



Reclaim your life.

A Patient Guide to Knee Replacement at Princeton Medical Center

Thank you for choosing the Jim Craigie Center for Joint Replacement for your knee replacement surgery.

We have carefully planned every step of your care to help ensure a speedy and successful recovery. Please rest assured, you're in excellent hands every step of the way.

We encourage you to read carefully through this guidebook. If you have a question, please contact the Orthopaedic Nurse Navigator at 609.853.7954.



Penn Medicine

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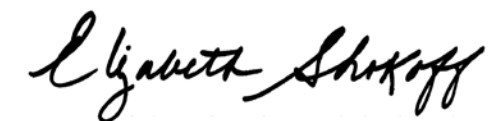
Dear Patient,

Thank you for choosing the Jim Craigie Center for Joint Replacement for your care. Our primary goal is to prepare you for a successful surgery and recovery. We provide comprehensive state-of-the-art care that offers the highest level of comfort. As a patient, you have access to our dedicated Orthopedic Nurse Navigator who will guide you through your joint replacement journey. This engaged nurse is available to you before, during and after your procedure, providing education, answering questions, and assisting with your transition to home. In addition, you will meet our committed discharge planner who will make sure that all your recovery needs are met. Our surgeons, orthopedic nurses, physical therapists, and pharmacists are specially trained to provide excellent care. If you and your surgeon determine that you are an appropriate candidate for same-day joint replacement, you can have your surgery and return to the comforts of your home the very same day!

The Jim Craigie Center for Joint Replacement is one of just a few hospitals in this region to hold Joint Commission Advanced Disease Certification in Total Hip and Knee Replacement Surgery. Additionally, the Jim Craigie Center for Joint Replacement is recognized by both Blue Cross and Aetna as a preferred provider, boasting highly competitive rates related to infection and complications. The Jim Craigie Center's strategic coordination between our surgeons, technology, and specialized staff helps to ensure seamless care and an excellent outcome for you.



Brian Culp, MD
Jim Craigie Center for Joint Replacement
Director/Medical Director



Elizabeth Shokoff, MSN, RN, ONC
Orthopedic Service Line



The Jim Craigie Center for Joint Replacement has earned the Joint Commission's Gold Seal of Approval[®] by achieving Advanced Certification for Total Hip Replacement and Total Knee Replacement.

Your Team

The Jim Craigie Center for Joint Replacement has an experienced and highly skilled team to care for you.

ORTHOPAEDIC SURGEON: Your orthopaedic surgeon is the physician who will perform your joint replacement operation and will oversee your care throughout your visit.

PHYSICIAN ASSISTANT: Your physician assistant may assist your orthopaedic surgeon in the operating room and help manage your care and recovery processes.

ORTHOPAEDIC NURSE NAVIGATOR: Your navigator is a registered nurse who will serve as a coordinator of care throughout your joint replacement journey. He/she will work directly with your surgeon and the rest of the team to ensure that you and your family will have the best possible experience.

ORTHOPAEDIC NURSE NAVIGATOR

☎ 609.853.7954

✉ jointcenter@pennteam.com

ORTHOPAEDIC NURSE PRACTITIONER: The Orthopaedic Nurse Practitioner is an advanced-practice nurse who is available to assist with concerns regarding your plan of care. He/she is a clinical expert who collaborates with the team to ensure that you receive optimal care and the most favorable outcomes.

COACH: Your Coach is the person who you designate to support you as you prepare for and recover from joint replacement surgery. This can be a spouse, friend, or family member who will assist and encourage you throughout your experience.

DISCHARGE PLANNING TEAM: A case manager, social worker, and/or the home care liaison help plan your transition from the hospital to your home and arrange for any additional equipment and services needed.

ANESTHESIOLOGIST: Your anesthesiologist is responsible for administering the medications required to keep you asleep and comfortable throughout your surgery and help manage your postoperative pain.

PRIMARY CARE PROVIDER: The primary care provider is your family physician and the physician who will manage your overall health. You can expect your primary care provider to stay in contact with your orthopaedic surgeon, perform your pre-surgery physical, and be informed regarding your progress after discharge.

HOSPITALIST: If you stay overnight in the hospital, this physician will follow your medical care, if needed, and communicate with your orthopaedic surgeon.

REGISTERED NURSE: During your visit, you will be cared for by a team of highly skilled, specialized nurses that will help prepare you for surgery and will be in the operating room with you throughout the procedure. After surgery, our nursing team will continue to care for you and provide information for your transition home.

PHYSICAL THERAPIST: Your physical therapist and assistant will help you gain strength and mobility in your new joint by teaching you how to exercise correctly. Your physical therapist will also teach you how to use your walker after surgery and help prepare you for the transition home.

Other team members that you may meet during your time with us include pharmacists, respiratory therapists, lab or x-ray technicians, patient transporters, and volunteers.

Understanding Your Surgery

Knee Replacement Surgery

Your knee is made up of three basic parts that work together to ensure smooth motion and function. When arthritis affects the joint and the cartilage that cushions the knee wears away or is destroyed, the joint requires replacement.

