The Joint Replacement Center at

BBJI

Boston Bone & Joint Institute

A DIVISION OF NOA

NORTHEAST ORTHOPAEDIC ALLIANCE

A Guide to Your Knee Replacement Surgery

Andrew Braziel, MD

Lauren Dolloff, PA-C

BBJI
Boston Bone & Joint Institute

To our patients,

Thank you for choosing our team to address your medical needs. Our priority is improving your quality of life through our knowledge, skill, experience, and most importantly – compassionate care. Hip and knee replacement surgeries are highly effective procedures, but we do understand surgery can be stressful. Your team includes Dr. Andrew Braziel, Lauren Dolloff, PA-C, Alicia Leblanc (Surgical Coordinator) and the rest of the Boston Bone & Joint Institute staff. We hope to make the process as smooth as possible with the necessary support and guidance along the way.

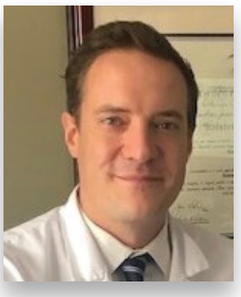
This booklet is intended to be a resource to help you and your loved ones understand hip and knee replacement surgery. We will review the risks and benefits of surgery and what to expect throughout your surgical and postoperative course. Please reference this booklet throughout the process. It is an important tool in your care. Additionally, our team is here to answer your questions. Please see the back of the booklet for the best ways to reach us.

We look forward to working with you at this important time and hope you find the following information to be a valuable guide in your journey through joint replacement surgery.

Sincerely,

Andrew Braziel, MD

Meet Your Joint Replacement Team



ANDREW BRAZIEL, MD

Dr. Braziel is a Board Certified joint replacement specialist at Boston Bone & Joint Institute. He earned his medical degree from Georgetown University School of Medicine and completed his residency at UMass Memorial Medical Center. He completed the Otto E. Aufranc Fellowship in Adult Joint Reconstruction Surgery at New England Baptist Hospital.

Dr. Braziel is the Medical Director of the Orthopedic Specialty Practice for arthroplasty at New England Baptist Hospital, and the Co-Director of outpatient arthroplasty.

He is an active member of multiple academic societies, including the American Association of Hip and Knee Surgeons (AAHKS), American Academy of Orthopaedic Surgeons (AAOS) and American Board of Orthopaedic Surgeons (ABOS).

Dr. Braziel's clinical interests include joint replacements of the hip and knee.

LAUREN DOLLOFF, PA-C

Lauren works closely with Dr. Braziel as a Physician Assistant. She earned a Bachelor of Science from University of Vermont and a Master's Degree in Physician Assistant Studies at Massachusetts College of Pharmacy & Health Sciences University. Lauren also has years of experience as an orthopaedic physician assistant at New England Baptist Hospital. She can help in navigating the process of your total joint replacement surgery and is available to answer questions about surgery along the way. Additionally, Lauren often assists in the operating room on the day of surgery. She can be reached by calling Alicia, sending a portal message or calling the main phone number, 781-890-2133, and asking a member of the staff to send a message through your patient chart.

ALICIA LEBLANC, Surgical Coordinator

Alicia handles all surgery, imaging and procedure scheduling for Dr. Braziel and Lauren. She serves an integral role as a bridge between patient and provider. She is able to answer any logistical questions before and after surgery and also can connect patients with the team to answer clinical questions. Alicia can be reached at 617-751-5243.

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Understanding Knee Replacement Surgery

Knee replacement surgery has been recommended for the treatment of your knee pain. This operation is usually performed for arthritis - most commonly osteoarthritis - which is causing significant pain and functional limitations. Most patients have failed a course of nonoperative or conservative treatments before considering knee replacement surgery as the long term treatment of their symptoms.

The purpose of this booklet is to give you information about the surgery, recovery, and answers to the most common patient questions. It will provide information on your surgery, hospital stay, and recovery at home.

The Normal Knee

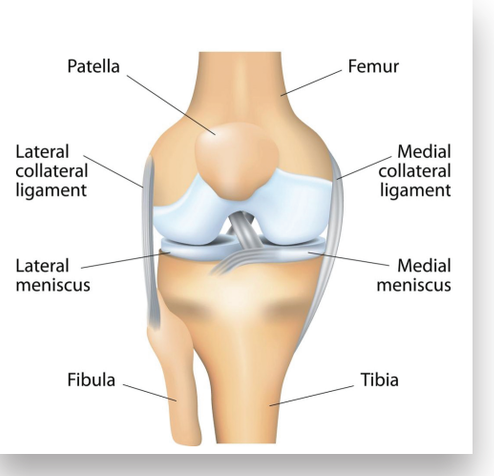
The knee is the meeting point of the femur (thigh bone) and tibia (shin bone). The patella (knee cap) is the bone that sits in front of the knee. The smaller shin bone is the fibula and is not actually part of the knee joint itself. The knee is a synovial joint enclosed by a capsule which is filled with a lubricating fluid called synovial fluid. It is a hinge joint, similar to a hinge of a door. However, it not only bends back and forth but has a complex rotational component as well.

There are several ligaments and tendons of the knee. There are two crescent-shaped menisci that act as shock absorbers between the femur and tibia when you bear weight. The ACL and PCL are cruciate ligaments in the center of the knee that function to stabilize the knee from forward and backward movement. The MCL and LCL provide stability to the knee including side to side motion.

Articular cartilage is the material that covers the ends of the bones of any joint. In large joints such as the knee, it is about 1/4 inch thick. It covers the ends of the tibia, femur and the undersurface of the patella. It is white, with a rubbery consistency which allows the surfaces to slide against one another. Cartilage does not contain nerve endings and so it is able to absorb shock and provide a smooth surface to facilitate pain-free motion.

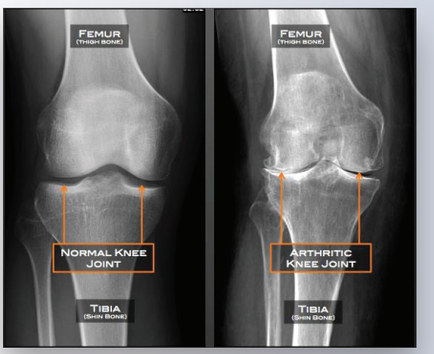
The knee contains 3 compartments:

1. Medial: the “inner” compartment of your knee between the femur and tibia
2. Lateral: the “outer” compartment of the knee between the femur and tibia
3. Patellofemoral compartment: the compartment between the undersurface of the patella and femur



Who Needs Knee Replacement Surgery?

