



ORTHOPEDIC ASSOCIATES
OF LONG ISLAND

Total Knee Replacement



DR. GREGORY MINUTILLO
HIP & KNEE REPLACEMENT



Surgical Booklet



DR. GREGORY MINUTILLO
HIP & KNEE REPLACEMENT

(631) 689-4162 | MinutilloTeam@OALI.com

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A Note From Dr. Gregory Minutillo

My team and I are committed to compassionate, personalized, and state-of-the-art care in joint replacement - the same care we would want for our own family members. Your success and safety in overcoming knee pain are my highest priorities. To ensure exceptional care, I ask that you carefully read this booklet, which I have personally written and assembled. It contains what I believe to be the most critical information for anyone considering knee replacement surgery and should be referenced throughout our journey together. In becoming an engaged and informed patient, we will have the greatest opportunity to achieve the best possible outcome and return you to an active and healthy lifestyle.

It is an honor to take care of you,

Gregory Minutillo MD/MPH



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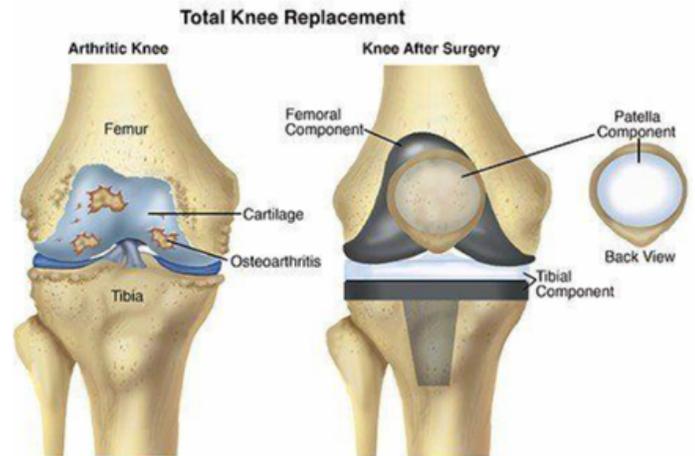
Knee Replacement Overview

INTRODUCTION

In knee replacement surgery, Dr. Minutillo replaces the damaged surfaces of the knee with artificial implants. The artificial joint decreases pain, restores motion, and improves function at the knee joint.

INDICATIONS AND GOALS FOR SURGERY

Most patients who consider knee replacement surgery have severe arthritis of the knee or another condition or injury that has led to the destruction of the cartilage in the knee. When this condition causes daily disabling pain, loss of motion, or decreased function, knee replacement may be an appropriate option if conservative (non-surgical) measures are no longer effective.



The primary goal of knee replacement surgery is to reduce knee pain. Knee replacement may also improve knee function and reduce or eliminate a limp.

DESCRIPTION OF THE SURGICAL PROCEDURE

During knee replacement surgery, Dr. Minutillo will make a small incision over the knee and enter the knee joint. He will then remove the damaged cartilage from the surface of the femur (thigh bone), tibia (shin bone), and possibly the patella (knee cap), depending on the patient. Then, he will implant a metal cap on the femur and a metal tray in the tibia. A highly engineered plastic will then be inserted and secured onto the tibia, which provides a smooth surface for the joint to move. The “new” knee will be sized to fit your specific anatomy to create a stable joint.

REHABILITATION

After discharge, the patient will begin physical therapy post-operatively. The patient’s motivation and willingness to participate in the rehabilitation program are critical in determining their final strength and walking pattern.

POTENTIAL BENEFITS

The primary benefit of knee replacement surgery is a reduction in knee pain. The patient may also note improved knee function and walking pattern as rehabilitation progresses.

POTENTIAL RISKS

Total knee replacement surgery is considered a major surgical procedure. Serious medical risks associated with the surgery may include and are not limited to problems with anesthesia, heart attack, heartbeat irregularities, and stroke. In very rare situations, death may occur from complications related to surgery. Other risks related to the procedure include but are not limited to blood clots, pulmonary embolism, infection, differences in rotation of the leg, fracture of bones involved with the procedures, hematoma formation (blood accumulation in the knee), nerve injury, blood vessel injury, and numbness and scarring around the surgical incision. Blood loss can occur during or after the surgery, which may require transfusions. The implants may need to be removed or replaced if they become loose, wear out, or if there is evidence of infection. Knee replacement may not alleviate knee pain, restore the function of the knee, or eliminate a limp.

ACHIEVING THE GOALS OF SURGERY

Upon full recovery, most patients have no pain or significantly less pain. Most patients can walk more smoothly, have more endurance with their new knee, and function more normally. A small percentage of patients have persistent discomfort and/or limp after surgery.