The materials used in your artificial joint are very strong and are designed to last a long time inside your body. Your orthopedic surgeon will consider many factors, such as age, bone density, and the shape of your joints to determine the exact type of knee replacement you'll receive and how it will be inserted.

TOTAL KNEE REPLACEMENT SURGERY

If the cartilage damage in your knee has occurred on both sides of the knee or in all three joint components, a total knee replacement may be performed. Knee replacement surgery involves resurfacing the knee joint and using artificial components to replace damaged tissue. At the Jim Craigie Center for Joint Replacement, your surgeon will use minimally invasive surgery techniques, if appropriate.

PARTIAL KNEE REPLACEMENT SURGERY

Sometimes, the cartilage damage in your knee is limited to just one side or the other. When this happens, a partial knee replacement procedure may be appropriate. Partial knee replacement is similar to total knee replacement except only one side of the knee joint is resurfaced. This involves a quicker recovery and a smaller scar.

What results can you expect?

You can expect a successful outcome from your knee replacement surgery. Generally, patients experience less pain and more mobility and can resume most of the activities they enjoyed before the onset of arthritis. Long-term studies show that 85%-90% of artificial joints are intact and functional for 20-25 years. Your artificial joint will last longer if you maintain your ideal weight and if you avoid high-impact activities.

The Risks of Knee Replacement Surgery

Joint replacement surgery is major surgery, and although advances in technology and medical care have made the procedure very safe and effective, there are risks. We encourage you to discuss the potential risks with your orthopaedic surgeon, primary care provider, and your family.

Every measure will be taken by our team of experts to minimize risk and avoid complications. Although complications are rare, they do sometimes occur.

BLOOD CLOTS: Blood clots can form in a leg vein and in your lungs after knee replacement surgery and can be dangerous. Factors that increase your risk of blood clots include advanced age, obesity, history of blood clots, smoking, and cancer. Medications and activities that prevent blood clots after surgery are required to reduce this risk.

INFECTION: Infection is very rare in healthy patients. Patients with chronic health conditions like diabetes or a compromised immune system are at higher risk of infection after any surgery. If an infection develops, it's usually treated with antibiotics. Deeper infections inside the joint are rare, and they may require additional surgery.

NERVE, BLOOD VESSEL, AND LIGAMENT INJURIES: Damage to the surrounding structures in the knee, including nerves, blood vessels, and ligaments is possible but extremely rare. Some patients experience numbness in the area of the incision, which usually resolves over time.

DELAYED WOUND HEALING: Sometimes a surgical incision heals slowly, particularly if you take corticosteroids, have a disease that affects the immune system (such as rheumatoid arthritis or diabetes), or if you are a smoker.

LIMITED RANGE OF MOTION: The day of surgery, you will begin exercises to help improve your range of motion. Even after physical rehabilitation, you

may continue to feel some stiffness after physical activity, particularly with excessive bending. Most patients find this stiffness minor compared to the limited function they experienced prior to surgery. If your range of motion is very limited, you may need an additional procedure under anesthesia to improve your flexibility.

HEMATOMA: Bleeding into the knee can occur either immediately after surgery or at a later time. Symptoms include acute pain and swelling. Your surgeon will evaluate the condition and determine the best course of treatment.

LOOSENING OF THE JOINT: Over time, loosening of the artificial knee components is possible due to erosion of the bone surrounding the prosthesis. Loosening occurs more frequently in heavier and more active patients.

Preparing for Surgery

These guidelines will prepare you for a speedy and safe recovery, so you will experience less pain, better mobility, and reclaim your life.

Your experience begins before your surgery with the selection of a Coach. To make sure you and your Coach are fully prepared for your surgery, it's important that you both carefully and thoroughly review this guidebook so you know what to expect every step of the way as you prepare for your surgery and recovery.

Pre-Operative Education Classes

Our education class is designed to make sure you are fully prepared for your joint replacement surgery. The class will help you better understand your diagnosis, the joint replacement process, and what to expect throughout your journey.

Included on page 15 of this guidebook, you will find exercises to do before surgery.

You'll also be instructed on important exercises and tips that will help speed recovery and ensure lasting success. Performing these exercises consistently is perhaps the most important factor in speeding recovery and determining long-term success of your new joint.

TO REDUCE THE RISK OF MANY COMPLICATIONS:

- Reduce or eliminate the use of tobacco and alcohol.
- Manage your diabetes, if applicable.
- Maintain a healthy diet.
- Use good hand-washing techniques.
- Perform exercises as directed by your physical therapist.
- Limit high impact activities as directed by your surgeon.



MY PENN MEDICINE PORTAL

Please sign up for MyPennMedicine to safely and securely communicate with your care team, pay bills, view test results, and access and share your health information.

MyPennMedicine.org

For further info about the preoperative class, call **609.853.7954** or email **jointcenter@pennteam.upenn.edu**.

Pre-Admission Testing

Your Pre-admission Testing appointment consists of blood work, EKG, a nursing assessment, and consultation with a representative from the Department of Anesthesia. That day, you may eat breakfast and take all of your daily medications. Complete Pre-admission Testing no more than 30 days prior to your surgery date.

