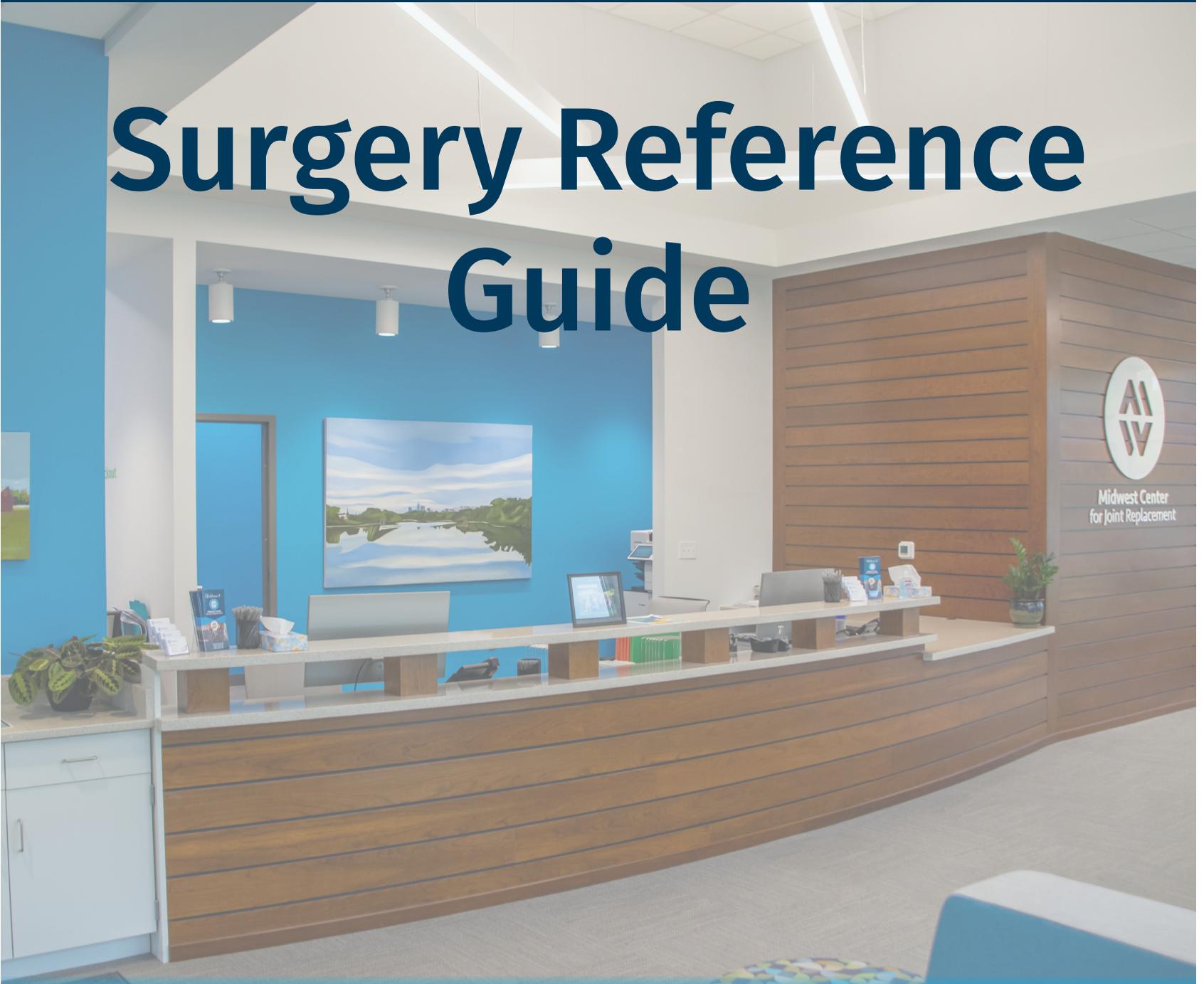




**Midwest Center
for Joint Replacement**

Surgery Reference Guide



KNEE REPLACEMENT



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Welcome!

Thank you for choosing Midwest Center for Joint Replacement for your knee replacement surgery. We are dedicated to restoring your quality of life. We hope this booklet will help answer your questions and concerns. If you have further questions, however, please call our office at 317-455-1064.



L to R: Dr. Wesley Lackey, Dr. Joshua Carter, Dr. Michael Berend

“Taking the pain out of joint replacement™”

This is a motto we’re committed to.

But what does it mean?

While any surgery brings with it some physical pain, we do what we can to minimize and manage your physical, emotional, and mental hurdles of going through a major surgery.

For you, our patient, this means:

- Your time is **valued**: we make every process **efficient** & **easy to understand**
- You will feel **heard**: communication with your provider is **simple**
- You will be **coached** through every step of recovery
- You will have **convenience** without sacrificing the quality of care

To our employees, this means:

- “Minimizing steps to improve efficacy and efficiency”
- “Giving back patients’ quality of life”
- “No barriers to care”
- “Removing unnecessary steps”

We’re committed to “taking the pain out” by:

- 1 Removing barriers to communication**
→ **How?** *Calls are always answered by a live person*
- 2 Preparing our patients for the day of surgery**
→ **How?** *Providing relevant educational material, doing pre-op testing, helping with insurance and billing, explaining the plan of care*
- 3 Coaching patients through physical recovery**
→ **How?** *Managing and explaining meds, helping with wound care, opening communication between patient and doctor*

SECTION 1: UNDERSTANDING YOUR KNEE REPLACEMENT

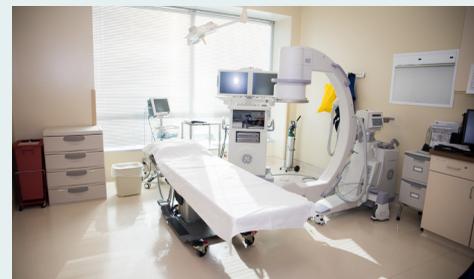
Surgery Locations

Where you will have surgery depends on your insurance and overall health. The MCJR team performs over half of all operations as outpatient procedures at an ambulatory surgical facility, but also partners with local hospitals to provide extensive medical care to those who may need it.

Outpatient Surgery: Midwest Specialty Surgery Center (MSSC)

MSSC's surgeons and staff are national leaders innovating the latest in outpatient joint replacement care. These advancements have resulted in thousands of successful cases. The clean, efficient space provides for a lower infection rate, rapid recovery, comfort, and compassionate care.

- **Premier outpatient surgical center, built exclusively to serve orthopedic patients**
- **Located on MCJR's first floor**
- **2 operating rooms, a minor procedure room, x-ray suite, and 8 private recovery suites**
- **Highly experienced staff in pre-op, intraoperative, and post-operative surgical care**



Inpatient Surgery: Franciscan Health Mooresville

If you are in need of additional care or aren't eligible for outpatient surgery for medical or insurance reasons, you will have inpatient or outpatient surgery at Franciscan Health Mooresville. This hospital has one of the leading joint replacement programs in the nation, providing about 2,500 joint replacement operations each year. Our surgeons perform one-third of those operations.