ALTERNATIVES TO SURGERY

Conservative (non-surgical) measures may help control knee pain. These include using anti-inflammatory and/or pain medications, weight loss, using a cane or other assistive devices, and reducing heavy and/or pounding activities. In selected cases, other surgical options may exist, such as osteotomy of the bones to realign the knee, resurfacing the joint, or eliminating the joint by fusing the bones together. Another alternative to knee replacement surgery would be seeking no treatment.

CONSEQUENCES OF DECLINING CARE

Arthritis itself is not considered a life-threatening illness. If the patient elects not to undergo total knee replacement, then he/she will likely continue to have knee pain. The patient's pain and disability may increase over time. If left unattended, arthritis may progress enough that surgery in the future may be very difficult and provide less predictable results.

MEMBERS OF THE SURGICAL TEAM

Dr. Minutillo works with a team of experts during surgery. Physician assistants, surgical assistants, and surgical technicians will be performing important surgery-related tasks. These activities are in accordance with Dr. Minutillo's direction and the hospital or surgery center's policies.

LONG-TERM CONCERNS

Long-term complications are possible after total knee replacement. Late loosening, implant wear, infection, or progressive bone loss may occur and may require reoperation. Close follow-up is necessary to monitor for changes around the joint replacement, which could threaten the strength of the bone near the implant. The risk of problems related to wearing of the artificial joint surfaces increases over time. Regular follow-up (every two years) becomes more important as the joint replacement ages. The risk of problems related to wearing of the artificial joint surfaces increases over time.



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Preparing For Surgery Begins Early

What Should I Be Doing 3-4 Weeks Before My Surgery Date?

Critical Tasks:

- Make sure you've made an appointment with your medical doctor for pre-surgical clearance. **It is extremely important that this appointment is before your pre-operative visit with Dr. Minutillo.** This pre-op visit is typically within the week before your surgery.
- Enroll in our text messaging service if you have not already done so. We know what you're thinking: "Oh no, another app." This isn't like that. Simply text "Join" to (631) 649-7725 or scan the QR code below and follow the instructions. This is a series of text updates in accordance with Dr. Minutillo's specific protocols. These texts will begin approximately 2 weeks pre-operatively and extend until 7 weeks post-operatively. This is free, and if you wish to stop the service, you may do so at any time.
- Schedule your "Total Joints Class." Attendance is mandatory and may be completed at any time, but ideally before your pre-op appointment. Please call the office and ask to speak to the surgical coordinator if you have questions regarding this.



Other Important Tasks

- **CANCEL ANY DENTAL APPOINTMENTS OR INVASIVE PROCEDURES THAT FALL BETWEEN 6 WEEKS PRIOR TO SURGERY AND 3 MONTHS AFTER SURGERY. THIS INCLUDES UROLOGIC PROCEDURES AND COLONOSCOPIES.**
- **AVOID ANY INJECTIONS INTO YOUR SURGICAL JOINT FOR 3 MONTHS PRIOR TO SURGERY. PLEASE INFORM DR. MINUTILLO'S TEAM IMMEDIATELY IF YOU BELIEVE YOU HAVE SCHEDULED SURGERY IN THIS WINDOW.**
- Arrange for a family member or friend to accompany you to the surgery location on the day of your surgery.
- Arrange for someone to stay with you the first night you return to your home or hotel after the surgery.
- You will be discharged from the hospital or surgery center as discussed, so plan ahead for transportation home or to your hotel (if traveling for surgery) on the day of your planned discharge.
- While taking opioid pain medication, you will NOT be permitted to drive. Oxycodone is an opioid medication. You may need to arrange for transportation to your initial follow-up visit.
- Adjust your work/social schedule accordingly during your anticipated recovery time. Recovery will be covered in more detail in this book.
- Prepare your home for recovery:
 - Remove small throw rugs or other obstacles in your home that may be in your path.
 - If you have pets, you may want to arrange for someone to assist in caring for them for a few days after you return home.
 - In order to stay well hydrated after surgery, pick up some alternatives to water, such as Gatorade, juice, or Vitamin Water.
 - Consider taking additional protein before and after surgery for healing benefits.
- If you are currently performing an exercise program, continue doing so.
- If you are not currently performing an exercise program, you may incorporate exercises as directed in the next section of this booklet. **If you start the exercises and they are too painful, stop doing them.**
- **If you are a smoker, you must quit smoking 6 weeks prior to surgery through 6 months after. A negative nicotine test is required before having surgery.** This test should be completed 2 weeks prior to surgery. It should be ordered by your Primary Care Physician (PCP) if they see you for your pre-op clearance or by one of our pre-surgical testing teams.