Please bring a list of all your medications (with dosages and frequencies) as well as any over-the-counter drugs, vitamins, supplements, and patches to your pre-operative visit with the surgeon and to your Pre-admission Testing visit appointment.

Medication Management

Your surgeon and/or anesthesiologist will advise you about which medications to take or stop prior to surgery. You will receive a list of your medications and their stop dates at Pre-admission Testing. Vitamins/supplements, anti-inflammatory medications (Advil, Aleve, Motrin, etc.), anticoagulants (Eliquis, Plavix, Coumadin, etc.), and medications that affect your blood sugar may be stopped prior to surgery.

Obtaining Medical Clearance

You will need to schedule an appointment for medical clearance with your primary care physician well before surgery. Please schedule this appointment to take place two to 10 days following your Pre-admission Testing visit.

Your test results from Pre-admission Testing will be sent to your physician for review. If you have risk factors that require additional medical attention, we may recommend a consultation with a specialist.

Preventing Surgical Site Infection

At the time of surgery, it's important that you be free from infection. Any source of infection, such as your teeth or ingrown toenails, should be treated. There are several steps that you can take to help prevent surgical-site infections.

DENTAL CARE: You may continue routine cleanings as scheduled, but all other dental work must be completed at least six weeks prior to your surgery. Please call your surgeon's office if any dental problems arise prior to your scheduled surgery date.

SHAVING: It is very important that you do not shave your legs or use hair removal products anywhere near the surgical area for 48 hours prior to surgery. Studies show an increased risk of surgical site infection associated with shaving due to the microscopic cuts in the skin that allow bacteria to enter.

YARD WORK: Avoid yard work for 10 days prior to surgery. Also plan to have someone else help with outdoor work such as gardening or cutting the grass for at least two weeks after surgery.

ILLNESS: If you become ill with a fever, cold, sore throat, flu, or any other illness, please contact your surgeon's office.

SKIN RASH: Please report any broken skin, rashes, or sunburn to your surgeon.

Pre-Surgery Skin Preparation:

Before surgery, your skin needs to be thoroughly cleansed with a special product. During your Pre-admission Testing visit, a nurse will give you the product and detailed instructions regarding how to cleanse your skin prior surgery.

IT IS VERY IMPORTANT TO USE THIS PRODUCT PRIOR TO YOUR SURGERY.

Tips for Preparing Your Home

Your safety is our primary concern. We require that your Coach, spouse, family member, or friend stay with you after your surgery until you are able to perform activities of daily living independently and safely. Typically, this occurs within a few days after you return home.

You and your caregivers may want to consider these tips to help make your home safe and comfortable when you return from your surgery.

- Purchase a non-slip bathmat for inside your tub/shower.
- Check every room for tripping hazards. Remove throw rugs and secure electrical cords out of your way.
- Determine what items from dressers, cabinets, and shelves you'll need immediately after returning home. Any items you use often should be moved to counter height to avoid excessive bending or reaching.
- Make sure stairs have handrails that are securely fastened to the wall. If you must negotiate stairs to enter or once within your home, please discuss this with the physical therapist during your visit.
- If you have pets, you may want to consider boarding them for a few days after your return home or gate off an area of your home to avoid tripping over them or other accidents.
- We recommend that you use a chair that has a firm back and armrests during your recovery. A chair with a higher seat will help you stand more easily. Chairs with wheels should not be used under any circumstances. Ensure that the chair where you will be spending most of your time during recovery allows you to keep your legs elevated.
- To increase nighttime visibility, install night lights in bathrooms, bedrooms, and hallways.

The Day of Your Surgery

Packing for Your Surgery

Whether you're spending the night in the hospital or if you are having a same day procedure, you should pack:

- This guidebook.
- Clean, comfortable, loose-fitting clothing like elastic waist pants, shorts, skirts, or jogging outfits. Avoid tight fitting pants, leggings, sweatpants, or any pants with ankle elastics.
- Sneakers/tennis shoes or shoes with a flat, rubber bottoms. Do not bring tight fitting footwear as your feet may swell a bit following surgery. Do not bring backless shoes or slippers because they increase your risk of falling.
- Eyeglasses and a case, contact lens cases with solution, hearing aids and case, and denture storage, if applicable.
- Your advance directive, either a living will or durable power of attorney for healthcare, if applicable.
- A credit, debit, or Healthcare Spending Account card for any copayments and medication purchases.

If you will spend the night in the hospital, also pack:

- Non-stock medications. These will be identified during your Pre-admission Testing visit. Typically, this includes eye drops, inhalers, and uncommon medications.
- If you use a breathing machine such as a CPAP, bring your machine, mask, and hose.

Please leave these items at home:

- Rings, jewelry, or valuables of any kind.
- Your walker can be left in your car or at home if you aren't using it to walk before surgery.

FINAL PREPARATIONS FOR SURGERY:

You will receive a phone call from a hospital representative to confirm your expected arrival time. If you are not home at the time of the call, a message will be left on your voice mail. Follow the directions you receive from Pre-admission Testing or your surgeon regarding what you can eat or drink the night before and day of surgery. Alert your surgeon if you have had any changes in medications or in your medical condition.

