



JOINT REPLACEMENT

GUIDEBOOK

What Our Patients Are Saying

"My knee replacement experience couldn't have gone better. My new knees have changed my life!"

- Joel Kauffman NMC Health Joint Replacement Patient

"Dr. Pigg and NMC trusted me to be a part of my healing by giving me the tools to help ensure a successful outcome. From my first visit and all along the way I was informed and empowered."

- Jackie Volbrecht NMC Health Joint Replacement Patient

"The results of my joint replacement have been amazing. The staff at NMC provided excellent care throughout the entire process...

Since my replacement, I have been able to enjoy an active lifestyle that was once impossible. I've lost 75 pounds as a result of improving my activity level because of the procedure, and I am in the best shape of my life! It has truly been life changing. Thanks NMC!"

- Ted Krehbiel NMC Health Joint Replacement Patient

About the Joint Replacement Program

NMC Health's Joint Replacement Program is an initiative focused on your well-being and achievements. Spearheaded by orthopedic surgeons Dr. J. Scott Pigg and Dr. Jessica Brozek, our program offers comprehensive guidance throughout your journey, starting from surgery scheduling to recovery.

What sets our joint replacement program apart is the seamless integration between the hospital and orthopedic clinic, both being integral parts of NMC Health. This ensures a smooth and coordinated experience for you and your support system.

At NMC Health, we employ cutting-edge technology in joint replacement procedures, specifically the Mako® Robotic-Arm Assisted Surgery System. With the aid of Mako technology, a 3D model of your joint is generated using CT images, enabling a personalized surgical plan tailored to your needs.

About NMC Health

NMC Health is an award-winning, nonprofit medical care system focused on improving health throughout Newton, Harvey County and surrounding counties.

Featuring a 99-bed hospital and 10 specialty and primary care clinics, NMC Health's services include:

- · emergency medicine
- surgery
- orthopedics & sports medicine
- neurology
- urology
- physical therapy & rehabilitation
- occupational medicine
- home health & private duty
- · advanced wound care, and more

For more information, visit myNMCHealth.org.

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Contact Us
Please contact us with your questions or concerns:
Clinic Surgery Scheduler316.804.6249 (or 5213)
Clinic Office
Hospital Front Desk316.283.2700
Case Manager 316.804.6222











NMC HEALTH

JOINT REPLACEMENT PROGRAM

Thank you for choosing us for your joint replacement. We know that deciding to proceed with surgery is an important decision. Our goal is to ensure that you have a safe and successful surgery.

This guidebook will help:

- Teach you how to prepare for surgery
- Explain what you can expect on the day of your surgery
- Guide you to the best recovery possible

A workbook is also included to help you track your recovery progress. After you have read the workbook, please sign and date page 46.

If you have any questions or concerns as you prepare for surgery, please contact us directly via email or through the patient portal at https://www.myNMCHealth.org/patients-visitors/patient-portal/.

Sincerely,

J. Scott Pigg, MD Orthopedic Surgeon

dr.pigg@myNMCHealth.org

Jessica Brozek, MD Orthopedic Surgeon

316.283.9977

Nationally Recognized Care



NMC Health Medical Center is a Blue Distinction Center+ for Knee and Hip Replacement, demonstrating the hospital's commitment to providing the best patient outcomes.



NMC Health is an Own the Bone Star Performer, recognizing our commitment to helping patients prevent falls and bone fractures. This distinction, given by the American Orthopaedic Association, is given to hospitals and practices that achieve a 75% compliance rate with at least five (5) Own the Bone prevention measures.



NMC Health was named one of America's Best Hospitals for Orthopedics by the Women's Choice Award©, America's trusted referral source for the best in healthcare. The award signifies that NMC Health's Medical Center and Orthopedics & Sports Specialists are in the top 2% of 4,728 U.S. hospitals offering orthopedics services.



Surgery Scheduling and Pre-Surgery Appointments

Surgery Scheduling

Our surgery scheduler will contact you by phone to schedule your surgery date, preoperative appointment, and any required tests. They will also go over your medical history and current medications. We'll guide you on how to get the medical clearance needed before surgery and provide information on physical therapy, both before and after surgery.

Medical Clearance

To be cleared for surgery, you will need approval from your primary care doctor. If you see any specialists (such as for heart, kidney, or arthritis issues), you may need to meet with them as well. Your doctors will review your medications and let you know if any need to be stopped before surgery.

If You Have a Cardiac Stent

You may need special instructions from your cardiologist if you have had a stent placed in your heart or if you have had a prosthetic heart valve. Please coordinate with our surgery scheduler and your cardiologist for special instructions in these situations.

Dental Health

If you have any dental issues, schedule an appointment with your dentist at least 3 weeks before surgery to address these issues. Avoid any non-urgent dental work for at least three months after your joint surgery to reduce the risk of infection.

Two Week Preoperative Appointment and CT Scan

Two weeks before surgery, you will meet with your surgeon's assistant to go over any last questions you may have. During this appointment, you will discuss your post-surgery care plan, including pain management and blood clot prevention. If you need extra help with your care after surgery, we will put you in contact with one of our case managers.

Pre-Admission Call

The day before surgery, you will get a call from a nurse in our Pre-Admission Screening Unit (PASU). They will review your medical history, medications, and medical clearances, and give you any final instruction. They will also tell you what time to arrive at the hospital on the day of your surgery.



IMPORTANT:

Before surgery, tell your surgeon if you think you may have an infection, cold, flu, fever or find a rash or sores on your abdomen, back, or legs.



Healthy Diet Makes a Difference

Before surgery, it is important to eat healthy foods that are good for your body. Studies show that eating healthy before and after surgery helps reduce the chance of complications from surgery.