- Knee replacement surgery is suggested if there is degeneration of the knee joint. The cartilage surface can degenerate over time and can become rough, causing the surfaces of the knee to rub against each other rather than glide smoothly. This rubbing causes pain, stiffness, and swelling.
- Most patients who decide to have knee replacement surgery have experienced pain and functional limitations for a long time.
  - Pain that limits daily activities such as walking, stair climbing, and getting in and out of a chair.
  - Pain that interferes with sleep.
  - Chronic inflammation and swelling of the knee
  - Knee deformity (varus/valgus deformity) - a bowing in or out of the knee
- In addition to these symptoms, patients have typically failed to have significant improvement with other treatments such as anti-inflammatory medications, cortisone injections, lubricating or viscosupplementation injections, physical therapy or other surgeries (such as arthroscopy).
- The goals of a knee replacement are simple - improve pain and improve function.
- There are numerous factors that increase a person's chance of developing osteoarthritis or other degenerative joint disease including family history, obesity, overuse, previous injuries such as fractures in the joint, and previous surgeries involving removal of cartilage from the knee. The most frequent cause is age-related wear and tear.



Types of Knee Replacements

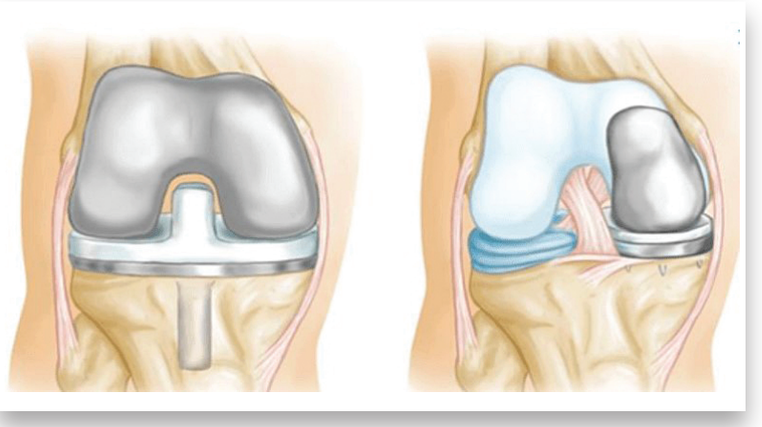
Unicompartmental Arthroplasty (UKA)

If cartilage damage has occurred in only one compartment of the knee, a partial knee replacement may be performed. The decision to perform a partial knee replacement will be determined by your surgeon based upon examination and x-rays. However, the final decision to perform a partial knee replacement is determined at the time of surgery.

The surgery would involve resurfacing one portion of the knee joint, such as just the medial compartment or just the lateral compartment. By performing a partial knee replacement to the affected compartment the function of the knee will be restored. This results in longevity and success equivalent or even better than total knee replacement surgery.

Total Knee Arthroplasty (TKA)

Total knee replacement surgery is recommended when more than one compartment of the knee is worn out, there is significant deformity of the knee, or when there is concurrent ligament damage. It is more accurately described as a “resurfacing” as only a minimal portion of the ends of the bones within the knee is replaced.



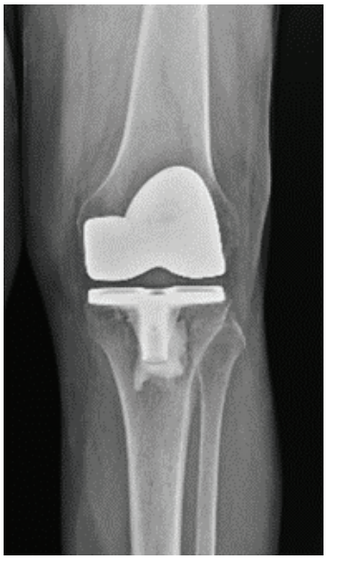
Robotic Assisted Knee Replacement Surgery

Robotic assisted knee replacement surgery is a newer surgical technique where the knee replacement is done with the assistance of a robotic arm. Dr. Braziel and your surgical team will have a personalized discussion with you regarding the surgical plan which may include robotic assistance. It is important to understand that the robotic arm does not perform the surgery, but it is a tool used by your surgeon to perform your knee replacement with accuracy and precision.

Cemented vs. Cementless

There are two methods to hold the knee prosthesis in place and adhere the implants to the bones.

1. Cemented Knee Replacement
   - The method uses medical grade cement to adhere the surface of the implants to the bone.
   - Cemented knee replacements have been around longest with a great track record. This technique allows the surgeon to adhere the implants to bone that may be more porous such as in the case of osteoporosis or previous surgery.
2. Cementless Knee Replacement
   - Also known as press-fit
   - The implants have a unique textured surface that encourages bone growth into the implants and allows for fixation of the implants to the bones of the knee.
   - These implants may have benefits over cemented implants especially in younger and heavier patients. These implants offer better long term fixation between the bone and prostheses and eliminates the concern for breakdown of cement.



Longevity of Knee Replacement Surgery

Knee replacement surgery is one of the most reliable and predictable operations for improving pain, function, and overall quality of life. There are several factors that influence the longevity of a knee replacement, some of which are patient specific and others that pertain to the specifics of the implants and surgery. We will have a personalized discussion with you regarding your individual risk and anticipated likelihood of long-term success.

It is important to understand that any long-term information pertaining to the longevity of knee replacement surgery is based on surgical techniques and implants that are over 10-20 years old. While we believe that current technology and surgical techniques will improve the survivorship of modern knee replacements, long-term follow-up will be needed to know for sure. After a patient has recovered we recommend routine follow-up with repeat x-rays of your knee replacement at 1 year from surgery and then typically every 5 years for the patient's lifetime.

Preparing for Your Knee Replacement Surgery

The following information is addressed in this section of the booklet. Any questions or concerns should be discussed between you and the team in preparation for your surgery.