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Exercises Prior To Knee Surgery

1. Quad Sets

Visit <https://strea.md/short/12120064> or scan the QR code with your phone:



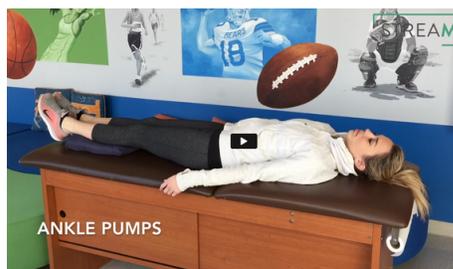
2. Short Arc Kicks

Visit <https://strea.md/short/10350592> or scan the QR code with your phone:



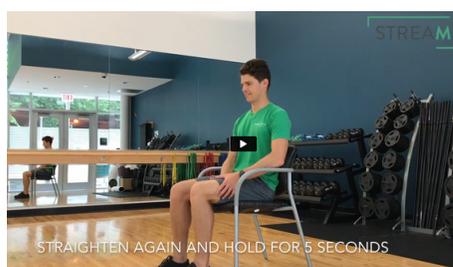
3. Straight Leg Raises

Visit <https://strea.md/short/2093056> or scan the QR code with your phone:



4. Long Arc Kicks

Visit <https://strea.md/short/14813184> or scan the QR code with your phone:





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1-2 Weeks Before Surgery

Your Pre-Operative Appointment With Our Team

The week prior to surgery, you will have a pre-operative appointment. At this time, Dr. Minutillo and his team will sit down with you to review your surgery, medical clearance, and answer any questions you may have after reading this booklet. **Prior to this appointment, please be sure you have:**

- Completed your pre-operative clearance appointment with your medical doctor
- Reviewed any notes from the total joints class you attended
- Gathered all other remaining questions you may have after reading this book

Assemble Additional Supplies

Dr. Minutillo recommends purchasing these additional items online (e.g., from Amazon) or at a pharmacy (pricing is subject to change).

- **Additional waterproof dressings.** Depending on your bandage/dressing, you may be instructed to change it at 1 week, post-operatively. If you have a dressing that is designed to stay in place for 2 weeks, it is still safe to have another dressing available if needed.
 - Amazon example 1: EVERLIT Silicone Foam Dressing with Gentle Adhesive Border (4" x 10" | 5 Pack) ~\$25
 - Amazon example 2: MedVance Silicone - Bordered Silicone Adhesive Foam Dressing" (Size 4" x 12" | 5 Pack) ~\$25
- **Chlorhexidine soap.** This is a special soap that you will use for two days leading up to (and the morning of) your surgery. It has been shown to kill bacteria on your skin and reduce the risk of infection after surgery. The specific instructions for its use are in the "Week of Surgery" section. This can be purchased at any drugstore or on Amazon. The brand name is Hibiclens, and the generic name is Chlorhexidine Gluconate (CHG) 4% Solution. *If you are having surgery at St. Catherine of Siena Hospital or St. Charles Hospital, you will be provided with this at your presurgical testing appointment.*
- **Pill organizer.** After surgery, you will be on a combination of medications that are designed to work together and make your recovery quicker and less painful. Medications will be scheduled for breakfast, lunch, dinner, and right before bedtime. To keep track of the timing of your medications, I recommend buying a 4-time-a-day pill organizer that has 7 days. These can be purchased for around \$10 online and may also be available in your local drugstore.
- **Compression stockings.** After surgery, your surgical leg will be bruised and swollen, which is normal. I recommend 20-30 mmHg compression stockings for the first two weeks after surgery to help with swelling and associated pain.
 - Amazon option 1: ABSOLUTE SUPPORT Post Surgery Compression Thigh High 20-30mmHg - Silicone Border & Open Toe - ~\$27
 - Amazon option 2: ABSOLUTE SUPPORT Plus Size Thigh High Compression Socks 20-30mmHg with Silicone Border & Open Toe - ~\$27



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The Week Of Surgery

The final week leading up to surgery can provoke anxiety and stress. This is entirely normal and is to be expected. By this point, our team is prepared and has everything we need to provide you with excellent care. Try to relax and focus on seeing yourself with relief from knee pain in the coming weeks. Some simple yet important things are left to do:

- **Pick up your medications from your pharmacy prior to your surgery date.** This is extremely important to ensure that your pain is well controlled and to optimize your chances of having a safe and rapid recovery. You will need these medications right after your surgery.
- **Review the next section, “MEDICATIONS TO STOP BEFORE SURGERY,”** and stop taking those medications as directed.
- **Two days prior to surgery (and the morning of), begin your chlorhexidine (CHG) soap treatment.**
 - Use your regular soap and shampoo to wash your head and entire body. Rinse thoroughly.
 - After rinsing off your regular soap, use the CHG soap on your entire body, excluding your eyes and inside private parts. Rinse this off completely.
 - Avoid applying lotion or oil anywhere on your body after showering.
 - Wear clean clothes after each shower.
 - Ensure you sleep in clean clothes and sheets the night before your surgery.
 - **If you shave, stop shaving the area around the surgical site 3 days before surgery.** Small nicks from a razor introduce bacteria below your skin.