- **5-star facility**
- **Top 2.2% of U.S. inpatient programs**
- **Joint Replacement Excellence Award™ ('20, '19, '18, '17)**
- **Patient Safety Excellence Award™ ('20, '19, '18, '17)**



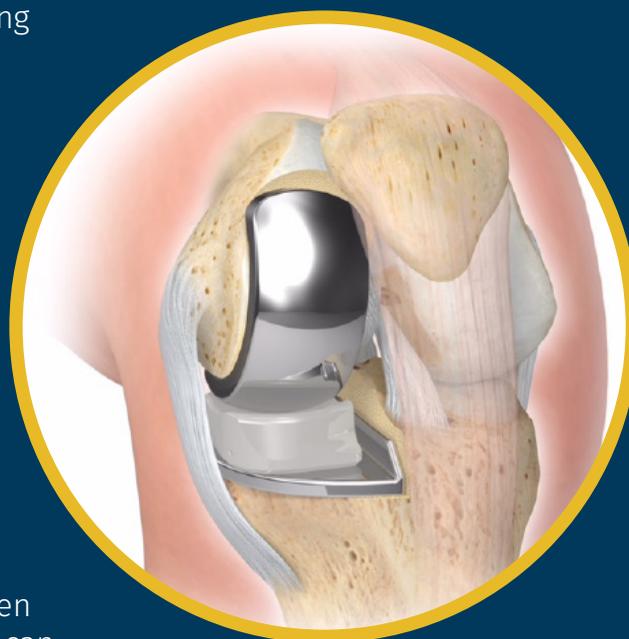
Partial Knee Replacement

The knee joint is divided into 3 areas called “compartments.” If your knee has cartilage damage in only one compartment, you may be a candidate for a partial knee replacement. This procedure involves resurfacing one portion of the knee joint and using artificial components to replace damaged tissue. Your surgeon would recommend a partial knee replacement based upon x-rays and examination.

Partial knee replacement has been in existence for several decades; it is not new or experimental. The longevity and success of partial knee replacement has been reported to be as good, or even better, than a total knee replacement. The concept of partial knee replacement is to do the least amount of surgery necessary to eliminate or reduce your pain.

This minimally invasive procedure allows for a faster recovery, less risk of complications, and provides better function, satisfaction, and activity than a total knee replacement. Total knee replacement is a good and proven procedure, but when a smaller and less invasive surgery can provide the same or better outcome, the MCJR surgeons favor this procedure.

Pre-operative x-rays and examination are accurate 95% of the time in determining if a patient is a good candidate for a partial or a total knee replacement. **However, about 5% of the time, something seen or observed during the procedure will move the surgeon to change from a partial knee to a total knee replacement.**

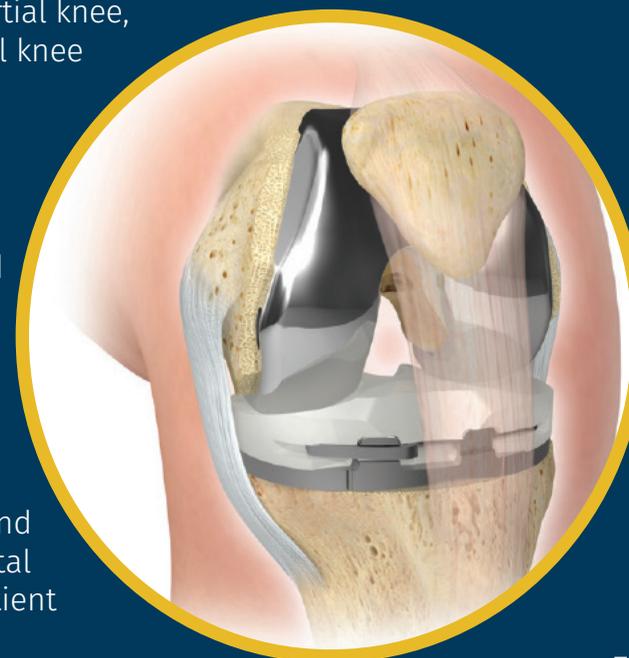


Total Knee Replacement

Total knee replacement, while a bigger operation than partial knee, provides better than 90% satisfaction for the patient. Total knee replacement is recommended when more than one knee compartment is worn out, when the deformity is greater, and when ligaments are damaged, not functioning well, or cannot be balanced.

Recovery from total knee replacement can be longer and more prolonged than partial knee. However, it is our surgeons' goal to do the correct operation first with the least invasive techniques available to provide long-lasting pain relief.

With the novel, multi-level pain management and the pre-operative and post-operative protocols developed and practiced at Midwest Specialty Surgery Center (MSSC), total knee replacement can be safely performed in the outpatient environment.



SECTION 2: HOW TO PREPARE FOR SURGERY

Midwest Medical Services

Our goal is to optimize and take the pain out of every step of your recovery. Midwest Medical Services, led by Dr. Dan DeSalle, works directly with MCJR to deliver personalized perioperative care for all joint replacement candidates. His team will coordinate care with the MCJR surgeons to ensure each patient is healthy enough for surgery.

*After you schedule surgery, you will then have a separate, new patient appointment in one of our two offices with Dr. Dan DeSalle for any pre-operative and medical fitness testing before surgery. **Please know there will be an additional office charge along with any related co-pay/co-insurance associated with this visit.***

What does this include?

- **History and physical:** please bring a list of your current medications including dosage
- **Laboratory workup:** you will have labs drawn at your appointment. You do not need to fast. Please come well hydrated.
- **Pulmonary and cardiac testing:** please wear comfortable clothing as you will need to change for your EKG
- **Additional medical fitness testing, if needed**
- **Post-surgical care**

Dr. Dan DeSalle

Daniel J. DeSalle, DO is a board-certified internal medicine physician who optimizes preoperative care for joint replacement candidates. Dr. DeSalle has spent most of his life in Bloomington, where he still lives with his wife of 17 years and three children.



DeSalle attended Indiana University for college, then went to medical school at the A.T. Still University Kirksville College of Osteopathic Medicine in Missouri, then completed a residency in internal medicine at Lehigh Valley Hospital in Pennsylvania. DeSalle has been working in Bloomington and Mooresville hospitals for over 15 years, including the Franciscan IMPACT Center. DeSalle currently splits his time between MCJR and Monroe Hospital, primarily serving patients with cardiac and respiratory conditions as they prepare for joint replacement surgery.

In his spare time, DeSalle enjoys participating in competitive swimming and driving cars on racetracks.

If you are having surgery at the hospital, you will have an appointment at the Franciscan IMPACT Center. Our team will set this appointment up for you.

Physical Therapy

It's very important to participate in physical therapy *before and after* your surgery to bring your joint to full recovery and range of motion. Some patients will do their own physical therapy at home without formal therapy, but others may want or require additional levels of care.

Your Physical Therapy Options

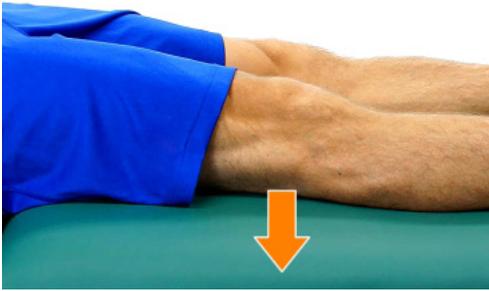
- 1 On your own:** If you have surgery at MSSC, **you will meet with a therapist across the hall at ATI Physical Therapy right after your surgery.** If you have surgery at the hospital, you'll meet with a therapist at the hospital. Once you get home, follow your home therapy protocol.
- 2 Outpatient physical therapy:** After the first post-op appointment (~2 weeks after surgery), some patients may need more guided physical therapy. This can be done at a location that is most convenient for you.
- 3 Home health services:** If you need skilled care beyond what your family or friends can provide but are unable to leave your home, consider home health nursing and physical therapy. Most insurances cover this. Ask your physician about home health care.
- 4 Skilled nursing facilities and inpatient rehabilitation:** If your circumstances require 24 hours-a-day care, you may consider staying at a skilled nursing rehabilitation center. The level of care you need, bed availability, physician orders, and insurance coverage will affect your placement. Ask your surgeon team if you are interested in this option.