1. Preoperative education about the surgical procedure
2. Surgical risks
3. Preparation for surgery
4. Day of surgery
5. Post-op instructions and rehabilitation
6. Home preparation for after surgery

Leading up to surgery, you may be looking for more information beyond this booklet to further educate yourself on surgery and expectations. We encourage you to refer to the Patient Education link on the NEBH website. The link is listed below or you may scan this QR code.

https://nebh.org/classes-events?listPage=1

Inpatient vs. Outpatient Surgery

You and your surgical team will determine whether your surgery will be an outpatient procedure where you would go home the same day as surgery or an inpatient procedure where you spend 1 or more nights in the hospital after surgery. There are numerous factors that weigh on this decision including age, medical comorbidities, living situation and functional capacity. Together we will consider all factors and determine the best plan for you.

Our outpatient surgeries are most typically performed at either of the following surgical centers:

North Atlantic Surgical Suites (NASS)
23 Keewaydin Dr. Suite 100
Salem, NH 03079
Phone: 603-386-0272
Fax: 603-386-0271
https://northatlanticss.com/

Lighthouse Surgical Suites
2 Market Pl. Suite 100
Hollis, NH 03049
Phone: 603-600-6175
Fax: 603-600-6388
https://lighthousesurg.com/

New England Baptist Surgery Center (NEBSC)
40 Allied Dr., Suite 200
Dedham, MA 02026
Phone: 781-809-2050
Fax: 781-809-2015
https://nebsurgerycenter.com/

We have worked closely with the medical staff at these surgical centers to develop an outpatient joint replacement program, which is the primary focus of these outpatient centers. This has allowed for a shortened postoperative stay, improvement in your quality of care, and allows you to safely recover in the comfort of your own home.

Our inpatient surgeries are performed at **New England Baptist Hospital (NEBH).**

New England Baptist Hospital
125 Parker Hill Ave.
Boston, MA 02120

Main Telephone Line: 617-754-5000
https://www.nebh.org/

Your surgical team will coordinate your date for surgery. However, the time of your surgery is determined by the operative staff at the surgical facility the day before surgery. **You will receive a call from the surgical facility the day before surgery to notify you of your arrival time.** Please understand that there are numerous factors that determine surgical scheduling, so please be prepared to accommodate your requested arrival time.

Preoperative Testing

You must complete a surgical clearance appointment prior to your scheduled surgical date. This is for all patients having surgery at our surgical center as well as NEBH. This is a visit to ensure that you are medically cleared to undergo elective surgery. This must be completed within 30 days of your surgical date. It typically involves a thorough history, full physical exam, labs, and often an EKG. You will also be given specific instructions about which of your prescription medications to continue or hold prior to surgery.

If you take any medications prescribed by a specialist (rheumatologist, cardiologist, hematologist) you should also reach out to the appropriate provider to discuss taking the prescribed medication around the time of your surgery.

It is especially important to discuss a plan for stopping blood thinners and biologics prior to surgery with your prescribing physician.

Surgery at NEBH

If you are having surgery at NEBH, this prescreening visit will be completed at your PCP office, unless specifically directed by your surgical team to schedule this appointment with the NEBH preadmission screening unit (PASU). If completing the visit with your PCP, you will be asked to schedule the appointment directly.

If you completed your prescreening visit with your PCP, you will receive a call from an NEBH PASU nurse within 5-7 days of surgery to review your records from your PCP. This call is not scheduled.

NEBH PASU
The department is located on the 6th floor of the Converse Building within NEBH. The hospital front desk staff will direct you upon arrival.

If you need to reschedule the day or time of your appointment you may call the prescreening scheduling line directly at 617-754-6545.

Surgery at an Outpatient Center

You will be asked to schedule your preoperative surgical clearance appointment with your PCP. This is to be completed within 30 days of surgery.

Guidelines for Diabetes & Weight Loss Medications

GLP-1 medications (such as semaglutide, liraglutide dulaglutide, tirzepatide, Ozempic, Wegovy, Trulicity, Saxenda, Mounjaro, etc.) are used to treat diabetes and in recent years have been used with increasing frequency to encourage weight loss. These medications must be held ahead of your joint replacement surgery. For patients taking one of the above medications for diabetes, please consult with your prescriber (PCP or endocrinologist) as to how to adjust this medication around the time of your surgery. For patients using one of these medications for weight loss, please let our team know. We will determine a plan for holding the medication ahead of surgery.

Generally, the guidelines are as follows when taking a GLP-1 medication for weight loss:

- Please stop all GLP-1 medications 14 days prior to surgery. You may resume this medication at the next scheduled dose after surgery.

Preparing for Your Surgery

Preparing Your Home for After Surgery

- Move frequently used items, especially in the kitchen, bathroom, and bedroom, to easy-to reach drawers and shelves
- Make sure all of your medications are within easy reach
- Have a cell phone or cordless phone close to you
- Purchase a non-slip bath mat for inside your tub/shower
- Make sure stairs have handrails that are securely fastened to the wall
- Check every room for tripping hazards. Remove throw rugs and secure electrical cords out of your way
- A chair with a firm back and armrests is recommended during your recovery. It would also be helpful to use a chair that sits higher to allow you to stand more easily.
- If you can, prepare meals in advance and freeze them
- Ensure well lit rooms and hallways
- Arrange for someone to stay with you after surgery until you are able to perform activities of daily living independently and safely. This typically occurs within a few days of surgery

Clothing for After Surgery

- Loose fitting and comfortable pants/shorts
- Good supportive sneakers

The Night Before Surgery

- Remember that you are to have nothing to eat or drink after midnight the night before surgery. This includes gum, mints, candy, water, and black coffee.
- If you are experiencing any signs of infection, such as fever, cold/flu symptoms, diarrhea, skin rash, or open sores please call the team and your medical doctor as soon as possible.
- Bathe or shower the day before and the morning of your surgery. A special wash (Hibiclens/ chlorhexadine) is recommended to prevent surgical site infections. Please follow those specific instructions on page 28.
- Please do not wear perfumes, make-up, nail polish, creams or lotions the day of surgery.