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Medications To Stop Before Surgery

10 days before surgery, you need to stop:

- Aspirin

7 days before surgery, you need to stop:

- Plavix
- Any anti-inflammatory medications (NSAIDs) except Celebrex
 - Examples: Advil, Aleve, Voltaren, and Mobic/Meloxicam
- Any herbal supplements
- Vitamins (Vitamin E, K, etc.)
- GLP-1 receptor activator medications for diabetes, such as Trulicity, Ozempic, or Mounjaro
- Regardless of this list, if you are on any medications for diabetes or weight loss, please call the office to confirm when/if they should be stopped, as guidelines may change.

5 days before surgery, you need to stop:

- Coumadin
- Warfarin
- Pradaxa

3 days before surgery, you need to stop:

- Xarelto
- Eliquis

You can continue to take the following medications:

- Tylenol
- Celebrex
- Ultracet
- Glucosamine chondroitin
- Iron supplements
- Ultram (Tramadol)

Take a moment to speak with the medical doctor about your regular prescription medications (blood pressure, heart, cholesterol) and their effect on your surgery. They may have provided other recommendations during your clearance appointment, which will be discussed with our team at your pre-op appointment.

If you take a sleep aid, you may not take it while on narcotic or opioid medications.



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The Night Before Surgery

- You will receive a call the day before surgery (typically by 4 PM) to be informed of your arrival time. If surgery is scheduled for Monday, you should expect the call on Friday. **If you have not been contacted by your surgical location, please call the appropriate number:**
 - St. Catherine of Siena Hospital: (631) 862-3033
 - St. Charles Hospital: (631) 474-6285
 - Precision Care Surgery Center: (631) 380-2710 and press 2
- Nothing to eat after midnight! The hospitals and surgery center are very firm on this. Your surgery will be canceled otherwise.
- It is OK to have one alcoholic drink the night before surgery.
- Pack your bag for surgery (items below).
- Remember to go to bed in fresh, clean clothes.
- Get a good night's sleep and know that you are well taken care of.

What should I bring to the surgical center?

- ID card
- Insurance card
- Wear **loose** and comfortable clothing
- Cane, crutches, or walker (if you currently use one of these devices)

What should I *not* bring?

- Jewelry – please remove all
- Medications (if you are spending the night, the hospital will provide all of the medications you take at home)
- Contact lenses (wear glasses if you have them; you can't wear contacts during surgery)



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Day Of Surgery

Congratulations! Today is the big day. Through all your preparations, you've given yourself the best opportunity to overcome your knee pain. You should be excited.

Remember, no eating and no coffee today! If you have medications to take this morning (like blood pressure medication), it is OK to take them.

***** Pre-operative liquids:** While you cannot eat food or drink coffee, we do encourage you to drink **water or yellow Gatorade** up to 2 hours before your arrival time. For example, If you are told to arrive at the surgery location at 9 AM, you may drink water or yellow Gatorade **no later** than 7 AM. We will address this at your pre-operative visit. *Don't forget, no coffee!*

On Arrival

Once you have arrived at the surgery center or hospital, enter the building and check in at the front desk. Tell them you are there to have knee surgery with Dr. Minutillo. You will be ushered into the pre-operative holding area after checking.

After Check-In

After checking in at the front desk, you will eventually be brought to the pre-operative holding area, where you will change into a patient gown and be introduced to your pre-operative nurse. Your nurse will ask you several questions that are likely to be repeated. These repeats are on purpose. Your safety is most important, and we take every measure necessary to ensure everyone is on the same page at every step. You will also meet your anesthesiologist at this time, who will review the type of anesthesia you will be receiving. Most commonly, this will be spinal anesthesia, which will feel like a quick pinch to the lower back, combined with an injection in your thigh called an "adductor canal block." Sometimes, if the anesthesiologist believes it to be safer, you may be given general anesthesia where a breathing tube is placed. Your anesthesiologist will review this with you further.

Relax & Nap!

At this point, there is nothing left to do but allow Dr. Minutillo and his team of experts to take care of you. You are on the way to knee pain relief! You will be wheeled into the operating room, where you can comfortably drift off to sleep during the operation. Every person in the operating room is entirely focused on your safety and the procedure. We will take excellent care of you.



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Immediate Post-Op Period

You did it! You will wake up in the Post Anesthesia Care Unit, also known as the PACU. You will be taken care of by a PACU nurse who will continue to monitor your vital signs, IVs, and make sure you are doing as anticipated. Grogginess is to be expected. When appropriate, they will allow the person who accompanied you for the day to sit with you. Your course from here will be one of two pathways based on your discharge plan:

- **If you are being discharged home the same day**, you will walk with a physical therapist once your anesthesia has worn off and your pain is controlled. We also like to see that you're eating, drinking, and feeling good in general. Once you have demonstrated that you can perform all the required tasks safely, you will be discharged, and your support person will bring you home.
- **If you are staying the night at a hospital**, you will probably rest after surgery and have your physical therapy session the next morning. Once again, physical therapy will ensure that you can both travel and be home safely.