Arriving on the Day of Surgery

Your surgery may take place at one of three locations:

- **Penn Medicine Princeton Medical Center**
1 Plainsboro Road, Plainsboro Township, NJ 08536
- **The Stephen & Roxanne Distler Center for Ambulatory Surgery, Medical Arts Pavilion**
5 Plainsboro Road, Plainsboro Township, NJ 08536
- **Monroe Ambulatory Surgery Center**
8 Centre Drive, Monroe, NJ 08831

Please arrive at the time instructed by the hospital representative, so that you have plenty of time to check in and prepare for surgery.

Wear comfortable clothes, including loose fitting pants. Do not wear pants with ankle elastics. Please avoid wearing cologne, perfume, or fragrances of any kind. Deodorants, creams, lotions, shaving creams, and makeup should be avoided as well, as they may be a source of bacteria.

If needed, a wheelchair is available upon request.

Surgery Preparation

Upon your arrival, you will be instructed to change into a gown. You will also put on a pair of compression stockings to improve circulation and non-slip socks to prevent falls.

Your nurse will verify information regarding your health, allergies, and medications. Your list of medications will be reviewed.

Your vital signs will be checked before you go into the operating room. Your nurse will also make sure the following preparations are completed:

- Clipping hair (if needed) around the surgical site to decrease the chance of infection.
- Marking the operative site (left or right side).
- Starting an intravenous (IV) line in your arm to provide the fluids you will need during surgery.
- Applying skin and nasal antiseptic products to decrease the chance of infection.
- Your surgeon may also order pain medications to be given to you prior to surgery to help reduce post-surgical pain.

Family Waiting

On the day of surgery, your Coach, family member, or friend can choose to wait in our comfortable waiting area, or they can provide a cell phone number to be notified when you're ready to go home. The person who picks you up after surgery will be able to speak with your surgeon to discuss your procedure and ask questions related to your surgery or recovery.

Anesthesia – General Information

The anesthesiologist will meet with you before surgery. At that time, he/she will examine you, discuss your medical history, and determine the best plan for your anesthesia care. It's important that you tell your anesthesiologist about any prior problems or difficulties you have had with anesthesia.

He/she will discuss the risks and benefits associated with the various anesthesia options, as well as the potential side effects that can occur with each. Anytime you have surgery with anesthesia there is a chance that you may experience some nausea and vomiting; however, medications are available to treat both and are routinely given ahead of time to help prevent these symptoms.

Spinal Anesthesia

Spinal anesthesia involves the injection of a medication in the spinal canal to numb your legs. You will receive sedation before the spinal anesthetic, so you will be comfortable and relaxed while it's being performed. Once the medication is administered by your anesthesiologist, you will be given additional sedation to relax into a twilight sleep. You will not be able to feel or move your legs until the spinal anesthesia has worn off. This effect can last for several hours, so it is important that you do not try to walk until your physical therapist determines that you are ready.

The Operating Room

The total time required for surgery varies from patient to patient, depending on the complexity of the procedure.

Inside the operating room, you will be greeted by the staff involved in your care, which includes a team of physicians, physician assistants, nurses, and skilled technicians.

Routine identity checks will be performed to ensure your safety. Specifically, a nurse will again ask you to identify yourself and your birth date. If it was determined that spinal anesthesia is the best choice, you will also hear the staff state your name and birth date or medical record number once more just before receiving your spinal anesthesia. After your spinal anesthesia, you will be positioned for surgery.

A calf-compression device will be applied to the unaffected leg to improve circulation. The operating room is kept cold, but your nurse will ensure that you are kept warm.

Recovery

After surgery, you will be transported to an area called the Post Anesthesia Care Unit (PACU) or recovery room while you recover from the effects of anesthesia.

During your time in recovery, a nurse will check your vital signs, monitor your progress, and provide pain medications as needed.

You will also start cold therapy to reduce swelling and pain. Cold therapy will be applied throughout your recovery and continued at home.

Your nurse will check your surgical site for drainage and will assess your breathing. He/she will also apply calf compression devices to both legs to help with circulation.

What to Expect after Surgery

After surgery, you will notice a bandage on your knee. At this point, you will have compression stockings and calf-compression devices on both legs. The calf-compression device will squeeze your legs at regular intervals to circulate blood and to help prevent clotting. If you do not feel the compression, be sure to let your nurse know.

When the spinal anesthetic wears off, you will start taking pain medications by mouth. Once your vital signs are stable and you have regained movement and sensation in your lower extremities, your nurse or physical therapist will assist you to sit at the edge of the bed, stand, and walk.

Managing Your Pain

The amount of pain and discomfort you experience depends on multiple factors. Your physicians and nurses will do everything possible to relieve your pain and discomfort using medications and other techniques, including cold therapy, position changes, and relaxation.

Communication is an important part of helping us manage your pain. We encourage you to share information with your nurses about any pain you experience. Be as specific as possible. For example, specify where the pain is, how often you feel pain, and what the pain feels like. Is it sharp, dull, aching, and spreading out? You will likely be asked to rate your pain a scale of 0 to 10, where 10 is the worst pain imaginable.