Packing for an Overnight Stay (If You are Having Surgery at NEBH)

Pack only the items you may need during your hospital stay. You may bring your own toiletries and any necessary personal items.

- What to Bring to the Hospital
  - A full set of comfortable clothes that are loose fitting. This will allow room for any postoperative swelling.
  - A pair of supportive sneakers
  - Personal items such as contact lenses, denture care, glasses, hearing aids
  - CPAP/BIPAP machine if you have sleep apnea and use one routinely
  - A form of photo ID and insurance cards to register at the admitting department
  - Ice machine if purchased ahead of time
- What not to bring to the hospital
  - Money, jewelry, or other valuables
  - Medications unless otherwise instructed by your medical team
  - Cigarettes, electronic cigarettes, or other tobacco products

Your Surgical Day

Morning of

- Shower from the chin down with the special cleanser (Hibiclens) the morning of surgery.
- Wear clean, comfortable clothes. Avoid wearing any fragrance, deodorant, cream, lotion, or makeup.
- Take medications with a small sip of water as advised at your preoperative appointment or PCP appointment.

Arrival to the hospital or outpatient center

- The day of surgery you will check in and proceed to the preoperative area where you will change into a hospital gown. You will be asked to confirm your name, date of birth, your surgeon's name, and the procedure for which you are scheduled. Before your surgery, several different people involved in your care will ask you to repeat this information. Do not be alarmed; this is a routine safety measure. The nurse in the preoperative area will take your vital signs, start an IV, and review your medical history.
- Hearing aids: If you use hearing aids, wear them to the hospital on the day of surgery. Your surgical team will ensure you have access to your hearing aids after the surgery as well so you can hear everything we need to tell you.
- Dentures: You will be asked to remove all nonpermanent dental work before your surgery.
- Contact lenses: Wear glasses if possible. If contacts must be worn, bring your lens case and solution.
- Family waiting area: When you are taken to the operating room, your family will be directed to the family waiting area, where they may wait during your surgery. Once the surgery is complete, your surgeon will call or visit with your family to update them on your condition.

Please understand given the COVID pandemic the hospital and surgical center may change their visitation guidelines. Please refer to their respective websites to get the latest update on visitation guidelines.

Anesthesia

Your anesthesiologist and nurse anesthetist will meet you in the preoperative area before surgery. At this time you will review your medical history with them and determine the best plan for your anesthetic care. It is important to discuss any prior problems or difficulties you may have had with anesthesia.

Your anesthesia team will discuss the risks and benefits associated with the various anesthetic options, as well as the potential side effects that can occur with each.

It is most common for our patients to undergo spinal anesthesia for their knee replacement surgery. Your anesthesia team will determine if this is the best option for you.

During Surgery

Once in the surgery suite, you will be assisted onto the surgical table. The surgery room is kept cool and the nurse will give you warm blankets if needed. The anesthesiologist or nurse anesthetist will attach monitoring equipment and check your IV. They will continuously monitor your vital signs throughout the procedure. An additional aspect of our culture of safety is called the “time out”. In this safety measure, we confirm that we have the following before surgery:

- the correct patient
- the correct side and site marked
- the correct procedure
- the correct position on the operating table
- the correct implants, special equipment and X-rays

You will be in the surgery room for about 2-3 hours to allow time for anesthesia, the surgery and wound closure.

Recovery Room

After surgery you will be taken to the recovery room/post-anesthesia care unit (PACU) where a nurse will care for you for the following 1-2 hours. The total time spent in the recovery room varies for each patient. The nurse will take your temperature, pulse, and blood pressure and will assess your pain. If needed, pain medication will be started.

To assist with breathing, you may receive oxygen through a small intra-nasal tube or mask. Circulation aids and compression stockings will be applied to your lower legs to prevent blood clots. An ice pack will be applied to your surgical site to reduce pain and swelling.

- At NEBH, your family members may not visit with you in the PACU.
- At the outpatient surgical centers, your family member will be able to accompany you in the recovery room.

Leaving the Recovery Room

At NEBH: Transfer to Inpatient floor

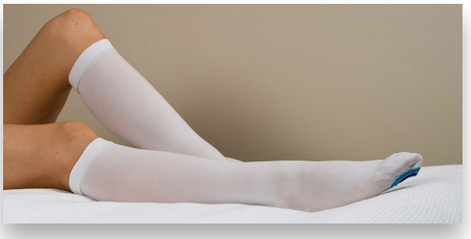
- You will be transferred from the PACU to a nursing unit. The nurse there will check your vital signs and make you comfortable. A member of your surgical team will visit you daily. Many times, the visit may occur early in the morning. In addition you may be treated by an internal medicine doctor, nurse practitioner or physician assistant. They will be aware of your plan of care and will assist as needed.

At the Outpatient Surgical Centers: Discharge from PACU

- You will be discharged directly from the recovery room (PACU). Once you are awake, stable, and have regained feeling and movement in your legs you will begin walking with the assistance of your nurse.
- The team at your surgical center will help you begin your exercise routine. You will be educated on using assistive devices (walker, crutches). These initial postoperative exercises are designed to increase strength and flexibility. Prior to discharge we will ensure that you are safely completing activities of daily living including walking, stair climbing, getting in and out of bed, and up and down from a chair or toilet.

Postoperative Care

Circulation Aids



Compression Stockings: You will not be as active as you usually are and therefore you are at a greater risk of developing blood clots after surgery. To help prevent them from forming, you will need to wear TED stockings. They are to be used at all times, except with bathing. You should wear them for 4 weeks postoperatively.

Sequential Compression Calf Sleeves: These sleeves are used in addition to the TED stockings to reduce your risk of developing blood clots. The sleeves inflate intermittently to promote blood flow. They will be applied while you are in the operating room and worn throughout either your hospital stay or surgical day.

The surgical centers will offer you to purchase a pair of these compression sleeves. We encourage you to purchase them, but it is not required. Please reach out to us if you have questions regarding this purchase.

Cough and Deep Breathing

Deep breathing is important to your recovery.

Incentive Spirometer: When in the hospital, you will be using a small device called an incentive spirometer. A nurse will show you how to use it to keep your lungs clear and active during your recovery. It is important to use 10 times every hour while you are awake to promote oxygen deep into your lungs. If you do not have this device at home, we encourage you to take 10 slow, deep breaths once an hour while you are awake.