Your Incision and Surgical Bandage—What's on my knee?

You will have either a water-resistant mesh OR a vacuum-assisted wound closure device (PICO) placed over your incision during surgery. Dr. Minutillo will determine the dressing that is best for you during your evaluation. This is subject to change based on intra-operative findings.

Vacuum-Assisted Wound Closure Device

(An example of this is depicted below and called a "PICO")

Note: dime-sized or quarter-sized red spotting seen on the pad is normal.
Don't be alarmed. If you have concerns, please call the office.





Post-Operative Medications

By this point, you should already have your post-operative medications that you picked up from your pharmacy before you had surgery. Unfortunately, taking medication is part of this process and absolutely necessary to ensure that you have a safe and rapid recovery. The medications and the way in which they are taken (outlined on the following page) have been shown by major academic institutions to control pain and reduce complications related to your surgery. Dr. Minutillo has specifically chosen all of these to optimize your recovery. He asks that you please follow this guide closely. You will see the medications are split into two categories of necessity:

1. **Scheduled medications** consist of antibiotics, pain and anti-inflammation medicines, a medication to prevent blood clots, and a medication to protect your stomach.
2. **"As needed" medications** consist of a weak and strong opioid medication that you will usually use for the first 1-3 weeks, a medication to treat nausea, and a medication to treat constipation.

**A note on refills:* Most patients do not require refills of these medications. However, if you do need to request a refill, please do so during office hours, 9 AM to 5 PM. During these hours, more team members who know you and are more familiar with your case will be available. Prescribing opioids is very serious and may be difficult for pharmacies to accommodate after hours.

Dr. Minutillo recommends using a pill organizer to reliably take these medications with ease. Below is a description of these medications, followed by a typical medication plan.

Medicine	Description	Doses	Typical duration
Antibiotics			
Duricef (Cefadroxil)	This is an antibiotic to help prevent infection. You will take it twice a day for 1 week if it is prescribed.	Breakfast - Dinner	1 week
DVT Prophylaxis			
Aspirin	Aspirin helps to prevent blood clots. You will take it twice a day for 4 weeks.	Breakfast - Dinner	4 weeks
Pain and Anti-Inflammatory Medications			
Extra-Strength Tylenol (Acetaminophen)	Very effective pain medicine when taken around the clock. You will take this for the first three weeks.	Breakfast - Lunch - Before Bed	3 weeks
Meloxicam or Celebrex	Long-acting anti-inflammatory medications that help reduce pain and speed up recovery. You will take this with breakfast for 8 weeks.	Breakfast	8 weeks
Lyrica (Pregabalin)	Nerve medication that helps with tingling and shooting pain after surgery. Take this for the first 2 weeks.	Breakfast - Dinner	2 weeks
Tramadol	Weak opioid pain medicine that you will take as needed . Most people take it around the clock for the first 1-2 weeks and then taper off by the third week.	Every 4-6 hours as needed	2-3 weeks as needed
Oxycodone	Opioid pain medicine that you will take as needed . Most people take this in addition to the medications listed above for a few days and then taper off.	Every 4-6 hours as needed	1-2 weeks as needed
Stomach Protector			
Pantoprazole	Protects your stomach from aspirin and meloxicam. You will take this once per day as long as you are on those medications (4-8 weeks).	Breakfast	4 weeks
Anti-Nausea			
Zofran (Ondansetron)	Anti-nausea medicine to use as needed . Make sure you take all the medication above with food to prevent nausea. If you are not hungry, have a pre-made protein shake. Never take these medications on an empty stomach.	As needed	As needed
Stool Softener			
Senna Plus (Docusate/Senna)	Opioid pain medication causes constipation because it slows your digestion. Take this medication twice per day early on when you are taking both Oxycodone and Tramadol and once per day if your stool is too loose. *If you are still experiencing constipation after taking this, you may take MiraLAX in addition. This is available over the counter; you may take it as directed.	Breakfast - Dinner	3 weeks

Typical Personalized Medication Plan

The following is an example of a personalized medication plan. Your unique plan may differ from this exact plan based on the medications you already take and any pre-existing medical issues. Your personalized plan will be discussed in detail at your pre-operative information appointment with Dr. Minutillo's team 1-2 weeks before surgery.

STEP 1: Scheduled medications.

Do the following and take these medications regardless of pain.