Pre-Operative Exercises

Do these exercises daily before surgery.

Some of these may not be challenging prior to surgery, but it's important to become familiar with them to know how they feel and be able to perform them properly. Some soreness is normal and will improve over time. If you experience severe pain with any exercise, you should stop immediately.

Watch instructional videos at mcjr.com/contents/prepare-for-surgery/physical-therapy1



QUAD SET

Tighten your top thigh muscle as you attempt to press the back of your knee downward towards the table.

10 reps hold 5 seconds – 1x/day.

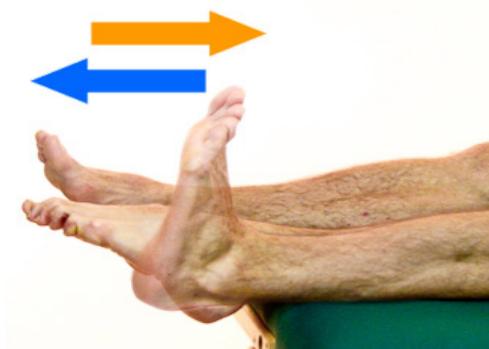


TOWEL UNDER HEEL

While lying down, place a towel roll under your ankle so that your leg does not contact the surface of the table/bed, allow gravity to pull your leg downward towards the ground to fully extend the knee.

Position your leg as shown 1x/day for 3-5 minutes or as tolerated, not allowing pain levels to get severe.

After surgery: DO NOT place a pillow under the knee or allow your knee to stay slightly bent for extended periods as this will cause the knee to stiffen.



ANKLE PUMPS

Bend your foot up and down at your ankle joint as shown. Hold each position for 5 seconds.

Repeat for 10 reps 1x/day.



GLUTE SET - SUPINE

While lying on your back, squeeze your buttocks.

Repeat for 10 reps, hold 10 seconds each squeeze, 1x/day.



CALF STRETCH WITH TOWEL

While in a seated position, hook a towel under your foot & pull your ankle back until a stretch is felt on your calf area. Keep your knee in a straightened position during the stretch.

Hold 10 seconds 5 reps 1x/day.



STANDING HEEL RAISES

While standing, raise up on your toes as you lift your heels off the ground.

Perform 2 sets of 10 reps 1x/day.



SEATED HAMSTRING STRETCH

While seated, rest your heel on the floor with your knee straight and gently lean forward until a stretch is felt behind your knee/thigh.

Hold the stretch position for 10 seconds Repeat for 10 reps 1x/day.



STRAIGHT LEG RAISE

While lying on your back, raise up your leg with a straight knee to approximately 12 inches off the ground. Keep the opposite knee bent with the foot planted on the ground.

Perform 10 reps slowly and with controlled movement 1x/day. Keep the foot flexed back towards your nose to keep the leg completely straight as you lift.

SECTION 2: HOW TO PREPARE FOR SURGERY



HEEL SLIDES - SUPINE

Lying on your back with knees straight, slide the affected heel towards your buttock as you bend your knee. After surgery you will use a towel, strap, or sheet to loop around the foot and use your hands to assist the movement as the heel slides. Hold a mild stretch in this position for 5 seconds and then return to original position.

Repeat 10 reps 1x/day.



KNEE EXTENSION

While seated, straighten your knee as you raise your foot upwards as shown. Lower your foot back down until your heel touches the ground.

Repeat 2 sets of 10 reps 1x/day.



HIP ABDUCTION - STANDING

While standing, slowly with controlled movement raise your leg out to the side. Keep your knee straight and maintain your toes pointed forward the entire time. Use your arms for support if needed for balance and safety.

Repeat 10 reps 1x/day.



SEATED HEEL SLIDES WITH TOWEL

While in a seated position, place your foot on top of a small towel or smooth surface with a sock on. Then, slowly slide your foot closer towards you, bending your affected knee.

Repeat 10 reps 1x/day.

Prepare Your Home: Safety Tips

Since your safety is our primary concern, we require that a family member or friend stay with you the first night after your surgery and until you can care for yourself independently.

Consider these tips to make your home safe and comfortable for when you return home from surgery:

Storage to avoid reaching

- Move items you'll need to counter height to avoid excessive bending or reaching.
- Do not use step stools or reach for objects on your tiptoes.

Rearrange things for easy access

- Select a chair that has a firm back and arm rests. A chair that sits higher will help you stand more easily. Do not use chairs with wheels.
- Plan on using a cordless phone or cell phone, placed within reach of your seat.
- Make sure stairs have handrails that are securely fastened to the wall.
- If you must negotiate stairs in your home, discuss this at your post-operative therapy visit.
- Install night lights in bathrooms, bedrooms, and hallways.
- Optional: Purchase a raised toilet seat or bedside commode for comfort and ease.



Rugs and other clutter

- Purchase a non-slip bath mat for inside your tub or shower.
- Check every room for tripping hazards including rugs and electrical cords.



Arrange for help

- If you have pets, consider boarding them for a few days after your return home.
- Arrange for someone to collect your newspaper & mail.
- Plan to have someone to help 24 hours a day for the first 3-5 days.

Nutrition

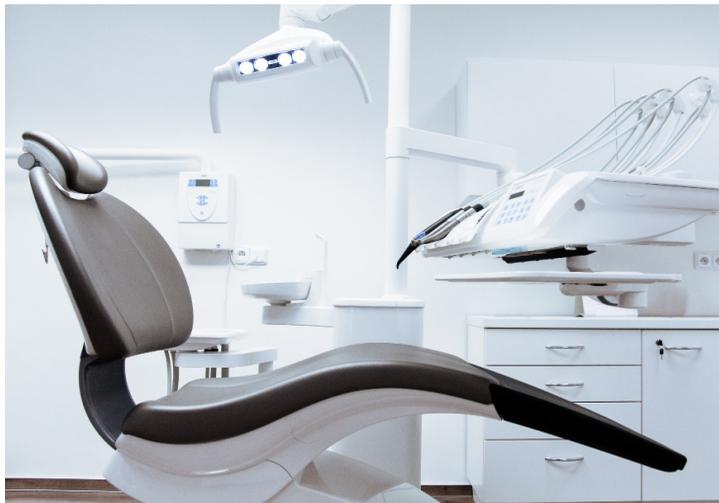
A healthy diet & proper nutrition before & after surgery has proven to lead to better outcomes & fewer infections after a joint replacement. "Immunonutrition" shakes are the gold-standard in the medical literature, but other high protein shakes have been proven to be just as effective. We recommend you drink one nutritional supplement a day for 6 days before AND after your joint replacement.

Some of the best options:

- Boost Premier Protein: for standard risk, diabetic, or overweight patients
- Boost Impact Advanced Recovery: for high-risk patients (bariatric, poor healing, vascular problems, etc)

Prevent Infection

There are several steps that you can take before your surgery to help prevent surgical site infections.