- 1. Limit eating red meat, sugar, and saturated fats.
- 2. Eat foods that are natural, unprocessed, and free from additives, preservatives, and artificial ingredients. Minimize packaged and pre-made meals.
- 3. Make sure you get enough carbohydrates in your diet from whole foods that have not been processed. Healthy carbohydrates are found in vegetables, fruits, and whole grains. They give you important nutrients like vitamins, minerals, and fiber, which keep you strong and support your immune system. They also help your body absorb nutrients, reduce inflammation, and recover your muscles.
- 4. Eat small amounts of protein throughout the day. Healthy proteins come from foods such as lentils, black beans, soy, peas, and brown rice. Processed animal products, such as bacon and sausage, should be avoided. Whole animal product such as chicken and fish can also be sources of protein.¹

Studies show that drinking protein shakes may help reduce complications after surgery, including muscle loss.² Drink one protein shake daily starting 7 days before surgery and continuing for at least 3 weeks after surgery. These shakes, found in Walmart (pharmacy department) or other local grocery stores, usually come as a powder that you can easily mix with water.

Weight Management

Keeping a healthy weight is an important part of feeling good and preventing health issues. Balance your diet and activity levels to help keep your weight within the right levels for your height.

A higher Body Mass Index (BMI) increases your risk of complications from surgery. A BMI greater than 30 can increase your risk of medical complications, including infection. To proceed with surgery, your BMI must be 40 or lower. Find out if you are at a healthy weight by calculating your BMI at www.cdc.gov/healthyweight.

¹Hirsch KR, Wolfe RR, Ferrando AA. Pre- and Post-Surgical Nutrition for Preservation of Muscle Mass, Strength, and Functionality Following Orthopedic Surgery. Nutrients. 2021 May 15;13(5):1675. doi: 10.3390/nu13051675. PMID: 34063333; PMCID: PMC8156786.

²Liao C-D, Wu Y-T, Tsauo J-Y, Chen P-R, Tu Y-K, Chen H-C, Liou T-H. Effects of Protein Supplementation Combined with Exercise Training on Muscle Mass and Function in Older Adults with Lower-Extremity Osteoarthritis: A Systematic Review and Meta-Analysis of Randomized Trials. Nutrients. 2020; 12(8):2422. https://doi.org/10.3390/nu12082422

Vitamin D

Studies show that low vitamin D levels can lead to increased risk of complications after surgery. If you are not already taking a vitamin D supplement, you should consider taking a daily vitamin D of 2,000-3,000 IU. Start now in preparation for surgery and continue for at least 6 weeks after surgery.

Surgery and Smoking

Smoking causes many issues that can be avoided, like heart and lung diseases and many cancers. Smoking also has negative effects on bones, muscles and joints, and can lead to issues after surgery. This includes smokeless tobacco.

Smoking is one of the main reasons for complications after surgery. When you smoke, you limit the body's chances of healing. The most common issues include:

- Slow wound healing
- Infection
- Bones can take longer to heal in smokers because nicotine slows the creation of bone-forming cells

You must be smoke-free for at least 4 weeks before your surgery. We will perform a blood test 2 weeks prior to surgery if there's any indication you may have been smoking. If this test confirms smoking, your surgery will be delayed.

¹orthoinfo.aaos.org/en/treatment/surgery-and-smoking/ ²www.facs.org/education/patient-education/patient-resources/prepare/quit-smoking



Risks of Using Narcotic Pain Medication

Narcotics, also known as opioids, can be effective for short-term relief of severe pain, but they are not recommended for long-term use due to their high risk of addiction and common side effects. Common opioids include hydrocodone and oxycodone.

Research show that:

- Approximately 20% of patients undergoing joint replacement surgery experience negative adverse effects from opioids.
- 8% of patients continue using opioids six months after surgery.
- Up to 50% of patients who use opioids before surgery still rely on them 6 months after surgery.¹

Recovering from surgery is generally less painful if opioids are not used prior to the procedure. Prolonged opioid use can increase pain sensitivity, a condition called "opioid-induced hypersensitivity," which can make post-surgery pain management more challenging.

To manage pain after surgery, we will use various methods, including:

- Pain blocks before surgery
- Joint injections during surgery
- Tylenol, anti-inflammatory medications, ice, elevation, and rest

Opioids will be available if pain becomes severe or cannot be managed with other treatments.

TAKE HOME POINT:

Limit opioid use before and after surgery. Some patients recover without using any opioids at all. Opioids will be available for you if needed but should not be used for first line pain management after surgery.

¹Goesling, Jenna; Moser, Stephanie E.; Zaidi, Bilal; Hassett, Afton L.; Hilliard, Paul; Hallstrom, Brian; Clauw, Daniel J.; Brummett, Chad M.. Trends and predictors of opioid use after total knee and total hip arthroplasty. PAIN 157(6):p 1259-1265, June 2016. | DOI: 10.1097/j. pain.000000000000516

²Zywiel MG, Stroh DA, Lee SY, Vonutti PM, Mont MA. Chronic opioid use prior to total knee arthroplasty. J Bone Joint Surg Am. 2011 Nov 2;93(21):1988-93. doi: 10.2106/JBJS.J01473. PMID: 22048093.

Reducing Infection Risks

You will receive a chlorhexidine gluconate (CHG) cleanser at your preoperative appointment. Shower with CHG daily for three days before surgery, including the night before and the morning of your scheduled procedure.

*CHG is a special antibacterial soap that helps ensure your skin is as bacteria-free as possible before surgery. If you haven't received this cleanser a week before your surgery or need more, please call our office. Do not use CHG if you are allergic to it. If you notice any skin changes, wounds, or rashes near the surgical area, contact our office, as this may delay your surgery. If you experience sensitivity, follow the instructions below using an antibacterial soap instead.

How to Use

- In the shower or tub, wash your hair and face with your usual products and rinse thoroughly.
- Apply the CHG liquid to a clean washcloth and wash the surgical site first.
- Wash your entire body from the neck down.
- Avoid using CHG near your eyes or ears.
- Turn off the water to prevent rinsing too soon.
- Gently wash your body for five minutes, without scrubbing too hard.
- Rinse thoroughly, then use a second clean washcloth to rewash only the surgical site and rinse with water.
- Dry the surgical area first with a clean towel, then dry the rest of your body with another part of the towel, ensuring the surgical site is not re-dried with the same towel.
- Repeat this process each day for three days before surgery, including the morning of your surgery.
- On the day of surgery, avoid using any lotions, powders, or creams after showering.