Ice and Elevation

Ice	Ice your knee over the incision for as long as comfortable during the first 40 minutes of every hour you're awake for the first 2 weeks. Make sure a wet bag of ice is not directly on the skin/incision.		
Elevation	Elevate your surgical leg above your heart to help reduce swelling for 40 minutes every hour you're awake for the first 2 weeks.		
Medications	Dose	How often and how long	For what reason
Duricef (Cefadroxil)	500 mg pill	Twice a day. Take 1 500 mg pill with breakfast and dinner for 7 days if prescribed.	Infection prophylaxis (for those with certain medical conditions and same-day surgery patients).
Extra-Strength Tylenol (Acetaminophen)	1000 mg pill	Three times a day: 2 x 500 mg (1000 mg total) with breakfast, lunch, and before bedtime for 3 weeks.	Baseline pain medicine (Non-opioid).
Aspirin	81 mg pill	Twice a day: 1 pill with breakfast, 1 pill with dinner for 4 weeks.	Prevent blood clots.
Protonix (pantoprazole)	40 mg pill	Take 1 40 mg pill with breakfast for 4 weeks.	Protect stomach from other medicines.
Celebrex (Celecoxib)	200 mg pill	Take 1 200 mg pill with breakfast for 8 weeks.	Anti-inflammatory, pain medicine (Non-opioid).
Lyrica (Pregabalin)	50 mg pill	Take 1 tablet at breakfast and one at bedtime for 2 weeks.	Helps with pain at night, especially nerve pain (Non-opioid).

STEP 2: “As needed” pain medicine.

Take this medicine if you are still uncomfortable after baseline medicine.

Medications	Dose	How often and how long	For what reason
Try this first:			
Tramadol	1st 50 mg pill	Take 1 tablet every 4-6 hours as needed for breakthrough pain.	Extra pain medicine (Weak opioid), expect to take every 4-6 hours for 1 week. Reduce intake by 2nd week. Usually, wean off around 3 weeks after surgery. When weaning off pain medications, start by removing doses that are not before PT or before you go to bed.
If still having too much pain after 30 minutes:			
Tramadol	2nd 50 mg pill	Take a second 50 mg Tramadol 30 minutes after the first one if you are still having too much pain. If this relieves your pain to an acceptable level, adjust your intake to 2 x 50 mg Tramadol 4-6 hours later as needed for pain.	
If still having too much pain after 30 minutes:			
Oxycodone	1st 5 mg pill	Take 1 5 mg Oxycodone tablet alongside the Tramadol (yes, taking both is OK). If this relieves your pain, it can be repeated every 4-6 hours as needed.	Extra pain medicine (opioid), expect to take around the clock for the first week and usually wean off around 1-2 weeks after surgery.
If still having too much pain after 30 minutes:			
Oxycodone	2nd 5 mg pill	Take this additional 5 mg of Oxycodone if you are still having too much pain after 2 x 50 mg of Tramadol and 1 x 5 mg of Oxycodone. This can be repeated every 4-6 hours as needed. It is OK to take with Tramadol.	
If still having too much pain after 45 minutes:			
Call Dr. Minutillo and his team at (631) 689-4162 and follow prompts to speak with Dr. Minutillo or the on-call surgeon.			

Other as needed medications - Extra medications just in case**Nausea medicine**

Zofran (Ondansetron) 4 mg oral dissolving tablets	Place tablet under the tongue.	Take every 4-6 hours as needed if feeling nauseated. Most often, nausea is caused by taking medicines on a stomach that does not have enough food. If medicines are listed with a meal, take them immediately after the meal.	
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Constipation medicine

Senna Plus (Docusate/Senna)	2 X 50 mg/8.6 mg	Take 2 tablets with breakfast and 2 at bedtime while taking Tramadol or Oxycodone.	Prevents constipation, which is very common with opioid pain medications (Tramadol and Oxycodone).
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The Post-Operative Phase

Week 1

You've done the hard part. By now, you should be in the comfort of your home, resting and taking all the medications outlined in the previous section. It is natural to feel discomfort at this stage, so do not plan on doing anything physically demanding. The first week is primarily about letting your body rest.

Expectations at this time:

- Some pain is part of the recovery process, but it should be tolerable with the medications prescribed. We understand some patients' hesitancy to take opioid pain medications. However, it is important to remember that you had major surgery. Excessive pain can slow your recovery, so **please take the pain medications as prescribed when needed.**
- You will still likely be tired from surgery.
- It is not uncommon for your entire leg to be swollen and begin to bruise from your thigh to your toes.
- Swelling will increase over the week and peak at 6-10 days.
- **Starting the day after surgery, it is critical that you follow Dr. Minutillo's Rapid Recovery Protocol, which is described on the following page.**