Pain Management

Effective pain management following surgery is a major priority for both you and your healthcare providers. Every effort is made to safely minimize your pain; however, it is normal to experience discomfort following your surgery.

You will be asked about your pain level while at the hospital or surgical center. You will be asked to “rate” your level of pain on a scale from 0-10. A rating of ‘0’ means that you are not in any pain at all. A ‘5’ means that you are experiencing a moderate amount of pain, and a ‘10’ means you are experiencing the worst possible pain. This score will be used to select the best pain medicine to manage your pain level. The doctors and nurses will ask you how the pain medicine is working and adjust the dose as needed.

Most commonly, postoperative pain is best managed with oral pain medications.

You may receive more than 1 type of pain treatment, depending on your needs and the type of surgery you are having. All of these treatments are relatively safe, but like any therapy, they are not completely free of risk. Dangerous side effects are rare. More common side effects, such as nausea, vomiting, itching, drowsiness, constipation, and light-headedness can occur. These side effects are usually easily treated in most cases.

Be sure to tell your doctor and nursing staff if you are taking pain medication at home on a regular basis and if you are allergic to or cannot tolerate certain pain medications.

Bowel Management

We recommend using stool softeners after surgery as you are at risk for constipation due to inactivity and while taking narcotic pain medication. Constipation is a common side effect of narcotic pain medication, so we recommend following the prescribed regimen of stool softeners and laxatives postoperatively. Additionally it is helpful to eat a high fiber diet and drink plenty of fluids to assist with preventing constipation.

Physical Therapy

The goal of physical therapy on the day of surgery is to begin range of motion exercises and educate you on using an assistive device (walker/crutches) to walk.

Care Coordination: Discharge from NEBH or Outpatient Surgical Centers

You will be discharged from the facility once your care team determines you are safe to be discharged and your pain is controlled. This is a collaborative decision made by your care team including your surgeon, PA, nurse, and physical therapist. Most patients are discharged home after surgery. Generally outcomes after surgery are much better when patients go home.

However, if you are having surgery at the hospital and you have not met the criteria to be discharged home, you will be discharged to a skilled nursing facility of your choice. You will work with the case management team at the hospital to select a facility and complete the referral process.

If you are being discharged home from outpatient surgical centers, your team will let you know of the approximate time of discharge. You will need to coordinate a family member or friend to drive you home.

If you are discharged home, you should plan to have someone stay with you initially after surgery. This is typically for the first 2-3 days or until you are comfortable to ensure safety. A specific plan will be made with your care team before discharge.

If you are discharged home, the team at your surgical site will coordinate home services for you. This will include in-home physical therapy and possibly in-home nursing if deemed necessary. Please contact your surgical facility directly if you have questions about these services once you are home after surgery. The contact information for the team members responsible for coordinating services is listed on your discharge paperwork.

After Your Discharge: Your Road to Recovery

In the initial 2-4 weeks following surgery the goals are to decrease swelling, manage pain, perform range of motion exercises, and begin to strengthen the muscles in your leg. In order to achieve these goals, the following guidelines should be followed. Each patient progresses differently depending on numerous factors. Please understand that your recovery process is unique to you (and even unique to the specific joint). If you have any questions, please contact our office.

Postoperative Medication

- Be sure to take your medications by mouth with a meal or snack. Avoid consuming alcohol or driving while taking prescription narcotic medication.
- You should take your home medications as instructed by your physician. Please be aware that there may have been some adjustments made to these medications around the time of surgery and discussed at the time of discharge.
- If your surgery is at NEBH, your prescription postoperative medications will be prescribed at the time of discharge from the hospital.
- If your surgery is at an outpatient surgical center, you will receive your prescription postoperative medications about 1 week prior to surgery. They will be sent electronically to your pharmacy.

Expectations Regarding Pain Management

Almost all surgical procedures result in some level of pain and discomfort. The amount of pain you experience depends on multiple factors. Pain is generally greatest immediately after surgery and subsides as time goes on. However, there may be some episodes of worsening pain in the initial recovery period.

Oral narcotic pain medication is frequently administered to patients after surgery to help control postoperative pain. It is important to note that although these medications are effective for the treatment of acute pain, use beyond that can be detrimental to your health and surgical outcome. It is vital that you discontinue this medication as soon as your pain allows. The medication should only be taken as needed, as prescribed.

Common Medication List

You will be discharged with a medication list specifically for you. Please refer to your discharge medication list for specific instructions. This list below is for reference to provide patient education regarding postoperative medications.

- Omeprazole (Prilosec)
  - 20 mg tablet, take 1 tablet in the morning prior to other meds for 4 weeks postop.
  - This medication is to ease heartburn associated with taking postoperative medications including aspirin.

- Aspirin
  - 81 mg tablet, take 1 tablet twice a day for 4 weeks postop
  - This medication is used to decrease risk of blood clots postoperatively.
  - You may be prescribed another blood thinner medication (i.e., Eliquis) in lieu of aspirin, depending on your medical history. Please refer to your discharge medication list to determine which blood thinner you should be using postoperatively.
- Ondansetron (Zofran)
  - 4 mg tablet, take 1 tablet every 6 hours as needed for postop nausea
  - This is an anti-nausea medication.
- Pain Medications (in order of use)
  - Acetaminophen (Tylenol)
    - 500 mg tablet, take 1-2 tablets every 8 hours as needed for postoperative pain
    - Typically we recommend routinely taking 1000 mg every 8 hours until pain is minimal.
    - It is generally very safe to take this dose of Tylenol. Please do not exceed 3000 mg total of Tylenol per day.
  - Celecoxib (Celebrex)
    - 200 mg tablet, take 1 tablet daily for 4 weeks postop
    - This medication is an anti-inflammatory used to treat postoperative swelling and pain.
    - If your surgery is at an outpatient surgical center, you will be instructed on the day before surgery to take 1 capsule twice a day and on the morning of surgery to take 1 tablet.
    - If your surgery is at NEBH, you will be given a dose of Celebrex preoperatively upon arrival to the hospital.
  - Oxycodone
    - 5 mg tablet, take 1-2 tablets every 4 hours as needed for moderate to severe postop pain
    - This is a narcotic pain medication used to treat signficant pain unrelieved by Tylenol and Celebrex alone.
    - There are other narcotic pain medication options such as hydromorphone. Your surgical team will discuss the best medication to treat your pain.
- Constipation Medications (in order of use); constipation is a common side effect when using narcotic pain medication
  - Docusate sodium (Colace)
    - 100 mg capsule, take 1 capsule daily while taking narcotic pain medication
    - Colace is a stool softener.
  - Sennonide (Senna)
    - 8.6 mg tablet, take 2 tablets at night before bed while taking narcotic pain medication
    - Stop taking if you are having loose stools.
    - Senna is a laxative.
  - Polyethylene Glycole (Miralax); powder for reconstitution
    - 17 g, use once daily until bowel movement is acquired, then daily as needed for constipation
    - Miralax is an osmotic laxative.
  - Bisacodyl (Dulcolax)
    - 5 mg tablet DR, take 2 tablets daily as needed for severe constipation
    - Ducolax is a laxative.