Choosing a "Coach" For Your Surgery Journey

You will need a "coach" to assist you before, during, and after your surgery. This person should accompany you to your preoperative appointments. Make sure to select your coach by the time of your two-week preoperative appointment.

After surgery, you will likely need help at home. The length of assistance can vary from a few days to a few weeks, depending on your recovery needs.

Your coach or helper might assist with:

- Tracking medications
- Applying ice regularly
- · Caring for pets
- Cleaning and doing laundry
- Grocery shopping and cooking
- Providing transportation to appointments

If you live alone and cannot arrange for someone to stay with you, please contact your case manager at 316.804.6222. If you are considering hiring a personal attendant for tasks like bathing, laundry, and cleaning, your case manager can assist; however, please note that insurance may not cover non-healthcare-related services.

Prepare Your Home Before Surgery

- Remove any power cords and throw rugs, and secure any loose carpeting.
- Make sure pathways throughout the home are clear and wide enough for using a walker.
- Place night lights in bathrooms, bedrooms, and hallways for better visibility.
- Install grab bars or handrails in the shower or bath.
- Add handrails to any stairs in the home.
- Prepare simple, easy-to-make meals (avoiding overly processed options).
- If possible, plan to live on one level of the home during recovery.

NMC Health's Home Care & Private Duty services are also available to help. For more information, call 316.283.8220.





What To Pack

Keep It Simple!

- Bring only the essentials.
- Label all personal items to help us identify them.

What to Bring

- 1. Identification and Insurance:
 - Driver's license
 - Health insurance or health plan card
- 2. Medical Information
 - Details of illnesses, surgeries, and allergies to medications
 - A complete list of all medications (include prescription drugs, over-the-counter items, vitamins, and herbal supplements), with the name, dosage, schedule, and purpose.
- 3. Comfort and Care Items
 - This guidebook!!
 - Walker
 - Comfortable clothes for going home (e.g., sweats and a T-shirt). If you are not staying overnight, wear these to the hospital.
 - Pajamas (for overnight stays)
 - Comfortable, nonslip shoes
 - Personal care items (e.g., toothbrush, toothpaste, shampoo, comb/brush, deodorant, razor). Note: These items are available for free if needed.
- 4. Medical Equipment (if applicable)
 - CPAP or BIPAP machine (for overnight stays)

Driving After Surgery

When to Resume

You can drive once you have stopped taking narcotic pain medications and can safely control the vehicle. Be aware that your reaction time may be slower for up to 6 weeks after surgery.

Safety First

Ultimately, it is up to you to decide if you can safely drive. Make sure you feel confident and capable before getting back on the road.

Surgery Countdown Checklist

3-4 Weeks Before Surgery	
☐ Get surgical clearance as requested. Your	Day Before Surgery
primary care doctor and any specialists (cardiac, etc.) will order lab work, chest X-ray and a heart tracing (EKG).	☐ The Pre-Admission Screening Unit (PASU) will call with your time to arrive the next day. If you haven't been called by 2:00 p.m., call
☐ Start preoperative exercises (page 23).	316.804.6165.
☐ Start eating healthy (page 7).	☐ Take Docusate Sodium (Colace) in the morning
☐ Start taking Vitamin D (page 8).	and evening to avoid constipation if you plan on taking opioid pain medication after surgery.
2-3 Weeks Before Surgery	☐ Continue daily CHG shower.
☐ Attend preoperative appointment with your	☐ Remove all piercings, jewelry, etc.
surgeon's assistant. You will receive the CHG soap.	☐ Do not eat anything after midnight.
☐ Get pre-op CT scan. Go to the front entrance	The Morning of Surgery
of the hospital and check in at admissions.	☐ Take your final CHG shower.
Arrive 15 minutes before your scheduled	☐ Do not eat anything.
appointment.	☐ You may drink water or black coffee up to 2
$\ \square$ If you have not quit smoking or using nicotine,	hours prior to your arrival at the hospital.
including vaping, call to reschedule your	\square Take only the medicines you were told to take
surgery.	with small sips of water.
	☐ Brush your teeth.
7-8 Days Before Surgery	☐ Do not use hair products.
☐ Start a protein shake (page 7).	☐ Bring a CPAP machine if you have one and are
☐ Continue preoperative exercises.	scheduled for an overnight stay.
	☐ Bring a walker, if you have one.
3 Days Before Surgery	\square Bring a list of your current medications.
☐ Start CHG showers daily using the techniques	☐ Bring your photo ID and insurance card
described on page 10.	 Check in at NMC Health's Emergency Entrance at the designated time.
	☐ Don't forget to bring this guidebook!

Questions? Call us! 316.804.6249 or 316.804.5213



On the day of your surgery, you will be asked to sign the following consent form. It is essential that you review the following information before your arrival. If you have any questions, please feel free to contact me directly at dr.pigg@myNMCHealth.org or through the patient portal at https://www.mynmchealth.org/patients-visitors/patient-portal/.

Consent for Knee and Hip Replacement

Surgery involves certain risks and responsibilities, and it is important to understand that any surgical procedure carries some level of risk. This consent form aims to inform you about potential complications during surgery and the recovery process.

While most patients experience a positive outcome, it is essential to be aware of the possible risks involved. Hip and knee replacement surgeries are elective, meaning you have the option to decide whether to proceed. The only way to completely eliminate surgical risks is to not proceed with surgery.

Alternatives to surgery are available, including rest, ice or heat, pain medications, physical therapy, assistive devices such as a cane or walker, and injections. However, surgery may be recommended if other treatments are not effective.