DENTAL CARE

All dental work, including cleaning, must be completed at least **2 WEEKS prior to** your surgery. You must call our office if any dental problems arise before your scheduled surgery date. After surgery, please wait **8 WEEKS** before scheduling any dental appointments. You will need to take an antibiotic prior to all dental visits following a joint replacement.

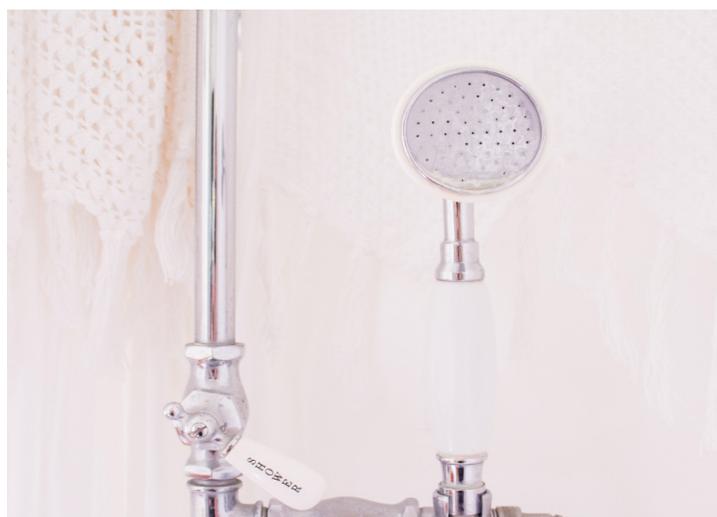
CLEAN HANDS

Hand hygiene is very important. You will notice your caregivers using alcohol-based hand sanitizer when entering your room. We also strongly encourage your family & friends to use this cleanser and to wash their hands frequently to prevent infection.



PRE-SURGERY BATHING

Do not shave or wax anywhere near your hip for **FIVE DAYS BEFORE** surgery. Shower the night before your surgery. Do not use any lotions, perfumes, or powders. Following your shower, put on clean, fresh pajamas and clean sheets on your bed.



SKIN RASH

Broken skin or rashes should be reported to your surgeon's team.

ILLNESS

If you become ill with a fever, cold, sore throat, flu, or any other illness, please contact your surgeon's team at 317-455-1064. Viruses do not occur in joints.

Medications: Before Surgery

Your Current Medications

Medications you CAN take prior to surgery

At your pre-op appointment with Dr. DeSalle or the IMPACT Center, you'll be given instructions about which prescriptions or over-the-counter medications to continue or hold prior to surgery.

Medications you may need to stop taking prior to surgery

Some medications you currently take may thin your blood and increase the risk of bleeding after surgery. You may need to STOP taking the following medications:*

- **2 weeks prior:** All herbal or vitamin supplements (such as St. John's Wort), biologic rheumatoid arthritis medications.
- **7 days prior:** Blood thinners, anticoagulants, and antiplatelet agents (such as Coumadin®, Plavix®, Effient®), Aspirin, compounds containing aspirin, hormone replacement therapy, omega 3 fatty acids. Anti-inflammatory medications (such as Ibuprofen®, Mobic®, Motrin®, Advil®, Aleve®, Naproxyn®, Relafin® or Diclofenac®). You may continue Celebrex®.

Some patients may have unique bleeding concerns that may change these guidelines. In these cases, special recommendations will be made in the pre-op clinic.

**These are examples only. Discuss your current medications and supplements with your doctor.*

Note: If you're receiving any vaccine, do so either 2 weeks prior to surgery or 2 weeks after surgery due to the immune response triggered by vaccines.

Pre-Op Medications

If your surgery is scheduled at Midwest Specialty Surgery Center, you will receive a phone call with your surgery time a few days prior to surgery. You may be prescribed the following prescriptions. During your pre-op appointment, a nurse will review what to take the day of surgery. Take the designated medications with small sips of water.

(If your surgery is at the hospital, you will receive your medications at the hospital.)

Tylenol (acetaminophen): We prescribe a regimen of Tylenol beginning the day before surgery and ending the morning of surgery.

Take two 500mg tablets of Tylenol every 6 hours starting the morning before surgery. The last dose of Tylenol should be 3 hours before your scheduled surgery time. (An example of a schedule for taking the Tylenol could be as follows: Day before surgery- 6AM, 12PM, 6PM, and final dose when you awaken on the day of surgery.)

Neurontin (gabapentin): This medication is used for pain management on the day of surgery, and will also be prescribed for a period of time after surgery.

Take 1 capsule with a small sip of water 4 hours before your scheduled surgery time.

Tranexamic acid: This medication is used preoperatively in order to prevent complications related to bleeding. If your surgery is at the hospital, you will not receive a script for this, as you will receive this medication at the hospital before your surgery.

Take the 3 capsules prescribed with a sip of water 3 hours before your surgery.

Medications: After Surgery

A few days before your surgery, your surgeon team will electronically send orders for several post-operative medications to the pharmacy you have listed with our office. Narcotic medications, used for pain management, **must be filled with a paper prescription**, which you will receive upon discharge.

The following medications will be prescribed to you:

Anti-nausea medication

- Some patients will experience nausea as a side effect of anesthesia and/or narcotic pain medications. You have been prescribed a medication to help ease your nausea. Please take this as directed by the instructions on the bottle. Some examples of this medication are promethazine (or Phenergan) or ondansetron (Zofran).
- *This is to be used on an “as needed” basis. It is not necessary that you take it if you are not experiencing nausea.*

Stool softener

- Anesthesia and narcotic medications slow the activity of the bowel, causing many patients to experience constipation. To combat this, you have been prescribed a stool softener to be taken 2x a day as needed. As you heal and are able to taper your use of narcotics, you may find that you no longer need a stool softener. Stop using this medication as you see appropriate.
- The most frequently prescribed stool softener is Colace. Some patients remain constipated despite taking a stool softener. In this case, you should stop your Colace and take a stronger medication such as Miralax, prune juice, or Milk of Magnesia.
 - Other important tips to prevent constipation:
 - Stay hydrated
 - Eat a well-balanced & fibrous diet
 - Take a fiber supplement, such as Benefiber or Metamucil

Blood thinner medication

- A potential complication of joint replacement surgery is the development of a blood clot. You'll be prescribed a medication to prevent a blood clot from forming.
- Take this for 30 days.
- Examples of blood thinner medications are aspirin (Ecotrin), apixaban (Eliquis), and rivaroxaban (Xarelto).

Antibiotic

- When an artificial joint is placed in the body, it doesn't have the same ability to fight infection as our native tissues. For this reason, we have taken every precaution in pre-op, the OR, and post-op to maintain a “clean” wound and prevent infection.
- **If you've had outpatient joint replacement**, you'll have a prescription to take an antibiotic. Once this is gone, you don't need a refill. Examples of frequently used post-op antibiotics are cephalexin (Keflex), ciprofloxacin (Cipro), or clindamycin (Cleocin).
- **If you've had inpatient joint replacement**, your antibiotic will be given through an IV.