Additional Medications

You can expect to receive IV antibiotics during your visit, medications for pain relief, and medications called anticoagulants to prevent blood clots. Sometimes, patients may feel nauseous or constipated after the procedure. Both symptoms can be managed with medication or other interventions, so it is important to tell your nurse if you don't feel well. Your nurse will review the side effects of your medications; be sure to ask questions if you don't understand the information.

Early Ambulation

After regaining movement and sensation in your legs, your physical therapist or nurse will assist you to walk with a rolling walker. Your physical therapist will help you begin your exercise routine. These exercises are designed to help increase strength and flexibility in the joint. Ultimately, the goal is to perform activities of daily living, like walking, climbing stairs, getting in and out of a bed, and up and down from a chair or toilet.

DO NOT TRY TO WALK UNTIL YOUR NURSE OR PHYSICAL THERAPIST DETERMINES THAT YOU ARE READY.

To ensure maximum success, it's important that you follow physical therapy instructions during your surgery visit as well as when you return home. Your Coach is encouraged to participate in your physical therapy sessions.

Exercises On Your Own

You will be instructed to perform ankle pumps every hour while you are awake. This keeps blood from pooling in your lower legs, reducing your risk of a blood clot. You will also be given exercises from your physical therapy team member that you can perform throughout the day from your bed or chair. Your outcomes will be better if you participate in physical therapy as directed.

Transitioning Home

Preparing to Return Home

Your surgeon and physical therapist will determine when you are ready to transition home, which will depend on factors such as your ability to walk safely and to perform your exercise program.

The following checklist helps your team determine when you're ready to leave the facility.

Can you:

- Get in and out of bed?
- Get up and down from a chair and the toilet?
- Perform your personal hygiene independently?
- Walk up and down the stairs?
- Walk approximately 100-300 feet?
- Get dressed?
- Get in and out of a car?
- Perform your recovery exercises?

Before you go home, we will make sure that all of your transitional needs are met. Your surgeon may order the following based on your individual needs:

- Medication for pain and inflammation.
- Medication to prevent blood clots.
- Walker and other equipment.
- Physical therapy.

The Drive Home

Your Coach, family member, or friend will drive you home. To make your ride more comfortable, your driver should slide your seat back, and recline the seat slightly.

Recovering At Home

As part of your recovery and when you are ready, your surgeon will prescribe outpatient physical therapy to emphasize stretching and strengthening of the joint after replacement. Princeton Medical Center Princeton Rehabilitation offers physical therapy services at several locations.

Some patients may need homecare services for a brief period of time until they can safely attend an outpatient physical therapy program. A visiting physical therapist and/or nurse can be arranged during this transition period to assure joint precautions are maintained in the safety of your home.

The discharge planning team will help make appropriate arrangements depending on your needs and insurance coverage. The team will also assist with any equipment needs.

Comfort

It's normal to experience a deep ache through the bone after surgery. This will gradually decrease. If following a regimen of rest, cold therapy, elevation, and taking your pain medications as prescribed doesn't relieve your pain to a satisfactory level, please contact your surgeon.

You will be prescribed medications to take routinely to reduce pain and discomfort, as well as pain medications to take as needed. Be sure to take your as needed pain medications with a meal or snack. Avoid drinking alcohol or driving while taking prescribed pain medications. Consider taking your as needed pain medication 30-45 minutes prior to performing the prescribed physical therapy exercises if you are finding it difficult to perform the exercises.

Some people experience constipation after surgery and while taking pain medication. You will be given instructions to use a gentle laxative daily. You may also consider drinking prune juice daily, drinking more water, or adding fiber to your diet. Exercise and walking also help prevent constipation.

Resume your home medications as instructed by your physician and indicated on your After Visit Summary.

Activity

Continue your exercises every day as instructed by your physical therapist. You may put as much weight as you can tolerate on your affected leg. Your physical therapist will provide instructions regarding when you may begin or resume certain physical activities such as using a stationary bike, golfing, etc. You may resume swimming when your surgeon verifies that your incision is fully healed.

Managing Bruising/Swelling

It's normal to have bruising around your knee. The bruising will heal on its own in a few weeks. You may also experience swelling of the upper and lower leg down to the foot and ankle. Swelling usually peaks 7-14 days after surgery. While at rest, you should keep your legs elevated.

Between your hourly walks, spend a good amount of time laying down with your feet elevated several inches above the level of your heart. You can do this by placing a cushion or pillows under your feet while you lay down or recline fully in a reclining chair. Your leg should remain straight while elevated, without a bend at your knee.

Be sure to use your cold therapy wrap to help reduce pain and swelling.

Continue to wear compression stockings at home until the follow up appointment with your surgeon. The stockings help reduce swelling and improve circulation. They may be removed while you sleep at night. You should also continue to perform ankle pumps at least 10 times an hour.

Incision Care

Care for your incision as directed by your surgeon. Directions will be reviewed before you discharge to home.

Keep your incision clean and dry. While your dressing is in place, no incision care is needed. Do NOT use creams or lotions on your incision for the six weeks after surgery or until cleared by your surgeon.

Avoid soaking your incision in a bathtub or hot tub, and do not participate in any water activities until the incision is completely healed, closed, and no longer draining. This typically occurs six weeks after surgery.