Potential risks of surgery include, but are not limited to, infection, blood clots, fractures,

Potential risks of surgery include, but are not

stiffness, nerve or blood vessel damage, joint dislocation, and persistent pain. There are also risks related to anesthesia, whether general, regional block, or spinal. Your anesthesia provider will explain these risks in detail prior to the surgery.

It is important to have realistic expectations. The artificial joint, made of metal and plastic, will not feel exactly like your natural joint. You may experience sensations such as popping during movement, and certain activities, like running, jumping, or kneeling, may become more difficult or impossible after surgery.

While there are no guarantees, joint replacement can significantly reduce pain and improve your mobility. If you have any questions, please ask before signing this consent form. I want to ensure you have all the information necessary to make an informed decision about your surgery.

J. Scott Pigg, MD

Signature:			
J			
Data			

Day of Surgery

Day of Surgery

Admissions

You will be called the day before surgery with your time to arrive. Check in at the Emergency Room front desk. Your registration, insurance, and personal information will be verified. You will receive information on patient rights, privacy practices, and living wills. Pay any applicable insurance co-pay or deductible.

Preoperative Care

After checking in, you will be taken to the pre-surgery care area. Once you are ready for surgery, one or two of your family members may stay with you. A waiting area is available for friends and family. You may want to make other plans for children. Please check our current visitation policy at www.myNMCHealth.org/visitors.



The nurse will get your health history and complete a physical assessment. They will give you Nozin® Nasal Sanitizer®, which helps protect against infection. An IV line will be started in your arm, and more lab work may be taken at this time.

The nurse anesthetist will meet to discuss your anesthesia options for surgery. Most of our joint replacements are done under a spinal anesthetic. You will also have the chance to talk with your surgeon, and they will confirm and mark your surgical site.

Operating Room

A surgical team member will take you to the operating room. If needed, updates will be given to family through the primary contact number you listed. After your surgery, the surgeon will update your family.

Post Anesthesia Care Unit (PACU)

Following surgery, you will be taken to the PACU where you will be closely monitored. Medicine will be given to help keep you comfortable.

Hospital Room

If you plan on spending the night, this will be your room until discharge, most likely the day after surgery. If you plan to discharge on the day of surgery, you will be taken to a "short stay" room in the hospital. Once the feeling and movement has returned to your legs, you will receive therapy. If you safely complete the required therapy and your pain is controlled, you will be discharged home.



Managing Pain After Surgery

Pain after surgery is normal, and not having any pain is an unrealistic expectation. Your goal is to manage pain effectively so you can recover better. Here's how:

Key Components of Pain Management Rest

- Rest is crucial to control swelling and promote healing.
- Balance rest with frequent range-of-motion exercises to prevent stiffness. Perform these exercises every hour while awake for the first 3-6 weeks.
- Avoid overexertion to minimize swelling and pain.

Icing

- Use ice to reduce swelling and pain:
 - Days 1-3: Ice throughout the day, but never place ice directly on your skin.
 - Day 4 onward: Ice for 20 minutes at a time, with at least an hour between sessions.
- Continue icing as long as it helps manage pain and swelling.

Pain Medications

- Baseline Medications:
 - Typically include Tylenol (acetaminophen) and Mobic (meloxicam), taken on a schedule for the first 3 weeks (even if you feel no pain)
 - You may also take an oral steroid once daily for 21 days.
 - Specific instructions will be provided in your discharge plan.
- Rescue Medications:
 - Medications like oxycodone or tramadol (Ultram) are prescribed for severe pain, to be used only as needed.
 - Aim to take these as little as possible, reducing the dose daily.
 - These medications can be addictive and should be used cautiously.

TAKE HOME POINTS:

- 1. Pain is expected after surgery. Focus on managing it, not eliminating it.
- 2. Rest and range-of-motion exercises are equally important for recovery.
- 3. Ice your knee regularly to reduce swelling and pain.
- 4. Follow the medication schedule provided, and use rescue pain medication sparingly.
- 5. Proper pain management is key to a faster, smoother recovery.

ain Managemen

Nuisance Symptoms

It is not uncommon to experience "nuisance symptoms" after a hip or knee replacement. These symptoms do not generally impact a patient's overall satisfaction with their artificial joint.

Knee replacement nuisances:

- difficulty kneeling (78%)
- limited ability to run/jump (71%)
- numbness around incision (46%)

Hip replacement nuisances:

- limited ability to run/jump (68%)
- thigh muscle pain (44%)
- limp when walking (37%)

Pain Management Guidelines

If your pain is Mild:

- 1. Continue to take your scheduled medications (Tylenol and anti-inflammatory).
- 2. Maintain your current activity level.

If your pain is Moderate:

- 1. Continue to take your scheduled medications (Tylenol and anti-inflammatory).
- 2. Consider resting, icing, and elevating your leg if needed.

If your pain is **Severe**:

- 1. Consider taking one narcotic pain medication (oxycodone or tramadol).
- 2. Stop your activity and find a comfortable position.
- 3. Elevate and ice your leg for 20 minutes.
- 4. If pain persists, consider taking another narcotic pain medication (oxycodone or tramadol).
- 5. Continue to ice and elevate for another 20 minutes.

Note:

- Severe pain during exercise is not normal. Stop and follow the steps above if it occurs.
- Always aim to manage pain early to prevent it from worsening.



Contact your doctor immediately if you experience:

- 1. Signs of a possible infection:
 - Any drainage from your incision
 - A fever of 101° F or higher
- 2. Signs of a possible blood clot:
 - Increasing pain in your leg calf
 - Tenderness/increased calf swelling
- 3. Signs of a pulmonary embolism (blood clot that has traveled to your lung):
 - Sudden shortness of breath
 - Sudden onset of chest pain
 - Localized chest pain with coughing
 - Any of these symptoms are an EMERGENCY. CALL 911.