Medications: After Surgery

Pain Management

- You may receive several medications for pain management. The local anesthetic during your procedure typically lasts 24-48 hours, so it's important to be prepared for when this wears off.
- We recommend you begin taking your oral narcotic pain medication **before bedtime the day of surgery** so your pain level doesn't become difficult to manage.
- Medications are prescribed based on a thorough assessment of each patient. These are prescribed on a case-by-case basis. If you have questions about your prescriptions, discuss with your surgeon team.
- **Do not drink alcohol or drive while on narcotics.**

Narcotic pain medication

- During post-op week 1, take the narcotic pain medication as prescribed. We recommend staying on the prescribed schedule rather than taking the pills as needed to prevent your pain from spiking. Based on pain level & judgment, you may lengthen the time between doses, or choose to decrease to 1 capsule instead of 2 at a time. This should be used as your first treatment for pain. As soon as you feel able to taper or stop using it, you should do so, as it has addictive properties. Many patients need to use narcotics for 1-2 weeks, then as needed for sleep & physical therapy.
- Pharmacies require narcotic scripts to be filled 1 week at a time, so you will be provided one script for the first week. If you need more pain medication, please call us for another prescription.
- Most patients can wean off narcotic medications & transition to regular Tylenol by 4 weeks post-op.
- The narcotic medications contain Tylenol. Do not exceed 3 grams of Tylenol in one day. Examples are Norco (hydrocodone/acetaminophen) & Percocet (oxycodone/acetaminophen).

Breakthrough pain medication

- Breakthrough pain is severe pain that occurs when you are already medicated with narcotic pain medication. For the first few weeks after surgery, you may experience severe pain even though you have been taking the medication as prescribed. If this occurs, you can use a breakthrough narcotic pain medication intended to bring your pain down to a tolerable level.
- This medication is not to be used as a first-line pain medication, as it won't last as long. If you're taking the narcotic medication and find you are frequently requiring the breakthrough medication, take the breakthrough medication halfway between the regular narcotic doses.
- The most common is oxycodone (Roxicodone). If you have sleep apnea, you won't be prescribed this. Sometimes insurance requires a prior authorization to approve your pain medication. We are often aware of this requirement and work to get this approved as quickly as possible. If your insurance denies your claim, we recommend using GoodRx to decrease your out-of-pocket cost.

Nightly nerve pain medication (non-narcotic)

- You may be prescribed a medication called Neurontin (gabapentin) to take each night (at bedtime) for 1 month after surgery. This is the same medication you may have been prescribed to take on the morning of your surgery.
- This medication helps decrease the pain associated with the nerves in the operative leg "waking up." Once this medication is gone, you do not need to refill.

If you need a refill of your pain medication, please call our office at 317-455-1064 between the hours of 8:00 a.m. and 4:00 p.m. Monday through Thursday, or between 8:00 a.m. and 12 p.m. on Friday, as most pharmacies are also open during these hours and will be able to fill your prescription.

SECTION 3: YOUR SURGERY

The Day Before Surgery

- You may eat or drink as desired until midnight the night before surgery. **However, after midnight, do not eat, drink, smoke, chew gum, or eat mints.**
- Take the medications as instructed during your preop testing with a small sip of water.
- Don't bring your home medications with you on the day of surgery. At your pre-op visit, your physician will discuss which medications you should take the morning of surgery.
- If you are having **outpatient surgery**, plan to spend most of the day with us. If you are having **inpatient surgery**, you will likely stay in the hospital overnight and well into the second day.

The Day of Surgery

- Wear clean, loose clothes. Avoid wearing fragrance, creams, lotions, makeup, or nail polish.
- Take the medications as instructed with a small sip of water.

- **Arrival**

Arrive promptly at your scheduled time and location, with plenty of time to check in and prepare for surgery. **Your surgeon's team will instruct you the day before on your expected arrival time.**

A nurse will review your medical records, take vital signs, perform a brief physical exam, and clean the surgical site. Then, a nurse will start an IV, which allows medication and fluids to flow directly into your bloodstream. We utilize preoperative antibiotics to reduce the risk of infection.

- **Anesthesia**

Your anesthesiologist will meet you before surgery to discuss your medical history and determine the best plan for your anesthetic care. It is important that you discuss any prior problems or difficulties you've had with anesthesia.

Your anesthesiologist will discuss the risks, benefits, and side effects associated with the various anesthetic options. Any time you have anesthesia, you may experience some nausea and vomiting; however, we routinely provide medications ahead of time to try to prevent these symptoms.

- **Family Waiting**

Your family members or friends can stay with you until you are ready to go into the OR. During surgery, they will be escorted to a waiting area. Once your surgery is complete, a member of the surgical team will contact your family members or friends to speak with your surgeon.

Immediately after Surgery

● Recovery

After surgery, you'll be transported to the Post Anesthesia Care Unit (PACU), or recovery room. Your stay in the PACU will depend upon your rate of recovery from the effects of anesthesia. Following an outpatient joint replacement, your post-op stay is typically 4 hours. Following an inpatient joint replacement, you will likely stay until the afternoon of the second day.

● Managing Pain

You will receive pain medication orally and, if needed, through your IV. Your physicians and nurses will do everything possible to relieve your pain and discomfort using medications and other techniques. Be as specific as possible about the pain you experience.

You can expect to receive IV antibiotics before you go home and additional medicines as needed. Sometimes, patients may feel nauseous or constipated. Both symptoms can be managed with medication so it is important that you talk with your nurse if you don't feel well.

● Early Ambulation

Once your vital signs are stable and you have regained movement and sensation in your lower extremities, your nurse will assist you to sit at the edge of the bed, stand, and walk.

If your surgery is at MSSC, you will see an ATI physical therapist across the hall before you go home.

The physical therapist will help you:

- Properly fit and safely use your walker
- Navigate climbing stairs, getting in and out of bed, getting up and down from a chair
- Answer any questions about your exercise routine

● Follow-up Phone Call

The day after surgery, you will receive a phone call as part of your ongoing care to check in on your progress.

Transitioning Home

You'll be ready to go home once you can walk safely, perform your exercise program, and your surgeon or PA determines that you are ready for dismissal.

You MUST arrange for someone to stay with you when you go home or you will not be released from the hospital or MSSC in a timely manner.

- To make your ride comfortable, your driver should bring pillows for you to sit on, slide your seat back, and recline the seat slightly.
- Be sure to use ice, which is given to you as you leave.

SECTION 4: RECOVERY

Recovery Goals

Day of Surgery

- Up in chair as tolerated
- Diet as tolerated; start slow and advance as you feel better
- Begin physical therapy
- Use ice every 2-3 hours and after exercises
- Use a walker without wheels for first few days
- Wear calf compression pumps at least 20 hours per day for 14 days

Post-Operative Day 1

- Continue use of ice therapy every 2-3 hours and after exercises
- Take pain medications as needed
- Elevate your knee but keep your leg straight
- May go up and down a flight of stairs as tolerated

Post-Operative Day 2

- Continue use of ice therapy every 2-3 hours and after exercises
- Take pain medications as needed
- Elevate your leg but keep your knee straight
- May now shower, keeping the wound dry
- Increase activity as tolerated

Taking Care of Your Joint

Managing Pain and Swelling

- The local anesthetic typically lasts 24-48 hours after surgery. We recommend you begin taking your oral pain medication prior to bed the night of your surgery so you do not get behind on your pain. Take your medications with a meal or snack. **Refer back to page 16 for medication instructions.**
- Swelling usually peaks during the first week. It's normal to experience bruising up your inner thigh/knee to the groin area & down to your foot, swelling of the upper/lower leg down to the foot/ankle, and/or a deep ache through the bone after surgery.
- Use ice every 2-3 hours and after exercises with your leg elevated. This will help reduce pain and swelling. DO NOT place ice directly on the skin.
- Elevate your leg 10" above the level of your heart and apply the ice if you have excessive swelling. You may place a pillow under your heel and the lower part of your leg.