When to Call Your Surgeon

A moderate amount of bruising, swelling, and redness can be expected after knee replacement surgery.

If you experience any of the following, you should contact your surgeon or the nurse navigator:

- A temperature of over 101 degrees F (38.3 degrees C).
- Increased dizziness or lightheadness.
- Inability to do your exercises for any reason.
- Inability to do any physical therapy or climb stairs.
- Your calf is red and hot to the touch or pain in your calf is making it difficult to walk on the leg.
- Drainage increased from the previous day.
- Dressing has begun to peel off.
- Increased redness/heat around the incision.
- No bowel movement in 3-4 days.
- Moderate nausea.
- Any other unexpected problems, concerns, or questions.

Notify your surgeon immediately if:

- Pain is uncontrollable with pain medication.
- You experience a fall.
- You are unable to put weight on the affected leg.
- New numbness.
- Color change to your leg (pale or blue).
- Your leg is cool to the touch.
- Significant drainage (bandages are more than 70% saturated).
- The incision has opened.
- Significant redness around the incision/streaking.
- Severe nausea and vomiting.
- Constant stomach pains.
- Unable to pass gas.
- No bowel movement in five or more days.
- Blood in your stool.

CALL 911 IF YOU EXPERIENCE:

- Chest pain/difficulty breathing.
- Shortness of breath.
- Significant dizziness or loss of consciousness.

Life After Joint Replacement

Diet

It's important to eat a healthy diet to promote healing. You may experience decreased appetite after surgery. This is normal and should gradually resolve. Be sure to drink plenty of fluids throughout your recovery.

Rest

It's common to have difficulty sleeping after surgery and for your energy levels to decrease. Be sure to take rest breaks as needed during the day to support the healing process. Your energy levels will gradually improve.

You may sleep on your back or either side but do not put a pillow under the affected knee. If you use a machine for sleep apnea, it's especially important that you use it at home following surgery, both overnight and during naps.

Exercises and Activity

Exercise and maintaining an active lifestyle are important parts of good health. Most patients with artificial joints are able to enjoy many activities, though some should be avoided. In general, high impact exercises such as running, jumping, heavyweight lifting, or contact sports are not recommended. Participating in these types of activities may damage your joint or cause it to wear down much more quickly. Low impact activities like swimming, walking, gardening, and golf are encouraged.

Generally, most people wait to resume sexual activity for a few weeks after surgery. However, you can resume activity when you feel ready. Choose a position that feels safe and comfortable. Keep a few pillows or rolled towels nearby to help with body support. Take a mild pain medication 20-30 minutes before sexual activity to help prevent minor aches.

Reducing Risks of Infection in Your New Joint

Following your joint replacement surgery, it's important to notify your dentist, prior to each visit, that you have a joint implant. It may be necessary to take an antibiotic PRIOR to any dental cleaning or procedure to reduce the risk of developing an infection in your joint.

To reduce your risk of infection, antibiotics may also need to be administered prior to any invasive test, procedure, or surgery. The physician or surgeon performing the test, procedure, or surgery will prescribe antibiotics if necessary.

Follow-up Care

You will see your surgeon or physician assistant for a follow-up appointment approximately two weeks after surgery and routinely several times during the first year. Joint replacements are monitored annually thereafter for life.

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.

When traveling long distances, you should attempt to change position or stand about every hour. Some of the exercises, like ankle pumps, can also be performed should you need to sit for long periods of time.

Driving

You should not drive a car or other motor vehicle until your surgeon says it is safe to do so. You will not be cleared to drive until you are finished your pain medications. In most cases, patients are able to resume driving about 2-6 weeks after surgery, depending on which knee you had replaced.

Returning to Work

You should discuss your plan to return to work with your surgeon, as it will depend on the activity requirements of your job. If your job requires a work release form, your surgeon can help with completion of the form.

Exercises and Mobility

The following pages contain a list of basic exercises and activities that you will perform before and after your knee surgery. These are vital in helping you return to normal activities and are designed to help increase knee strength, flexibility, and function.

IF YOU EXPERIENCE SEVERE PAIN WITH ANY EXERCISE, YOU SHOULD STOP IMMEDIATELY AND CONTACT YOUR SURGEON.

Before Surgery

These exercises are all performed lying in bed or sitting on a recliner with your legs straight in front of you.



BUTTOCK SQUEEZES: Squeeze your buttock muscles. Hold for 5-10 seconds, then release. Perform 10 repetitions, three times a day.



QUAD SETS: Slowly tighten the muscles on the front of your thigh. Straighten your leg as if you are pushing the back of your knee into the bed. Hold for 5-10 seconds. Perform 10 repetitions on each leg, three times a day.



STRAIGHT LEG RAISES: Bend one leg and keep the other leg straight. Raise your straight leg about 6-8 inches. Do not lift your straight leg higher than your bent knee. Perform 10 repetitions on each leg, three times a day.



HIP ABDUCTION: Keep knees straight and toes pointed toward ceiling. Slide one leg out to the side and then back to center. Perform 10 repetitions on each leg, three times a day.