Contact Us

Minimize Your Risk

Post-Surgery Care Instructions

Swelling

Swelling and bruising in your leg are normal after surgery but can increase your pain if unmanaged. To reduce swelling and control pain:

1. Post-Surgery Care:

- **Elevate Your Leg:** Keep your toes higher than your nose when resting.
- Use Ice: Regularly apply ice to reduce swelling. (See page 18)

2. Rest Is Key:

- Avoid excessive walking or exercising, as this can worsen swelling.
- Do not perform resistance exercises for 6 weeks. Instead, focus on 4 simple exercises done hourly (see page 24). Recovery should be gradual strength will build over time.

Blood Clots (DVT)

After orthopedic surgery, you are at a higher risk of blood clots (deep vein thrombosis). To reduce this risk:

- 1. Machines: Compression wraps on your legs are used before, during, and after surgery to promote blood flow through gentle massage while in the hospital.
- 2. **Medications**: Most patients will take aspirin, though your specific medication will depend on your health history.

3. Movement:

- Take 5-10 steps every hour while awake during the first few weeks.
- Perform ankle pumps while lying in bed or sitting in a chair to promote circulation.

Respiratory Care

To prevent respiratory complications such as pneumonia:

• Take deep breaths and cough at least every two hours.

Showering After Surgery

You can safely shower with your bandage on since it is water-resistant. However:

- Avoid soaking it in a bath or pool.
- To protect your incision further, you can wrap your knee (or hip, if applicable) in plastic wrap during showers.
- If water gets under the bandage, remove it and notify your surgeon immediately.

Activities of Daily Living

Home Equipment and Therapy Tips

Home Equipment

- Walker: Most patients will need a front-wheeled walker after surgery. If you don't have one, insurance usually covers the cost. Don't buy one in advance.
- **Hip Kit:** For total hip surgeries, a "hip kit" will be provided, including:
 - Long-handled shoe horn
 - Long-handled sponge brush
 - Reacher
 - Sock donner
- Additional Equipment: Therapists may recommend items like shower chairs, tub transfer benches, leg elevation pillows, or raised toilet seats. Note that these are typically not covered by insurance.

Hip Precautions (Total Hip Replacement)

To avoid dislocation in the first 6 weeks post-surgery:

- 1. Do **NOT** bend forward at the waist/hip more than 90 degrees.
- 2. Do **NOT** turn your surgical leg inward.
- 3. Do **NOT** cross your legs at the knee.

Tip: Placing a pillow between your knees while lying on your side or back can help prevent dislocation.

Therapy Tips After Surgery

- Stairs: Take one step at a time.
 - Going up: Lead with your non-surgical leg.
 - Going down: Lead with your surgical leg.
- Chairs:
 - Use your arms to help sit and stand.
 - Add a pillow or cushion to raise the seat height if needed.
- Cars: Sit down first, then swing your legs into the car.
- Dressing: Always dress your surgical leg first.
- Shoes: Wear rubber-soled, easy-to-slip-on shoes for traction.
- Bandage Care: Do not submerge your bandage in water; cover it as directed.
- Resting: Elevate your legs frequently to reduce swelling.



Pre-Surgery Exercises

Perform the following exercises **twice daily** to prepare for surgery.

Straight Leg Raise

- Lie on your back.
- Slowly lift your leg straight up to about 45°.
- Hold briefly, then lower it slowly and relax.
- You may bend the other leg for support.
- Goal: 20 repetitions per leg, twice daily.

Heel Slide

- Sit or lie on a firm surface with your legs straight.
- Slide your heel toward your buttocks, bending your knee as you go.
- Return to the starting position.
- Goal: 20 repetitions per leg, twice daily.

Seated Hamstring Stretch

- While sitting or lying down, pull your toes up toward your head, then point them downward.
- Goal: 10 repetitions for both feet, twice daily.

Hip Abduction

- Lie on your back with your toes pointing upward.
- Move one leg out to the side, keeping your knee straight (but not locked).
- Return to the center.
- Goal: 20 repetitions per leg, twice daily.

Sit to Stand

- Sit on a chair with your feet flat on the ground.
- Scoot to the front of the seat. Use a stable surface (like a countertop) for support.
- Lean forward over your toes, squeeze your buttocks, and slowly stand up.
- Slowly sit back down.
- Goal: 10 repetitions, twice daily.











After Surgery Exercises for Knee Replacements

To help you recover smoothly, follow these simple exercises (#1-4) every hour while you are awake. They only take about **8 minutes** per session and can be done with a stable chair. Perform exercise #5 three times a day.

#1 Short Walk (Every Hour)

- Walk 5-10 steps every hour.
- Don't overdo it stay comfortable.
- This helps prevent stiffness and blood clots.

#2 Knee Bends (10 Reps Every Hour)

- Sit on a stable chair with your feet on a smooth surface.
- Slowly slide your foot backward as far as possible.
- Keeping your foot planted, **scoot forward** in the chair to deepen the bend in your knee.
- Hold for 5 seconds, then relax.
- Repeat 10 times each hour.

#3 Ankle Pumps and Deep Breaths (10 Reps Every Hour)

- Sit with your leg straight in front of you.
- Pull your toes up toward your head, then point them down.
- Move your foot up and down slowly.
- Take deep breaths as you perform this exercise (helps prevent pneumonia).
- Repeat 10 times each hour.

#4 Seated Hamstring Stretch (10 Reps Every Hour)

- Straighten one leg in front of you, keeping your heel on the floor.
- Push your knee down toward the floor.
- Hold for 5 seconds, then relax for 5 seconds.
- Repeat 10 times each hour.

#5 Heel Hang (3 Times Daily)

- Place your foot on a chair or stool in front of you, ensuring nothing is behind your knee.
- Let gravity help straighten your knee.
- Hold the position for **5 minutes** (you should feel a stretch behind your knee).
- If needed, briefly bend your knee, then return to a straight position.
- Do this at least 3 times a day (e.g., with meals).