Please note that you must avoid over-the-counter anti-inflammatories (NSAIDs) for 4 weeks postoperatively while you are on a blood thinner (such as Aspirin/Eliquis). This includes Advil/Motrin (ibuprofen) and Aleve (naproxen). If appropriate you will be prescribed Celebrex as mentioned above.

Activity

- Continue your exercises as instructed by your physical therapist. In general it is recommended to perform these exercises three times every day.
- Range of motion exercises are the mainstay of your recovery after knee replacement surgery. Your focus will be on aggressive range of motion exercises to avoid stiffness in the postoperative period and gain necessary motion to perform your daily living activities.
- You may bear weight as tolerated on the surgical leg, unless instructed otherwise by your surgeon.
- Get up and walk every hour for about 10 minutes when you are awake using your crutches or walker for support and safety. Continue to use your crutches or walker for at least 2 days after surgery or longer as directed by your surgical team or physical therapist. The walker or crutches are used for safety and support. You may advance to a cane as directed by your physical therapist and surgical team. You will be able to wean from these assistive devices gradually.
- Initially, you should take two 10-15 minute walks per day and gradually increase the time and distance.
- In general you may advance your activity as you can tolerate. There are no restrictions on your activity, but pain should be your guide. Please reach out to the office with any questions regarding advancing your activity.

Physical Therapy

Typically patients participate in an in-home physical therapy program for about 3 weeks after surgery. A physical therapist will come to your home for this time, after which, you will continue physical therapy at an outpatient center. This usually begins once you can get yourself to an outpatient facility. The outpatient physical therapy course is typically for 2-3 months after surgery. However, this time frame may vary for each patient. You will discuss the time frame with your surgical team at your postoperative visit, as well as with your physical therapist.

In-home physical therapy is set up by the facility at which you are having surgery.

You should select an outpatient physical therapy facility convenient for you. We recommend selecting a facility close to your home.

Managing Swelling

It is normal to have bruising around your knee, extending up to your thigh and down to your foot. Swelling may increase after you are discharged home and typically peaks at about 7 days postoperatively.

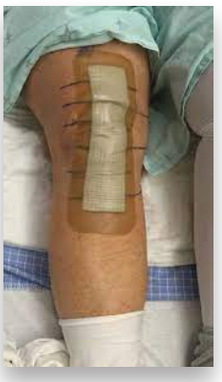
You should use ice to your knee and along your entire leg intermittently throughout the day. We recommend icing every 3-4 hours for about 20 minutes. Remember not to apply ice directly to your skin. You should continue using ice regularly for several weeks and as needed for a couple months after surgery.

You should intermittently elevate your leg 10” above the level of your heart. You may prop your leg with a pillow under your heel but not under the knee directly. This is so that you are resting with your leg fully extended at your knee rather than with it bent.

You may consider purchasing an ice machine from our office. It is not required and unfortunately not covered by insurance. However, we do recommend them as ice therapy is essential to your recovery.

- If you would like to purchase an ice machine, please visit https://shop-recovery.net/braziel or scan the QR code to the right.
  - Password: Breg Polar Wave
  - Cost: $350
  - The machine will be delivered to your home.

Incision Care



If discharged from NEBH

- You will be discharged with an aquacel dressing (see photo to right). This remains in place for 7 days from application. You may shower with the aquacel dressing but ensure it is completely sealed. After 7 days you may remove the dressing and leave the wound open to the air assuming it is dry and without drainage.

If discharged from an outpatient surgical center

- You will be discharged with a bulky ace bandage dressing. This is to be changed to an aquacel dressing 2 days after surgery. This aquacel dressing is waterproof and will remain in place for 7 days, after which you may remove the dressing and leave the wound open to the air (assuming it is dry and without drainage). While the aquacel is in place you may shower but ensure it is completely sealed.

Once the wound is open to the air, you may shower and let water run over the incision. At 2 weeks postop you may use regular soap and gently scrub the region.

Typically there will be dermabond (skin glue) along the incision with Steri-Strips (white tape) near the ends of the incision. These Steri-Strips are tacking down suture tails. These clear suture tails will fall off with time as the remainder of the suture under your skin dissolves. Please do not pull at the tails. If they are still there at your first postop visit we will remove them.

Keep in mind that there are other wound closure techniques that may be used. In the situation where your surgery was completed with robotic assistance there may be a small incision to your shin where a dressing will be applied. Please reach out to the office with any concerns regarding this matter.

Do not use creams or lotions on your incision for 6 weeks from surgery or until cleared by your surgical team.

Do not swim until cleared by your surgical team at your first postoperative visit. Typically we recommend avoiding swimming or submerging your incision in water (hot tub, bath) for at least 6 weeks from surgery.

Driving

You may resume driving when you have regained complete control of your leg and are no longer taking narcotic pain medication. You should confirm with your surgical team before driving. On average patients resume driving at about 2-4 weeks postoperatively.

Diet and Rest

Eat a healthy diet to promote healing. You may experience a decrease in appetite after surgery. This is normal and should gradually resolve itself. Take rest breaks as needed during the day. It is common to have difficulty sleeping after surgery. This will gradually improve but can take at least 4-6 weeks from surgery.