HEEL SLIDES: To promote active bending, lie on your back with your legs straight and your toes pointed toward the ceiling. Slowly pull the heel of one leg toward your buttocks as far as you can and slowly straighten back to the starting position, attempting to achieve greater motion with each repetition. Perform 10 repetitions on each leg, three times a day.



SEATED KNEE EXTENSION: Sit up on the side of a bed or chair. Slowly extend one knee as though you are kicking something in front of you. Perform 10 repetitions on each leg, three times a day.

After Surgery

Our goal is to assist you in achieving the safest level of functional mobility. We encourage you to actively participate in your rehabilitation process. Please feel free to ask the nurse navigator any questions you may have concerning your progress or rehabilitation plan.

As you progress with outpatient physical therapy, your exercise regimen will be expanded.

AFFECTED LEG (AFFECTED SIDE): The leg or side of the body that you had surgery on.



ANKLE PUMPS: To promote circulation, pump your ankles up and down. Perform 10 repetitions every hour while awake.



BUTTOCK SQUEEZES: Squeeze your buttock muscles. Hold 3-5 seconds. Perform 10 repetitions every hour while awake.



QUAD SETS: Slowly tighten the muscles on the front of your thigh. Straighten your leg as if you are pushing the back of your knee into the bed. Hold each rep for 3-5 seconds. Perform 10 repetitions every hour while awake.



STRAIGHT LEG RAISES: Bend one leg and keep the other leg straight. Raise your straight leg about 6-8 inches. Do not lift your straight leg higher than your bent knee. Perform 10 repetitions on each leg, three times a day.



HIP ABDUCTION: Keep knees straight and toes pointed toward ceiling. Slide your leg out to the side and back to the center. Perform 10 repetitions as tolerated, three times a day.



HEEL SLIDES: To promote active bending, lie on your back with your legs straight and your toes pointed toward the ceiling. Slowly pull the heel of one leg toward your buttocks as far as you can and slowly straighten back to the starting position, attempting to achieve greater motion with each repetition. Perform 10 repetitions on each leg, three times a day.



SEATED KNEE EXTENSION: Sit up on the side of a bed or chair. Slowly extend one knee as though you are kicking something in front of you. Perform 10 repetitions on each leg, three times a day.



BOLSTER KICKS: Lay on your back and place a bolster (rolled towel or pillow) under the knee on your affected side. Straighten your knee as much as possible, lifting the foot up. Perform 10 repetitions as tolerated, three times a day.



SEATED KNEE BENDS: Bend your affected knee as far as you can. Perform 10 repetitions as tolerated, three times a day.

Advanced Exercises

As each individual progresses at a different pace, your physical therapist will guide you through the more advanced exercises including the proper technique, form, number of repetitions, etc. Usually these exercises begin within the first two weeks after surgery.



SIT TO STAND: Put your hands on the arms of the chair. Push to a standing position and then slowly return to sitting. Repeat 10-20 repetitions, three times a day.



STANDING TOE AND HEEL RAISES: To improve your standing balance, stand with feet shoulder distance apart. Make sure you are holding onto a table or counter. Rise up onto the balls of your feet and slowly lower back down. Perform 10 repetitions, three times a day.



STANDING MARCHING: To promote joint motion and strength, hold onto a table or counter and lift your knee up to the level of your hip, keeping your body erect, and lower slowly. Alternate legs with each repetition. Perform 10 repetitions, three times a day.

Daily Activity Strategies

Getting In and Out of Bed

- From laying down, press up onto your elbows then up onto your hands.
- Pivot on your hips. Using your arms, scoot to the edge of the bed.
- Sit on the edge of the bed using your arms for support.
- To return to lying down, follow the above steps in reverse.

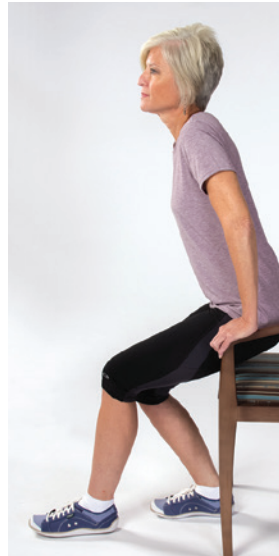
You will find it easier to get out of bed on your affected side. This may mean switching the side of the bed you sleep on or reversing your pillow to the foot of your bed.



Sitting to Standing

Choosing the proper seat to sit in:

- Always choose a chair with a firm seat and armrests.
- Avoid seats that are too low.
- Sit in seats that are at least as high as the back of your knees. Add a firm cushion to the seat if it's not high enough.
- Do not sit in a chair with wheels.
- For periods of rest, use a seat that allows for elevation of the legs, such as a recliner or ottoman.



Sitting down

- Back up, leading with the unaffected leg, until you feel the seat on both legs.
- Scoot the affected leg out in front of you.
- Reach back for armrests or grab bar near the seat or surface you'll be sitting on, one hand at a time. Do not start to sit with your hands on your walker.
- Slowly lower yourself down to the edge of the seat, keeping your affected leg in front of you in order to take pressure off and to not increase pain.
- Scoot back into the seat.