Walking After Knee Replacement

Use a pedometer or your phone to track your daily steps. Follow the recommended step limits for each week (see your chart). Gradually increase your steps after Week 6, based on how you feel. Stay consistent, and your recovery will progress smoothly! **Tip:** Avoid too much activity early on to reduce swelling and pain.







After Surgery Exercises for Hip Replacements

Walking is one of the best ways to recover after hip replacement surgery. Gradually increase your daily steps, keeping a steady and manageable pace. Remember, recovery takes time – most patients take 6-12 months to fully regain strength and stamina.

Tips for Recovery

- Preventing Blood Clots: Take 5-10 steps every hour while awake, and perform ankle pumps at least 10 times per hour.
- **Physical Therapy**: If you experience a limp or muscle weakness, formal physical therapy is highly recommended.

Exercises for Recovery

These exercises can complement your walking routine and aid in your recovery.

Ankle Pumps:

- Sit in a chair with your leg straight out in front of you.
- Pull your toes up toward your head, then point them downward.
- Move your foot slowly up and down.
- Focus on deep breathing during the exercise.
- Repeat 10 times every hour.

Glute Squeezes:

- While sitting in a chair, tighten your buttocks muscles.
- Hold for 2 seconds, then relax.
- Repeat 10 times every hour.

Heel Slides:

- Sit or lie on a firm surface with your legs straight out in front of you.
- Slowly slide your heel toward your buttocks, bending your knee.
- Return to the starting position.
- Perform 20 repetitions twice a day for each leg.

Hip Abduction:

- Lie on your back with your toes pointed upward.
- Move the leg out to the side. Keep your knee straight but not locked.
- Bring your leg back to the center.
- Perform 20 repetitions twice a day for each leg.

Passive Hip Extension:

- Lie flat on your back with your nonsurgical knee bent.
- Keep your surgical leg flat and relaxed on the bed.
- Stay in this position for 5 minutes.

Final Note

Slow and steady progress is key. Don't rush your recovery – patience and consistency will help you regain your strength.













Knee Replacement Activity Tracker: Week 1

It is important to keep track of your daily activities during your recovery. Please fill out this daily log as accurately as possible. Check the boxes as you complete a specific activity.

Remember that your pain will likely worsen over the first few days as the pain block from surgery wears off. Also, expect your swelling to worsen over this first week. It is a good idea to ice most of the time for the first three days after surgery. Starting on Day 4, you should be taking one hour breaks between 20-minute icings.

Call if you see any signs of bleeding under your dressing. Elevate and ice to reduce swelling. Keep moving with short walks of 5-10 steps every hour to help prevent blood clots. Walking too far or too soon might make your swelling and pain worse. Gradually increase your activity level over time.

Please bring this book to your appointments so we can review your progress.

V	VEEK 1: Try no	ot to exceed 75	50 steps da	ily!
HOURLY CHECKLIST Day #1 Date Exercises #1-4 (pg 24) 5-minute heel hang	Morning NAM NAM NAM 10AM 11AM	Afternoon 15bM 15bM 15bM 15bM 15bM 15bM 15bM 15bM	Evening Wd Wd 8 Md Wd 8	Day one is usually not very painful. BE CAREFUL! Many patients try to do too much today which makes swelling and pain worse.
Best part of your day: Worst part of your day: Notes				Total steps taken today # of oxycodone or tramadol taken today
HOURLY CHECKLIST Day #2 Date Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day: Notes				Ice and elevation are critical. Never put ice directly on your skin. Days 3-7 are often the hardest days during your recovery. Keep with the program! Total steps taken today # of oxycodone or tramadol taken today

WEEK 1: Try not to exceed 750 steps daily!

HOURLY CHECKLIST Day #3 Date Exercises #1-4 (pg 24)	Afternoon	Expect swelling to increase over the next several days. It is not uncommon to have bruising up and down the leg.
5-minute heel hang Best part of your day: Worst part of your day: Notes	 	 Total steps taken today # of oxycodone or tramadol taken today
HOURLY CHECKLIST Day #4 Date Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day: Notes		
HOURLY CHECKLIST Day #5 Date Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day: Notes		 Take your pain medications as detailed in your Personal Plan (see page 45). Remember, toes above your nose when elevating Total steps taken today# of oxycodone or tramadol taken today

WEEK 1: Try not to exceed 750 steps daily!

HOURLY CHECKLIST	Morning	Afternoon	Evening		
Day #6 Date	7AM 3AM 9AM 10AM	12PM 1PM 2PM 3PM 4PM 5PM	SPM 3PM 3PM	Listening to music or an	
Exercises #1-4 (pg 24)				audiobook helps distract from pain.	
5-minute heel hang				pani.	
Best part of your day:				Total steps taken today	
Worst part of your day:				# of oxycodone or tramadol taken today	
Notes				taken today	
HOURLY CHECKLIST	Morning	Afternoon	Evening		
Day #7 Date	7AM 3AM 10AM 11AM	12PM 1PM 2PM 3PM 4PM 5PM	Z Z Z Z	Today is when most patients	
Exercises #1-4 (pg 24)				have the most swelling. It will get better!	
5-minute heel hang				6-1 (1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	
Best part of your day:				Total steps taken today	
Worst part of your day:				# of oxycodone or tramadol taken today	
Notes					
NOTES FOR THE WEEK					
If you had a physical therapy appointment this week, what was your measured knee range of motion?					
Flexion° Exte	ension°				

Knee Replacement Activity Tracker: Week 2

Congrats on completing your first week! This is the time after surgery when swelling is often at its maximum. Continue your simple hourly exercises and remember to ice and elevate as needed. This week, try not to exceed 1,200 steps daily.

If you see blood or drainage from your dressing, call us immediately. If you are experiencing stomach upset, stop your anti-inflammatory medication and call us. Continue taking the scheduled pain medication as directed (Tylenol and meloxicam) and only take the rescue pain medication if the pain is Severe.