Knee Immobilizer

You may be discharged from NEBH with a knee immobilizer brace. If so, you are to wear this when sleeping for 2 weeks after surgery. It is used to aid with maintaining full knee extension (keeping your knee straight).

Concerning Signs or Symptoms

Infection

Risk of infection is very low after knee replacement surgery. Most patients who have surgery do not develop an infection.

Surgical site infection (SSI) is an infection that occurs after surgery in the part of the body where the surgery took place.

- Some common symptoms of surgical site infection:
  - Increased redness and pain around the area where you had surgery
  - Drainage of cloudy fluid from the surgical wound
  - Fever

DVT/Blood Clot

Deep Vein Thrombosis (DVT) is a formation of a blood clot. This is a potential complication following knee replacement surgery. A blood clot from your leg can travel to your lungs and cause serious complications.

- Sudden onset of shortness of breath and chest pain are warning signs of this condition. If you develop any of these signs call 911.

Symptoms of a DVT may include:

- Pain in your calf or leg
- Increased swelling of your thigh, calf, ankle or foot
- Redness
- Increased skin temperature at the site of the clot

Prevention of blood clots is the best treatment:

- Exercise, increased mobility
  - It is essential to reposition yourself frequently to prevent the risk of blood clots.
- Blood thinners (as prescribed by your surgeon)
- Compression stocking (and possibly sequential compression devices) are to be worn for 4 weeks postoperatively.
  - Compression socks are provided by the surgical facility; however, if you would like an additional pair or a better fitting pair you could purchase online or at a local drug store. Be sure to look for knee high stockings with a compression measurement of 18 mmHg.

Constipation

- It is normal to take several days to make a bowel movement after surgery.
- Drink plenty of clear liquids as the stress of surgery and anesthesia can cause dehydration/ constipation as well.
- Remember to eat a high fiber diet to decrease risk of constipation.
- Use the bowel regimen as described above while using narcotic pain medication.
  - Contact the office if you have concerns regarding constipation or are experiencing significant bloating, abdominal pain, or associated nausea or vomiting.

Stiffness

There is a concern for stiffness after knee replacement surgery. The best way to prevent this complication is to participate in your physical therapy exercises as recommended by your surgical team and physical therapist. The focus initially after surgery is on range of motion exercises with transition to strengthening as your pain improves in the recovery process.

Dental Work

For our patients with prosthetic joint implants, we recommend you avoid dental work for 90 days from your day of surgery, after which you will need to pre-medicate with prophylactic antibiotics before all dental work that involves gingival manipulation or muscosal incision (including dental cleanings). We recommend prophylactic antibiotics before dental procedures for 2 years from your most recent joint replacement surgery.

At the 2-year mark we recommend you discuss continuing this prophylaxis regimen with your surgical team. Typically if you are healthy without any other high risk comorbidities (diabetes, obesity, smoking, heart disease) you will no longer need to use prophylactic antibiotics once you are 2 years out from your joint replacement surgery.

When to Notify Surgical Team or go to ED

- You have a fever over 101.4 degrees Fahrenheit
- You have drainage from incision
- The area around your incision becomes hot to touch, red, or swollen
- You have increased pain that is not relieved with pain medication
- You develop sudden or severe calf pain, or swelling in the calf that does not decrease after elevation of leg
- You develop shortness of breath, chest pain, or difficulty breathing
- You have questions regarding activity or your medications
- You suffer a fall or other trauma

Smoking

If you smoke, you are required to stop prior to surgery. Stopping smoking will reduce the risk of breathing (respiratory) problems and complications from anesthesia. Smoking also affects wound healing after surgery and puts you at an increased risk of infection. There are many other health benefits from stopping smoking including:

- Prolonging your life
- Decreasing risk of diseases such as heart disease, heart attack, high blood pressure, lung cancer, throat cancer, emphysema, and other conditions
- Helping you feel better (less coughing, sore throats, and your stamina will improve)

We know it is an extremely difficult process to stop smoking, but we will be flexible and will work with you in scheduling surgery. Speak with your primary care provider for information on how to stop smoking. For more information about other smoking cessation programs in your community, please contact your local American Heart Association at 1 (800) 242-8721 or American Cancer Society at 1 (800) 277-2345.

Alcohol Consumption

Drinking alcohol can greatly affect the outcome of your surgery. Your recovery from surgery may not proceed as planned if your health care providers are not aware of your history of alcohol use. Please tell your health care provider how many drinks you have per day (or per week). Although it may be difficult to discuss alcohol use, it is done for your safety and to improve the outcome of your surgery.

During your presurgical visit with either your PCP or hospitalist at NEBH, you will be asked a series of questions. Your answers will help determine your risk of alcohol withdrawal and other alcohol-related problems that could occur after surgery. Please respond to the questions as honestly as possible. Remember, any provided information is confidential. We are here to help you prepare and recover from surgery as quickly and safely as possible.

Supplements and Hormonal Replacements

Some medications that you currently take may prove harmful around the time of surgery because they thin your blood or increase risks of bleeding, blood clots or infection. You will be asked to stop all vitamins and supplements 2 weeks prior to surgery and continue to hold until 4 weeks postoperatively. If you are on any type of hormone replacement therapy, you may be asked to hold this medication after surgery (typically for 4 weeks postop).

Follow-up

You have been scheduled for a postoperative visit listed in your surgical packet. Your first postoperative visit should be approximately 4-6 weeks after surgery. You will have a second postoperative visit approximately 4 months after surgery. Typically one of these two visits will be with Lauren and the other with Dr. Braziel.

If you are unsure if your first follow-up appointment is scheduled, please contact our surgical coordinator, Alicia.

Traveling After Surgery

You should not fly on a plane for 6 weeks after surgery due to the risk of blood clots associated with orthopedic surgery and flying.

When traveling long distances in a car after surgery you should attempt to change position or try to stand every hour. Some of the exercises, such as ankle pumps, can also be performed, should you need to sit for long periods of time. If traveling in the first 4 weeks after surgery you should wear your compression stockings.

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 a concern.

- It is no longer standard practice to provide you with any documentation for this.