Standing up

- Scoot to the edge of the seat.
- Keep your affected leg out in front and your unaffected leg underneath you.
- Use both hands to push up from the armrests of the chair or surface on which you are sitting.
- Stand.
- Reach for walker/assistive device.

Safety When Walking

Initially, you will be walking with the help of an assistive device. This will first be a rolling walker, which will give you the most support. As you are able, the assistive device can be changed to a cane, etc. This progression will be made with the assistance of your physical therapist.

Using a walker

- Move the walker a few inches in front of you.
- Step into the walker with your affected leg first. Be sure to step into the middle of the walker — your toes should not cross the front of the walker.
- Step your unaffected leg into the walker next to your affected leg. Overtime, you'll need to put less weight on the walker to support you.

As you progress to a cane, you will be able to try to walk more smoothly, taking even steps. Your physical therapist will advise you when to start using a cane.



Safety With Stairs

During your visit, a therapist will teach you and your Coach how to get up and down stairs, simulating the stairs you have at home.

The one thing to always remember with stairs: Go up stairs with your unaffected leg first and go down stairs with your affected leg first.



Safety in the Bathroom

During your visit, your physical therapist will review bathroom safety and determine if you need additional equipment for your home recovery.

Getting into a Tub or Shower

- A stall shower is preferred.
- If you need to use a tub/shower, start by standing next to the tub facing the showerhead.
- Step sideways into the tub/shower using the leg closest to the tub first.
- Do not turn around while in the tub.
- If needed, sit on a tub/shower seat until you feel steady enough to stand when showering.
- Reverse the steps when getting out of the tub/shower.

Getting In and Out of Cars

- Slide the passenger seat of the car as far back as possible and, if able, recline the seat.
- Using your walker, back up to the car, leading with your unaffected leg.
- Slide your affected 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, follow the above steps in the reverse order.



Dear Patient:

The team at the Jim Craigie Center for Joint Replacement at Penn Medicine Princeton Medical Center (PMC) is proud to provide our patients with high quality, comprehensive, individualized care close to home. The Center was established more than 10 years ago when Jim Craigie had both hips replaced and was so grateful for the excellent care he received—and his improved quality of life that resulted from it—that he made a generous gift to PMC. Jim wanted to ensure that other patients having a joint replacement would have access to a stellar team of providers, advanced technology and an environment that is designed to promote safety and healing. We are very grateful to Jim and to other patients and families who have supported the PMC Institute for Surgical Care and the Jim Craigie Center for Joint Replacement. Our programs and future patients and families will continue to benefit from their generosity.

If you feel that you have received outstanding care and want to express your gratitude for your experience as a patient, we hope you will consider making a gift of any amount in honor of a surgeon, nurse or other staff member; or honor a friend, family member or your joint replacement coach. Your gift can be designated for either the Surgery Institute Fund or the Jim Craigie Center for Joint Replacement Fund. These gifts will provide immediate support for our surgical programs and will be recognized by the Princeton Medical Center Foundation.

You can also make a gift to support a specific need within either the Institute or the Center and receive a naming opportunity as a result of your gift. These gifts will be recognized by the Foundation and may be recognized with signage in the Institute or the Center.

Thank you for choosing the Jim Craigie Center for Joint Replacement for your care.



W. Thomas Gutowski, MD, FACS
Chair
Penn Medicine
Princeton Medical Center Foundation



Brian Culp, MD
Jim Craigie Center for Joint Replacement
Director
Medical Director

Support the Craigie Center

Philanthropy has been a hallmark of Penn Medicine Princeton Health's history for over a century. In fact, the Jim Craigie Center for Joint Replacement was created thanks to the generosity of a former patient and community member who wished to show his appreciation for the outstanding care he received at our hospital. Today, community support continues to play a pivotal role in our Center's success and prepares us to continue to address the community's evolving healthcare needs and the new challenges ahead.

Through philanthropy, you, too, can help support important new programs and initiatives at the Jim Craigie Center for Joint Replacement.

There are several ways that your contribution will make a difference:

NEW EQUIPMENT: Philanthropic support enables the Craigie Center to replace and upgrade state-of-the-art equipment so we can continue to provide the most advanced level of care for our patients and the community.

EDUCATION & TRAINING: Community support ensures that specialized training and certifications, continuing education, and professional development opportunities are available for staff, nurses, and clinicians.

INNOVATION & NEW INITIATIVES: Philanthropy provides invaluable funding for the pursuit of clinical innovation and novel technology advancement, treatments, and patient care.

COMMUNITY OUTREACH: Your generosity helps ensure that our most vulnerable patients with financial hardships can access the care they need when it is needed most.

PATIENT AND CAREGIVER EXPERIENCE ENHANCEMENTS: Charitable gifts support capital improvements, renovations, and facility upgrades so our patients and their caregivers can experience exceptional care in a soothing, healing environment.

To make a gift to the Craigie Center, please visit princetonhcs.org/donate.

If you have questions, or would like to speak to someone about making a gift, please contact the Princeton Medical Center Foundation at **609.252.8710** or email PMPH-foundation@PennMedicine.Upenn.edu.



Penn Medicine