Calf Compression Pumps

- Wear these for 20 hours a day for 14 days. Remove them when you bathe.
- If you have any questions on the calf pumps, please call the vendor (Matt Dripps at 317-517-3113 or Andy Hubbard at 317-797-4216).

Incision Care

- Keep your incision clean and dry.
- On day 2, remove the ace bandage and dressings. Wash your hands thoroughly. **Do not remove the adhesive wound closure tape, glue, staples, strips, or incisional vacuum.** If the strips begin to curl, you may trim them.
- Place a clean ABD pad over your incision and rewrap your leg with ace bandage. Change the dressing daily thereafter.
- Do not apply any creams, ointments, lotions or any other medication to the incision.
- If you have a purple incisional vacuum over the incision, please leave in place until the batteries stop working. This will occur in roughly 7-8 days. When this occurs, please remove the purple foam pad and change the dressing daily as instructed above. As long as the sponge is sucked down to the skin, it's working properly even if there is no drainage in the tubing.

Showering

- You may shower 48 hours after your surgery, but cover your incision with a water-protective material (i.e. saran wrap, press 'n seal, plastic bag with tape around the edges).
- For a step-in shower, step over the shower lip with your non-surgical leg first and then your surgical leg. Back up into the shower. Some patients choose to use a shower chair for assistance.
- If available, use hand-held shower and/or long-handled sponge to avoid excessive bending.

Rest

- Take rest breaks as needed during the day and get a good night's sleep to support the healing process. However, it is common to have difficulty sleeping after surgery. Achieving a restful night's sleep may be difficult for 2-3 months after joint replacement.
- You may sleep on your back or on your side with a pillow between your legs for comfort.
- The tendency is to over-do it in the first 3-4 weeks as you are feeling better, so be sure to rest well.

Activity

- Change positions every hour during waking hours. Get up and walk every 1-2 hours with a walker.
- Use a walker for 1-2 weeks following surgery, or longer if needed. You may transition to a cane.
- In the first few days, take your pain pills 30 minutes prior to doing your exercises to control soreness.
- You may bear weight as tolerated on the surgical leg unless instructed otherwise by your surgeon.
- Do not repetitively go up and down flights of stairs in the first few weeks.

Driving and Traveling

- No driving for the first two weeks. This will be discussed at your 2-week appointment.
- When traveling long distances, you should attempt to change position or try to stand every hour.
- Some of the exercises, like ankle pumps, can also be performed if you need to sit for long periods of time. If traveling within 14 days of your surgery, you should wear your calf compression pumps.
- Please consult with your surgeon team prior to air travel.

Risks of Joint Replacement Surgery

Joint replacements have success rates of higher than 95%, and advances in technology and medical care have made the procedure very safe and effective. However, risks do exist. These risks should be considered carefully before you decide to have surgery, so we encourage you to discuss them with your doctor and family. Every measure will be taken by our team of experts to minimize the risks and avoid complications.

Blood Clots & Prevention

- Blood clots can form in a leg vein and in your lungs after joint replacement surgery & can be dangerous.
- Getting up and moving frequently following surgery can reduce the risk of forming a blood clot.
- We recommend the use of portable calf compression devices for 14 days following surgery.
- Remember to take your blood thinner as prescribed.

Hematoma

- Bleeding into the joint can occur either immediately after surgery or at a later time
- Hematomas can be accompanied by acute pain & swelling and are sometimes confused with infection

Infection

- Infections occur in 1 out of 200 patients (0.5%). Patients with chronic health conditions, like diabetes or liver disease, or who take some forms of corticosteroids, are at higher risk of infection after any surgery
- Superficial wound infections are usually treated with antibiotics
- Deeper infections inside the joint may require additional surgery
- Acute pain, fevers, chills, night sweats, or new drainage can indicate infection & should be reported immediately

Nerve, Blood Vessel, and Ligament Injuries

- Damage to nerves, vessels, ligaments are a possibility in orthopedics
- More commonly, there is numbness in the area of the incision, which usually resolves in 6-12 months
- Don't be surprised if you have small residual numbness in one or more areas around your incision

Arthritis Progression (Partial Knee)

- The knee may experience further degeneration in the knee portions that weren't replaced
- Occurs in less than 10% of patients with partial knee replacements after 20 years

Limited Range of Motion

- Even after physical therapy and an extended recovery period, some people continue to experience range-of-motion loss and stiffness that can make normal activity difficult.

Delayed Wound Healing

- If you take corticosteroids, smoke, or have a disease that affects the immune system, your incision will likely heal slowly.
- Smoking can cause serious complications. Quitting before undergoing joint replacement surgery is strongly encouraged. If you need help quitting, speak with your surgeon or family physician.
- You may have an incisional wound vac placed over your incision per your surgeon's discretion.
- Prevena - If you have a purple incisional vacuum over the incision, please leave it in place until the batteries stop working. This will occur in roughly 7-8 days. When this occurs, remove the purple foam pad and change the dressing daily. As long as the sponge is sucked down to the skin, it's working properly even if there is no drainage in the tubing.

Wear

- Your knee replacement is a mechanical device that can wear over time. The rate of wear may depend on your age, weight, and activity level.
- The Oxford partial knee replacement system has the lowest documented clinical wear of any implant in the world with a 35-year clinical history.
- It's rare for the specialized plastic (polyethylene) to wear out in any implant we use, even after 20 years.

Loosening of the Joint

- Occurs in 2-3% of patients within 10 years of joint replacement surgery
- Occurs when tissue grows between the artificial joint and your bone, or due to infection.
- Could cause pain and loss of bone, which could require a revision surgery for a new prosthesis

When to call your surgeon

A moderate amount of bruising, swelling, and redness can be expected after knee or hip surgery. However, **if you experience ANY of the following, please call our office at 317-455-1064:**

- A fall
- Numbness, tingling, or burning that persists even after elevating your leg and applying ice
- Pain not relieved by medication or pain that is getting worse
- Thick yellow drainage or bleeding from the incision site
- Inability to do your exercises
- Excessive swelling that persists
- Toes that are very cold and do not get warm when you cover them
- Increased redness around your incision
- A temperature over 101 degrees F (38.3 degrees C)
- Any unexpected problems, concerns, or questions



If you experience chest pain, palpitations, or difficulty breathing, please call 911.

Life after Knee Replacement

Exercises and Activity

- Exercise and maintaining an active lifestyle are important parts of health. Most patients with artificial joints are able to enjoy many activities, though some should be avoided.
- In general, high impact exercises like running, jumping, heavy weight lifting, or contact sports, are not recommended. Participating in these kinds of activities may damage your joint or cause it to wear down much more quickly.
- Low-impact activities like swimming, walking, biking, gardening, and golfing are encouraged. You may kneel on your new knee without damaging it; however, it will likely feel uncomfortable. Make sure to wait until your incision has healed before you try these activities. Ease into these activities and increase in small amounts over time.