DR. GREGORY MINUTILLO
HIP & KNEE REPLACEMENT

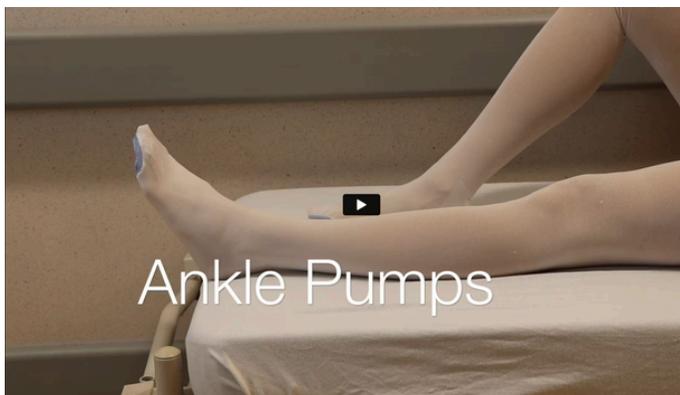
Dr. Minutillo's 40/20 Rapid Recovery Protocol

Swelling and inflammation are the largest obstacles on the road to recovery after knee replacement surgery. Despite how quickly your procedure is performed, it is still a major surgery and takes a significant toll on your body. **You must give your tissues a chance to heal.** The theme of the first 2 weeks is *"TAKE IT EASY."* Premature activity before your body is ready can result in increased swelling, pain, and ultimately work against your progress. To put you on the right track, Dr. Minutillo recommends the following to be done **every hour you are awake for the first 2 weeks:**

- **40 minutes per hour** should be spent **elevating and icing** your knee. Elevating means keeping your knee **fully extended (straight)** and above your heart or "toes above your nose." This ensures that unwanted swelling is draining away from your leg and not pooling in unwanted areas. It also ensures that your knee does not heal in a bent position. You may take breaks from icing within these 40 minutes, but you should always maintain elevation, as depicted below:



- **20 minutes per hour** should be all of the following activities:
 - **Walking (5-10 steps).** Walking at this stage is mainly done to prevent blood clots.
 - **10 ankle pumps.**
 - Visit <https://vimeo.com/371437268> or scan the QR code with your phone:



- 10 passive seated knee flexes.
- Visit <https://vimeo.com/371437567> or scan the QR code with your phone:



- 10 passive knee extensions.
- Visit <https://vimeo.com/288076973> or scan the QR code with your phone:



- Three times per day, you should perform a 10-minute passive prone foot hang.
- Visit <https://strea.md/short/8646656> or scan the QR code with your phone:



Physical Therapy and Activity

You may walk carefully for short distances in the house and perform daily living activities after surgery. A home-care nurse and physical therapist will assist and work with you in the first two weeks after surgery. The focus is generally to ensure you can walk safely by training you to use a walker or cane to obtain your balance. Even if you don't need a cane or walker, Dr. Minutillo prefers that you use one of these assistive devices for the first 1-2 weeks for safety purposes and to make sure you are ready to progress.

Your Bandages and Showering

Your incision will likely be closed with a type of skin glue over internal sutures. However, if external sutures are used instead, they will be removed at your 2-week post-op appointment. As described previously in the "immediate post-op period" section, you will have a **water-resistant mesh** or a **vacuum-assisted wound closure device (PICO)** dressing. Listed below is information and instructions pertaining to each type of wound dressing.

- **If you have a water-resistant mesh:**
 - It is designed to stay in place for at least 2 weeks.
 - You may shower beginning 24 hours after surgery.
 - Do not scrub the mesh/incision, and do not place it directly under the stream of water. You may let soapy water gently run over the incision. The incision should be blotted dry - not rubbed - with a towel.
 - If the mesh begins to come off at the edges (slightly peeling off the skin), the edge may be trimmed with a scissor **as long as the actual incision remains covered and sealed with the mesh.**
 - If the mesh begins to come off and exposes the actual incision **before** 2 weeks after surgery, please call the office.
 - Patients are instructed to keep their dressing in place until they see Dr. Minutillo in the office at their 2-week post-operative appointment.

- **If you have a vacuum-assisted wound closure device (Example: PICO):**
 - It is designed to stay in place for 7 days.
 - You may shower with this bandage in place 24 hours after surgery as long as the seal is maintained (no air leaking and the sponge is deflated). When showering with this device, you must place the pump connected to the hose in a waterproof bag (like a ziplock) off to the side of the shower.
 - On day 7, you will slowly peel off the PICO and throw it away. Do this by first turning off the electric pump. Then, peel off the bandage. If there is active drainage (fluid dripping out of the incision) at this time, please call the office.
 - You will replace this PICO with a water-resistant bandage that can be purchased at a pharmacy or online. (Make sure you have your replacement bandages ready by day 7. Example: Search Amazon for "MedVance™ Silicone - Bordered Silicone Adhesive Foam Dressing" Size 4" x 12").
 - After this, you may shower with the new water-resistant bandage in place. If water gets under the bandage, blot the incision dry and replace the bandage.
 - Do not scrub the incision or bandage, and do not place it directly under the stream of water. You may let soapy water gently run over the bandage.
 - Patients are instructed to keep these dressings in place until they see Dr. Minutillo in the office at their 2-week post-operative appointment.