If the pain is Severe, stop and rest, ice and elevate. If the pain is still Severe after 20 minutes, take one rescue pain medication (oxycodone or tramadol). Continue to ice and elevate. If the pain is still severe after another 20 minutes, take another rescue pain medication.

WFFK 2. Try not to exceed 1 200 stens daily!

•••	LLIC Z. II y IIC	ot to execed 1,2	oo steps at	any.
HOURLY CHECKLIST Day #8 Date Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day: Notes				One week down! Keep up the good work! Total steps taken today # of oxycodone or tramadol taken today
HOURLY CHECKLIST Day #9 Date Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day: Notes				Difficulty sleeping is normal. It will get better! Try not to nap during the day. Total steps taken today # of oxycodone or tramadol taken today

WEEK 2: Try not to exceed 1,200 steps daily!

Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day:	Morning Afternoon Evening WWW WWW WWW WWW WWW WWW WWW WWW WWW W	Moving from bed to chair to couch is normal at nighttime, when sleeping is difficult. Keep your walker or cane handy! Total steps taken today # of oxycodone or tramadol taken today
Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day:	Morning Afternoon Evening WAV WWW WW	Remember to eat healthy while you heal! Consider protein shakes and plenty of fruits and vegetables. Total steps taken today # of oxycodone or tramadol taken today
Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day:	Morning Afternoon Evening WW	Fiber (only found in plant foods) helps keep the bowels moving. Total steps taken today # of oxycodone or tramadol taken today

WEEK 2: Try not to exceed 1,200 steps daily!

HOURLY CHECKLIST	Morning	Afternoon	Evening	
Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day:				"Healing is a matter of time, but it is sometimes also a matter of opportunity." -Hippocrates Total steps taken today # of oxycodone or tramadol taken today
HOURLY CHECKLIST Day #14 Date Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day: Notes				End of week 2! You're doing great. Avoid strenuous exercises like strengthening with weights, lunges, etc. Total steps taken today # of oxycodone or tramadol taken today
NOTES FOR THE WEE If you had a physical therap Flexion ° Ex		week, what was your m	neasured knee rang	ge of motion?

Knee Replacement Activity Tracker: Week 3

Congratulations on reaching the third week in your recovery!

This is a crucial milestone for you. Many patients often experience improvement in swelling and pain levels during this week. However, it is important to note that sleeping difficulties are still common at this stage, and it is completely normal. In fact, trouble sleeping can persist for up to six weeks or more after surgery. Please don't feel discouraged by this, as it is a normal part of the recovery process. It is important to remember that a fully normalized schedule may take around three months to achieve after surgery.

Keep up the good work, and do not hesitate to reach out if you have any concerns or questions. Try not to take more than 2,000 steps each day this week.

WEEK 2. Try not to exceed 2 000 steps daily!

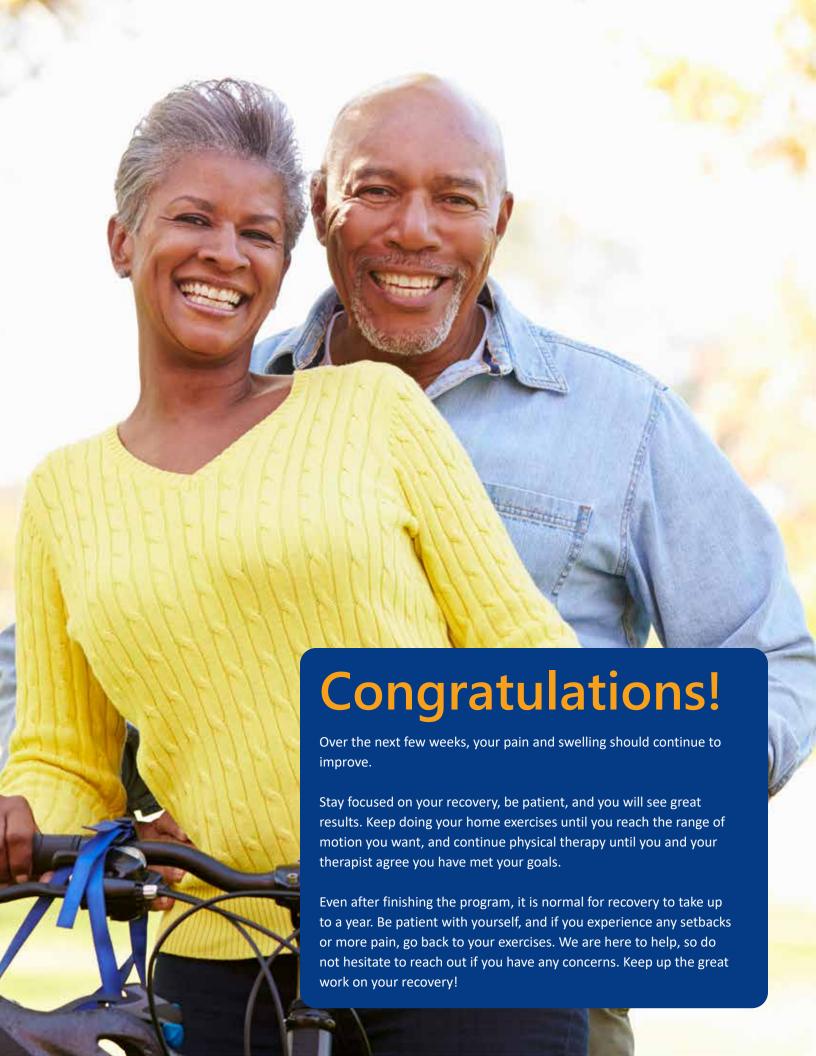
•	LER 3. If y flot to exceed 2,000 steps a	any.
Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day:	Morning Afternoon Evening Max Ma	Week 3 is here! Many patients find that they "turn a corner" this week. Total steps taken today# of oxycodone or tramadol taken today
Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day:	Morning Afternoon Evening Morning Mo	Keep up your simple hourly exercises! They make a difference! Total steps taken today # of oxycodone or tramadol taken today

WEEK 3: Try not to exceed 2,000 steps daily!