Dental Care

- Notify your dentist that you have had a joint replacement. It is essential that you obtain a prescription from your dentist for a prophylactic antibiotic to be taken PRIOR to any dental cleaning or procedure for the rest of your life. You will need to remind your dentist before every scheduled appointment in the future of this requirement in order to reduce the risk of developing an infection in your joint.

Traveling

- Because your new artificial joint contains metal components, you will likely set off the security systems at airports or shopping malls. This is normal and should not cause concern.

Infection Prevention

- To reduce your risk of infection, antibiotics may need to be administered prior to any surgery, invasive test, or procedure (**such as a colonoscopy**). The performing physician should prescribe antibiotics if indicated.

Follow-up Care

- After your surgery, you will return for follow-up appointments at 2 weeks, 3 months, and 1 year. **Your 2-week post-op appointment will be with one of our physican assistants.**
- After your 1-year appoinment, joint replacements are monitored every few years at your physician's discretion. We may also include phone or email surveys for research purposes.



SECTION 5: MOBILITY & EXERCISES

Mobility

Walking with an Assistive Device

- Move your walker or crutches first, then your surgical leg, followed by your other leg.
- Heel-to-toe gait: When walking with a walker or crutches, stand tall & look ahead (not the floor), bend your knee to take a step, keeping your toes pointed straight ahead, then set your heel on the floor first.
- For better balance, stay in the middle of your walker. Don't step beyond the front of your walker.
- Use your walker until you are able to walk confidently without a limp. If you find yourself holding onto the wall or other objects while walking, you need to continue to use your walker. You may transition to a cane when you are able to stand on your surgical leg without support. Be sure to carry your cane on your non-operative side.

Standing

- Scoot to the edge of the seat, keeping your surgical leg forward for comfort.
- Push from armrests or toilet to stand.

Sitting

- Back up (using a walker or crutches) until both legs touch the chair or toilet.
- Slide your surgical leg forward for comfort, reach back for the armrest, handle, or toilet, then sit slowly.

Bed Mobility

Getting Out of Bed

- Scoot your bottom and hips to the edge of the bed.
- Slide your legs off the edge of the bed while using your arms to help sit up.

Getting Into Bed

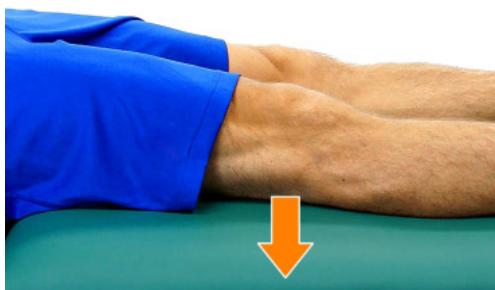
- Slide your surgical leg forward for comfort and sit on the edge of the bed.
- Scoot your bottom and hips back, bring your legs onto the bed.
- Scoot up in bed using your arms and non-surgical leg.

Car Transfers

- Slide the seat of your car as far back as possible and if able, recline the seat. If needed, place a pillow on the seat to make it level.
- Back up to the car using your walker (or crutches). Reach back to the car seat or dashboard for support.
- Slide your surgical leg forward as you sit down on the edge of the seat.
- Scoot back on the seat as far as possible and lean back as you swing your legs into the car.
- To get out of the car, reverse the above procedure.

Post-Operative Exercises Days 1-14 Exercises

The pictures shown below may display larger ranges of motion or list a greater number of repetitions/sets than you may be able to complete during the first two weeks after surgery.



QUAD SET

Tighten your top thigh muscle as you attempt to press the back of your knee downward towards the table.

Repeat for 10 reps, hold for 5 seconds, 3x/day.

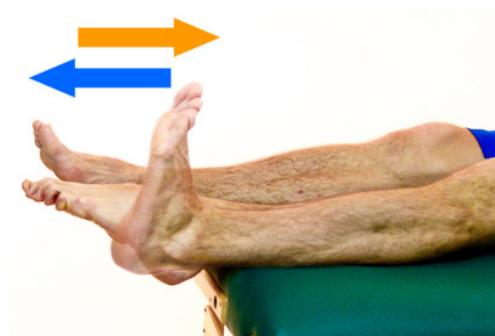


TOWEL UNDER HEEL

While lying down, place a towel roll under your ankle so that your leg does not contact the surface of the table/bed, allow gravity to pull your leg downward towards the ground to fully extend the knee.

Position your leg as shown 3x/day for 3-5 minutes or as tolerated, not allowing pain levels to get severe.

DO NOT place a pillow under the knee or allow your knee to stay slightly bent for extended periods as this will cause the knee to stiffen.



ANKLE PUMPS

Bend your foot up and down at your ankle joint as shown. Hold each position for 5 seconds.

Repeat for 10 reps 3x/day.



GLUTE SET - SUPINE

While lying on your back, squeeze your buttocks.

Repeat for 10 reps, hold 10 seconds each squeeze, 3x/day.

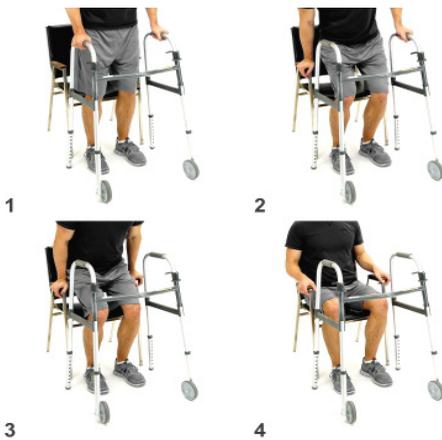


SEATED HEEL SLIDES WITH TOWEL

Start gentle bending of the knee immediately after surgery. On day 5, begin more aggressive bending with the following exercise:

In a seated position, place your foot on top of a small towel or smooth surface with a sock on. Then, slowly slide your foot closer towards you bending your affected knee.

Hold a mild to moderate level of stretch for 10 seconds and then return foot forward to original position. Repeat 10 reps 3x/day.



TRANSFER - STAND TO SIT - LEG PROTECTION

Walk over to the chair with your walker and turn so that the back of your legs touch the seat. Next, take a small step forward with the affected leg and reach back with your hand (opposite the affected leg) to hold the chair as you lower yourself to sit.

Your affected leg should slide forward as you sit to protect it from bending into an uncomfortable position – you will use this technique for approximately 2 weeks, then have enough knee movement to sit normally.



GAIT WITH WALKER

Move the walker forward and take a step into the frame with your affected leg; use your arms to take pressure off the affected side to allow for comfortable amounts of weight through the leg.

Next, step forward with your unaffected leg so that it lines up with the other leg. Pick the foot up and allow the knee to bend - no straight or stiff leg gait!

You can bear as much weight on your affected leg as you feel comfortable.

Use ice as directed after each exercise routine for 20-30 minutes.

Climbing Stairs

- Always lead going up the steps/curb with the unaffected leg and lead going down with the affected leg;
- “Up with the good and down with the bad.”
- During the first 3-4 weeks after surgery, always have someone with you to assist with climbing/descending several stairs and utilize handrails for balance/support. If you can remain on one level as much as possible, that is recommended.

Post-Operative Exercises Days 15-30+ Exercises

Continue with all Days 1-14 exercises and add these in.



STRAIGHT LEG RAISE

While lying on your back, raise up your leg with a straight knee to about 12 inches off the ground. Keep the opposite knee bent with the foot planted on the ground. Perform 10 reps slowly and with controlled movement 1x/day. Keep the foot flexed back towards your nose to keep the leg straight as you lift.