- **No submerging/soaking** (taking baths, swimming, or using hot tubs) for the first 5-6 weeks after surgery.
- No creams, lotions, or ointments on the incision until our team sees the incision at 2 weeks and feels it is safe.
- Please call the office should you notice any drainage or leak outside of the bandage or have any concerns in general.

Week 2

Toward the end of this week, you will have your follow-up appointment with Dr. Minutillo so he can physically check on you in person. At that visit, we will get x-rays of your new knee. You may notice some redness, swelling, and/or bruising down your leg (sometimes from thigh to toe!). This is NOT uncommon.

- **Expectations at this time:**
 - Pain is even more tolerable than week 1, but you are likely still taking Tramadol and maybe Oxycodone on top of your baseline medications. By the end of this week, you should begin thinking about reducing or stopping these medications.
 - Your swelling and bruising will peak in the first few days of this week and start to get better.
 - You still feel tired from having surgery.
 - You may begin to transition off the walker or cane.

Week 3

Beginning this week, you will likely transition to outpatient physical therapy instead of doing it in your home. This is when you will truly start working on your range of motion.

- **Expectations at this time:**
 - At this point, you should be transitioning off a cane and ambulating independently. However, it is OK if you aren't ready yet.
 - You may drive at this point if you are off opioid medicines and feel comfortable.
 - By this time, the vast majority of patients have stopped taking Tramadol and Oxycodone.
 - The swelling and bruising are still there, but they will be improving.
 - Your incision is still healing at this point – once again, don't scrub it aggressively, but let the water roll over it and pat it dry.

Weeks 4-6

You should be walking freely without a cane or walker, but if you feel you need to use it for safety, you may do so. You should still refrain from high-impact exercise like intense bike riding, jogging, or jumping. Yes, unfortunately, that includes pickleball.

- **Expectations at this time:**
 - You should no longer require pain medications (Tramadol or Oxycodone).
 - Pain should be minimal.

Weeks 6-12

At 6 weeks, your pain should be minimal, if there is any at all. However, everyone is different, and some people need a little more time than others. Don't get discouraged if this is you. Dr. Minutillo will allow you to begin increasing your activity toward the amount you once had.

Weeks 12 and Onward

It has been quite a journey. Most of the recovery should be complete this time. However, it is important to remember that this was still a major surgery, and everyone heals at a different rate. Your progression will continue, even in small amounts, throughout the first year in terms of mobility, pain, and comfort. Most people at this point are doing very well and are pleased with their decision to take their life back with knee replacement surgery.

Dental Procedures

To prevent infection, Dr. Minutillo recommends that you take prophylactic antibiotics for any dental cleaning or procedure **for life** to prevent infection. This is usually just two tablets taken before your dental procedure. Please call the office for any upcoming procedures, and we will prescribe this medication for you if your dentist does not.

Future Activities

Generally speaking, Dr. Minutillo does not recommend learning new high-risk activities, but if you were reasonably proficient at something, it's OK to resume. For example, if you are an avid skier, you may return to this activity. However, if you have never skied, or are not comfortable skiing, it may be best to avoid this activity. Common activities people return to doing include hiking, traveling, skiing, golf, tennis, pickleball, yoga, cycling/spin, dancing, and more.

A common rule of thumb is to listen to your body. If you're doing something and it hurts, stop doing it. If you have any questions or concerns, just call us. People heal at different speeds. TAKE IT EASY! See you in a year.



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Other Useful Information

When to Contact the Office

- It is not uncommon to have some redness and swelling after surgery. Please do not hesitate to contact the office if you have concerns.
- Fever > 101.
- Significant drainage or drainage that is thick, yellow/green, foul odor.
- Redness spreading away from the incision.
- Increased pain uncontrolled by pain medications.
- Unable to put weight on leg or decrease in range of motion.
- Abdominal bloating associated with nausea/vomiting and constipation.
- Unable to empty bladder.
- Please reach out to your primary care doctor for concerns related to heart rate and/or blood pressure or present to an urgent care/emergency department.

When to Call 911 or Go to the Emergency Room

- Chest pain.
- Shortness of breath.
- Difficulty breathing.

Office Contact Information

- For questions and/or concerns M-F 9:00 AM - 5:00 PM, please contact Dr. Minutillo's office directly at (631) 689-4162. His team can answer most questions you may have.
- For clinical concerns after 5:00 PM (M-F), weekends, and holidays, calls will be directed to an operator. Please ask to be connected with the On-Call Surgeon. This is a surgeon who works with Dr. Minutillo.
- If you need to present to the Emergency Room for conditions related to your knee, we recommend you try to go to St. Catherine of Siena or St. Charles Hospitals. If your issue is an acute emergency, please call 911 or present to the nearest Emergency Room.

Dr. Minutillo's Office Number: (631) 689-4162