the incision.
- * Please notify us of any drainage from the incision, excessive redness or swelling, or if you run a fever OVER 101 degrees.
- * After total joint surgery, you will have moderate bruising and swelling up and down the leg.

Office Appointments After Surgery

- Patients will follow up with Dr. Carlone around 2 weeks post-operatively for a wound check.
- Patients will return for progress visits at 6 and 12 weeks post-operatively.
- Further appointments will be determined by your progress

Driving After Surgery

LEFT Total Knee:

You may resume driving around 2 weeks post-operatively when you are:

- No longer using the walker, no longer taking narcotic pain medication during the day and when you feel safe to drive.
- Practice in a parking lot and start with short distances first.

RIGHT Total Knee:

- No driving until approximately 4 weeks post-operatively when you are:
- No longer using the walker, no longer taking narcotic pain medication during the day and when you feel safe to drive.
- Practice in a parking lot and start with short distances first.

Antibiotics after Total Joint Surgery

We do not recommend dental work until 90 days after your total joint replacement. Each time you see your dentist, let them know that you have had total knee replacement surgery. It is important that you take antibiotics prior to any dental procedure - even routine cleanings as it may contribute to a higher risk of developing an infection. You will also need antibiotics before any non-sterile invasive exam. This is a precaution to help prevent a late infection in your knee joint, which is devastating to us all. If you are not sure, please call us.

Depending on a patient's allergies to medications, the following four different antibiotic regimens are recommended prior to dental procedures:

- **Amoxicillin 500mg** - Take 4 capsules one hour prior to your procedure.
- **Ciprofloxacin 500mg** - Take 2 capsules one hour prior to your procedure.
- **Clindamycin 150mg** - Take 2 tablets one hour prior to your procedure.
- **Erythromycin 250mg** - Take 2 tablets one hour prior to your procedure.

AT CSMO, MOST OF US BELIEVE THAT TAKING ANTIBIOTICS IS A LIFETIME PRECAUTION FOR ALL PATIENTS WITH TOTAL JOINT REPLACEMENTS. IF YOU ARE NOT SURE WHETHER OR NOT TO TAKE ANTIBIOTICS PRIOR TO AN INVASIVE PROCEDURE, PLEASE CALL OUR NURSES AT (423) 624-2696.



Important Contacts

Dr. Carlone's Medical Assistant – Vanessa Lara (423) 624-2696

Your Case Manager – Gail Peterson (423) 693-0068

- Works with you and your family to develop a discharge plan that meets your needs and allows you to return to your regular activities as soon as possible
- Expects that you should be able to go home to recover in your own safe surroundings
- Communicates your plan to the hospital and other centers
- Reviews needs you may have at home after surgery, your physical therapy appointments and medical equipment will be pre-arranged
- Acts as your advocate throughout your total knee replacement journey

Your Surgery Scheduler - Cindy Balley (423) 697-8821 ext. 1304

- Schedules your surgery, pre-operative appointments, and post-operative appointments
- Assists in coordinating any required pre-operative clearances from your primary care and specialty physicians
- Works with the financial team to ensure that your insurance company's approval / pre-certification is obtained so that you may plan accordingly
- Fax Number: (423) 697-8866

Forms Specialists – Mia Marine (423) 664-5159

- Completes any forms or documents required for FMLA, work releases, etc.
- The office has a \$20 processing fee, and a signed information release is required.
- Fax Number: (423) 664-5156

Your Billing Department

Will contact you before surgery to discuss your estimated coinsurance and deductible. They will estimate your out-of-pocket expenses and discuss expected costs and payment expectations.

CSMO Billing Department at 423-629-4395

CSMO Surgery Center Billing Department at 423-269-6244

Memorial Billing Department at 1-800-276-3614

Parkridge Billing Department at 844-974-3800



CSMO's Physical Therapy Locations

McCallie Office

2415 McCallie Ave, Chattanooga TN 37404

423-624-2696 x 3000

Gunbarrel Office

1949 Gunbarrel Road Suite 280, Chattanooga TN 37421

423-624-2696 x 3001

C4 Sports Therapy – Chattanooga

6401 Lee Highway Suite 109, Chattanooga, TN 37421

423-713-5639

Hixson Office

2051 Hamill Road, Hixson TN 37343

423-624-2696, x 3002

Cleveland Office

2400 North Ocoee Street, Cleveland TN 37311

423-624-2696, x 3003

C4 Sports Therapy – Cleveland

2399 Parker Street NE Suite C3, Cleveland TN 37311

423-697-8844

North Georgia Office

4725 Battlefield Parkway, Ringgold GA 30736

423-624-2696 x 3005