CALF STRETCH WITH TOWEL

While in a seated position, hook a towel under your foot & pull your ankle back until a stretch is felt on your calf area. Keep your knee in a straightened position during the stretch.

Hold 10 seconds 5 reps 2x/day.



STANDING HEEL RAISES

While standing, raise up on your toes as you lift your heels off the ground.

Perform 2 sets of 10 reps 1x/day.



SEATED HAMSTRING STRETCH

While seated, rest your heel on the floor with your knee straight and gently lean forward until a stretch is felt behind your knee/thigh.

Hold the stretch position for 10 seconds Repeat for 10 reps 1x/day.

Use ice as directed after each exercise routine for 20-30 minutes.

Continue these exercises beyond 4 weeks. Light walking, stationary bike, and other light strength/stretching exercises (no weight machines) can be used as guided by your surgeon team and PT. The amount of time you spend on your feet will directly impact pain and swelling. Although you want consistent amounts of light activity (around the house), the first 4 weeks are mainly for recovery. Pay attention to increased swelling and pain levels to determine the appropriate amount of activity that your knee can tolerate.

Significant increases mean you are doing too much!

SECTION 6: FREQUENTLY ASKED QUESTIONS

Q: What will the recovery be like after joint replacement?

A: The recovery process is like achieving milestones in a long-distance race. The first phase is to regain mobility around the house and with activities of daily living. This usually involves a walker for 1-2 weeks and then a transition to a cane. You are able to drive when you are comfortable on a walker or cane, are not taking narcotic pain pills, and have been approved by your surgeon's team (usually a PA) to drive. The next phase is range of motion. For the knee we have a goal of over 90 to 100 degrees by 2-3 weeks after the replacement. Partial knee replacements achieve this sooner. Most people are able to return to work between 4-8 weeks after a joint replacement, depending on what type of work they do. The final phase is strengthening and endurance. This takes 6-18 months to achieve final function. Most people need help at home for the first week and then are independent.

Q: How much weight can I put on the leg?

A: Most people with first time joint replacement can begin to walk and bear weight the day of the surgery and advance to full weight bearing with a cane within a few days to weeks.

Q: What will the pain be like?

A: You will experience pain after surgery. It will be different than the pain you are experiencing now and should improve gradually during your recovery from surgery. Your surgeon, anesthesiologist, and nurse will utilize multiple strategies to manage your pain including medication, positioning, ice, and activity. Sleeping comfortably can take 3 months to really improve. We have some newer medicines to take at bedtime, which seem to help this transition process.

Q: How much therapy is involved?

A: A physical therapist is a coach, but recovery of motion, strength, and function is up to the patient. It is up to the patient to maintain strength, health, and activity to get the most out of their joint replacement. See pg. 9 to review your physical therapy options.

Q: Where can I get a walker?

A: It is important that you get a walker before surgery. Many patients borrow a walker from a friend or family member. These can also be obtained from most local pharmacies or medical equipment suppliers. The local supplier for Medicare is Hook's Oxygen & Medical Equipment: 317-784-0226.

Q: When will I find out my surgery time?

A: You will receive a call one business day prior to the surgery with your arrival time and the time your procedure is scheduled to start.

SECTION 6: FAQ

Q: How often do I have to wear the calf compression pumps?

A: 20 out of 24 hours per day for 14 days after surgery.

Q: What do I do if the pumps don't work when I get home?

A: Please contact the vendor representative directly using the number on the box and on the forms you received. To speak directly with one of our vendors, call Matt Dripps at 317-517-3113 or Andy Hubbard at 317-797-4216. Please do not contact your surgeon's office regarding these devices.

Q: What about airport metal detectors?

A: Thousands of Americans with joint replacements travel every day. While there is no official TSA document, we do provide you with a souvenir joint replacement ID card. Simply report your joint replacement to the agent if/when asked.

Q: What is the normal follow up schedule?

A: For most patients, follow up appointments occur at 2 weeks, 3 months, and one year after surgery. After that, joint replacements are monitored every few years at your physician's discretion. If anything is out of the ordinary after surgery, you can contact us to be seen any time.

Q: What restrictions will I have long term?

A: Though we impose guidelines during the recovery period to aid healing, we do not routinely impose any lifetime restrictions on our patients. Please ask us about any special or unique activities you would like to return to.

Q: When can I drive?

A: Your surgeon will determine how long you will have to wait to drive, depending on your circumstance. Some patients may begin to drive once they are no longer taking narcotics and are not using a walker.

Q: How do I navigate the stairs in my home?

A: While you won't be running up and down stairs immediately after surgery, you will be able to navigate stairs to get into your home. Your physical therapist will discuss this with you the day of surgery.

Q: When can I return to work?

A: This varies widely between patients. You know your job requirements, job flexibility, and physical abilities better than anyone. The goal of joint replacement is to get you back to full function as soon as you are able. We will work with you to get you back to work as soon as possible. Do remember that we don't want to over-extend you too soon such that you are set back in your overall recovery. Average return-to-work time is between 4-8 weeks.

Financial FAQ: Surgical Billing

Please make sure to provide MCJR with your most current medical insurance cards. Let us know as soon as possible of any upcoming insurance changes that may affect your surgical coverage.

Q: What will the patient responsibility be for my surgery?

A: As everyone's insurance coverage is different, we encourage you to contact your insurance company for a better understanding of your surgical benefits and out of pocket costs.

Q: Who will pre-certify the surgery with my insurance?

A: MCJR staff will contact your insurance company to pre-certify your surgery. If possible, we start the precertification process at least 30 days in advance. MCJR will contact you if any issues arise requiring patient involvement.

Q: How can I get my FMLA or disability paperwork filled out for my employer?

A: Bring your FMLA or disability paperwork into MCJR along with the company mailing address or fax number for returning completed forms. Our nursing staff will get it filled out and filed where it needs to go. There is a \$10 fee for each set of paperwork, and we ask that you allow us 7-10 business day to get those completed.

Q: What will I be required to pay up front for surgery?

A: MCJR does not require payment up front; however, Midwest Specialty Surgery Center or the hospital may require payment. Those offices would contact you ahead of time to let you know how much to bring with you on the day of surgery.

Q: What services are part of the surgery?

A: The surgery itself and your 2-week post-op office visit are included as part of the surgery. Any other services following surgery (x-rays, injections, etc.) are not part of your surgery and will be billed to your insurance company. Your 3-4 month follow up office visit with x-rays is NOT part of the surgical package and will be billed to your insurance company.

Q: How can I pay my bill?

A: You will receive either an electronic statement or a paper statement from MCJR when you have a patient balance. Payment is due upon receipt. Payment may be made online with the QuickPay Code found on your statement, with a check to our PO Box in Belfast, Maine, or by phone through our office. We accept all major credit cards.

Q: What other bills can I expect to receive?

A: MCJR is a private practice and only does billing for your surgeon. Depending on where you have your surgery, you may also receive bills from Midwest Specialty Surgery Center (located on the first floor in the same building), Franciscan Health, anesthesia, physical therapy, labs, imaging, or other healthcare establishments related to your care.







Midwest Center for Joint Replacement

Taking the pain out of joint replacement™

Indianapolis Office



6920 Gatwick Dr. #200
Indianapolis, IN 46241

Bloomington Office



541 S. Landmark Ave
Bloomington, IN 47403

317-455-1064 | www.mcjr.com