Surgical Checklist for Your Upcoming Surgery

After booking surgery:

- Contact any specialists (i.e., cardiologist, hematologist, rheumatologist) for any documentation and clearance that they are comfortable with you proceeding with knee replacement surgery.
- If you take any medications such as immunosuppressants, hormone replacements, or rheumatoid arthritis or osteoporosis medications, contact the prescribing physician as there may need to be changes to these before surgery.
- Register for BBJI's patient portal. This can be an effective way to relay any pre and postoperative concerns.
- Make sure that no dental appointments are booked for 2 weeks before and 3 months after your surgical date.
- You cannot have a cortisone injection into the operative knee within 3 months of surgery.
- NEBH offers virtual preoperative education classes which are open to all of our patients.
  - This is a virtual nurse-led class providing information on what to expect before, during and after surgery. A question and answer session follows each class.
  - Sign up and find more information here: NEBH.org/myclass

Within 2-3 months of surgery:

- If you are on a blood thinner, consult with the provider who prescribed it for a plan to stop safely before surgery. If possible, have this provider document the plan in a letter or office visit note and have it sent to our office.
- If you are taking chronic narcotic medication, please reach out to your surgical team as well as your prescribing provider. We will need to make a plan for postoperative pain management as a team.
- Notify your surgical team of any changes in medical conditions such as open wounds, rashes, and any infections as they could impact surgery.
- If considering staying at a hotel near the hospital or surgical center the night before surgery, make a hotel reservation.
  - You may contact NEBH directly at 617-754-5800 for more information for accommodation near the hospital.
- Begin to make arrangements to have someone (spouse, children, friend, etc.) at home with you for a couple days after surgery to help with day-to-day tasks.

Within one month of surgery:

- Please reach out to your PCP office to schedule a preoperative screening visit unless told otherwise by your surgical team. This visit can be with an MD, PA or NP within your PCP practice. Alicia, our surgical coordinator, provided you with the necessary documents to take to this visit at the time you scheduled surgery or via the mail about 1 month prior to your surgical date.
- Be proactive in keeping healthy. Even a simple cold could cancel surgery.
- If any dental work is taking place within the last month, contact your dentist immediately for any signs of infection. You need to be clear of any infections prior to surgery.
- If you are a smoker, remember that you need to be completely off of cigarettes by surgery or it may be canceled.
- Consider buying a cold therapy unit. These are available online as well as through BBJI. You may call the office to purchase.

Within 1 week of surgery:

- Make any necessary arrangements at home to ensure safety after surgery.
- Stop all anti-inflammatories, unless otherwise directed by a physician, 5 days prior to surgery. You may use Tylenol instead. You can take Tylenol 500 mg tablets, 1-2 tablets every 8 hours as needed for pain.
- Be sure to know the date, time and location of your postoperative appointment.
- Make sure to use the Hibiclens soap as recommended, 2 days prior to surgery.
- Expect a call from your surgical facility in the afternoon the day prior to surgery informing you of your arrival time.

Preoperative Hibiclens Bathing Instructions:

Before surgery, it is important that you take an important role in your surgical care. To assist in the prevention of a surgical site infection we ask that you follow these instructions before joint replacement surgery to prepare your skin to be as germ free as possible.

We recommend using a special soap called chlorhexidine gluconate (CHG). A common name for this soap is Hibiclens. *If you are allergic to CHG or for any other reason that washing with CHG is not possible, please follow the instructions below and use antibacterial soap.*

Chlorhexidine reduces the number of microorganisms on the skin and keeps that number down for several hours.

Prior to your operation, **two chlorhexidine antiseptic showers are recommended.**

WHEN TO USE

First Shower – Have your first chlorhexidine shower the day before surgery.
Second Shower – Have your second shower on the morning of surgery.

HOW TO USE

1. Wash your hair and body as usual with your regular shampoo/soap.
2. Thoroughly rinse your body with warm water.
3. Turn off the water to prevent rinsing the CHG soap off too soon.
4. Apply the minimum amount of Hibiclens to cover from the base of the neck down the body avoiding sensitive areas. Use Hibiclens as you would any other liquid soap. **Do not scrub too hard.** You can apply Hibiclens gently to the skin and wash gently for **5 minutes** with a washcloth. Pay special attention to the area of surgery.
5. Turn the water back on and rinse thoroughly with warm water.
6. Pat yourself dry with a clean towel.
7. Do not apply lotion, powders or perfumes to the areas cleaned with Hibiclens.
8. Put on clean clothes.

Helpful Administrative Tips

General Appointment Scheduling

Our main phone number, 781-890-2133, is the best place to start if you need to schedule a follow up appointment. Select Option 1 after hearing the automated prompt.

Prescription Requests

Using our main number, select option 2 after hearing the automated prompt. You will be asked to leave a voicemail, which our medical assistants regularly check during business hours. They will then contact your surgical team with your request, so please be sure to leave a detailed message, including verifying your pharmacy. We request you put in a refill request at least 12-24 hours prior to running out of a medication. Prescriptions cannot be filled over the weekend, so be sure to request a refill appropriately before the end of the week.

FMLA/Disability Paperwork

These requests can be faxed to our office at 781-890-2177 or uploaded via the patient portal. Please be sure they include your name and where they should be faxed after completion. They take roughly 7-14 business days to turn around, so please allow enough time for their completion.

Please reach out to Kadeen directly for any questions regarding FMLA and/or disability forms
D: 617-751-5235.

Patient Portal

If you have not yet registered for our patient portal, please consider doing so. If you need any assistance please contact our front desk staff by calling the main number, 781-890-2133. Our portal allows you to send and receive secure messages, which are kept as a part of your medical record. This can be especially helpful after surgery as questions arise. However, please do not send urgent matters in this manner.

Notes

BBJI
Boston Bone & Joint Institute

www.bbji.com

BBJI

Boston Bone & Joint Institute

A DIVISION OF NOA

NORTHEAST ORTHOPAEDIC ALLIANCE

Waltham
71 Border Road
Waltham, MA 02451
Tel: 781-890-2133
Fax: 781-890-2177

Dedham
3 Allied Drive
Dedham, MA 02026
Tel: 617-264-1100
Fax: 617-264-1101