HOURLY CHECKLIST	Morning	Afternoon	Evening	
Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day:				"Great things are not done by impulse, but by a series of small things brought together." -Vincent Van Gogh Total steps taken today # of oxycodone or tramadol taken today
HOURLY CHECKLIST Day #18 Date Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day: Notes				Continue to decrease the amount of narcotic pain medication you are taking, if you have not quit altogether. Total steps taken today # of oxycodone or tramadol taken today
HOURLY CHECKLIST Day #19 Date Exercises #1-4 (pg 24) 5-minute heel hang Best part of your day: Worst part of your day: Notes				Remember to not perform the resistance strengthening exercises until 6 weeks after surgery. Total steps taken today # of oxycodone or tramadol taken today

WEEK 3: Try not to exceed 2,000 steps daily!

HOURLY CHECKLIST	Morning	Afternoon Evening	
Day #20 Date	7AM 8AM 9AM 10AM	12PM 1PM 2PM 3PM 4PM 6PM 7PM 8PM	During longer car rides, remember to pump your ankles every few
Exercises #1-4 (pg 24)			minutes in the car to keep the
5-minute heel hang			blood moving.
Best part of your day:			
Worst part of your day:			Total steps taken today # of oxycodone or tramadol
Notes			taken today
			,
HOURLY CHECKLIST	Morning	Afternoon Evening	
Day #21 Date		12 PM 2 PM 3 PM 4 PM 6 PM 7 PM 8 PM 6	"Recovery: Small steps, big
	A	12	victories."
Exercises #1-4 (pg 24)			
5-minute heel hang			Total steps taken today # of oxycodone or tramadol
			taken today
Notes			
NOTES FOR THE WEEK	,		
NOTES FOR THE WEEK			
		veek, what was your measured knee range	of motion?
Flexion ° Exte	ension°		



My Personal Post-Operative Plan

My Post-Operative Pain Control Plan	☐ I will resume my preoperative anticoagulation
☐ Ice and Elevation: (see page 18).	prescription
☐ Tylenol 500mg: 2 tablets every 8 hours for weeks.	3
☐ Meloxicam 15mg: 1 tablet every day for 3 v	veeks Constipation Prevention
(take with food, stop with any stomach ups	et). \square I will eat high fiber foods before and after
☐ Other	surgery (fruits and vegetables).
	🗌 I will take Miralax 1 capful every day until l
☐ Prednisone 5mg: 1 tablet daily for 3 weeks	
after surgery.	☐ I will take Colace 100mg 1 tablet two times a
Oxycodone 5mg: 1 pill only for SEVERE pa	•
if rest, ice, and elevation does not control	
pain. (Do not take more than 2 pills every	
hours.)	☐ My joint coach (responsible adult who will stay
☐ Hydrocodone acetaminophen: 1 tablet for	with me after surgery) will be
SEVERE pain if rest, ice, and elevation does control the pain. (Do not take more than 2	
every 3 hours.)	☐ I plan on performing simple home exercises
☐ Tramadol 50mg: 1 pill only for SEVERE pair	
if rest, ice and elevation does not control t	
pain. (Do not take more than 2 pills every	. 3 3
hours.)	after surgery.
☐ My pain management specialist will mana	.
post-operative medications.	surgery and will plan on home health for
$\ \square$ Resume chronic pain medication prescript	ion supervised physical therapy after surgery.
	 Discharge After Surgery
	☐ I plan on going home the same day as my
Blood Clot Prevention	surgery.
$\ \square$ I will take 5-10 steps every hour while awa	ke \Box I plan on spending one night in the hospital
for 6 weeks after surgery.	after my surgery.
☐ Aspirin 81mg: 1 tablet two times a day for	
weeks starting the day after surgery.	or rehab facility after my surgery and I have
Aspirin 325mg: 1 tablet two times a day fo	or 6 talked with a case manager about my options.
weeks starting the day after surgery.	dov. Madigations to Stan Drian to Surgan,
Rivaroxaban (Xarelto) 10mg: 1 tablet every for 35 days (Hip Replacements)	day Medications to Stop Prior to Surgery
☐ Rivaroxaban (Xarelto) 10mg: 1 tablet every	
for 12 days, then ASA 81mg 1 tablet two t	
a day for 30 days (Knee Replacements)	
☐ Apixaban (Eliquis) 2.5mg: 1 tablet twice a	day
for 35 days (Hip Replacements)	
\square Apixaban (Eliquis) 2.5mg: 1 tablet twice a	day
for 12 days (Knee Replacements)	

Acknowledgement

Please take a moment to ensure that you have read and understood the contents of this guidebook entirely, including the Post-Operative Plan which states you must have a responsible adult immediately available with you at all times for up to the first 2 weeks after surgery. It is important that you are well-informed and have had all questions or concerns answered before surgery. If you do have any remaining questions, please do not hesitate to ask before signing.

To ensure adequate time for questions, I kindly request that you complete reading this book before your two-week preoperative appointment. During that visit, we will be able to address any unanswered questions you may have and provide clarification as needed.

Please sign below to acknowledge that you have read this book and that

all your questions have been answered.

I, ______, have read this book, and all of my questions have been answered.

Signature: ______

Date:

NMC Health staff and I have put in significant time and effort to create this guidebook, making sure it is patient-friendly and filled with useful information. I've gathered information from different sources, including medical research, my own experience in performing over 3,000 joint replacements, input from therapists, pharmacists, patient coordinators, and feedback from patients. I've also included components of other successful programs from around the country to implement what I think are the best practices for a joint replacement program.

When you come in for your six-week checkup after surgery, I'll take this guidebook back from you and carefully go through the notes and comments you have recorded in the exercise tracker. This helps me improve the guidebook. If you have any suggestions to improve NMC Health's Joint Replacement Program, please add them to the note sections of the exercise tracker.

J. Scott Pigg, MD





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Your Health. Our Focus.

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