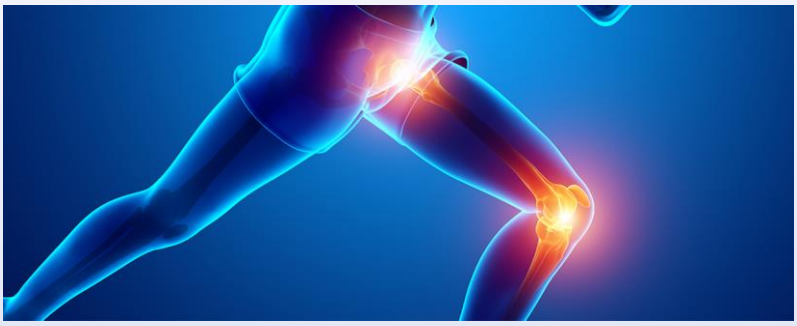
BBJI

Boston Bone & Joint Institute

Joint Replacement Center

A Guide to Hip & Knee Replacement Surgery



Jacob Drew, MD

Matt Attolino, PA-C
Tara Meaden – Surgical Coordinator

Beth Israel Lahey Health
New England Baptist Hospital

Beth Israel Lahey Health
Beth Israel Deaconess Needham

AAHKS®
AMERICAN ASSOCIATION OF HIP AND KNEE SURGEONS

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BBJI
Boston Bone & Joint Institute

To our patients,

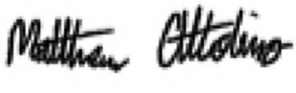
Thank you for the opportunity to take part in your care. Our number one goal, along with that of our team at the Boston Bone and Joint Institute, is to improve your quality of life through our knowledge, skill, experience, and most importantly – compassionate care.

Hip and Knee replacement surgery are highly effective procedures, but we recognize surgery can be stressful. We hope to make this process as smooth as possible. Our team of experts is here for your questions, concerns, and general support through this journey to improve your quality of life.

This booklet is intended to be a resource to help you and your loved ones understand your joint replacement, the risks and benefits of surgery, and what to expect during your surgical and postoperative experience. Please keep this with you all the way up to your date of surgery and beyond. Additionally, our team is always here to answer your questions – please do not hesitate to contact us about anything. See the backside of this booklet for information on how to relay questions to the team.

Our team is highly committed to improving patient outcomes and satisfaction. To this end, we kindly ask that you complete our patient-reported outcome questionnaires before each of your appointments. The questionnaires will ask you about your pain, joint function, general health, and satisfaction with your care. We rely on your responses to get a better understanding of how patients are doing and identify ways to improve the experience and outcomes for future patients.

Sincerely,



Jacob Drew, MD

Matt Attolino, PA-C

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Meet Your Joint Replacement Team

JACOB DREW, MD

Dr. Jacob Drew is a board-certified orthopedic surgeon with specialized fellowship training in Hip and Knee Replacement. After completion of residency training at University of Massachusetts Medical School, he completed the renowned Adult Reconstruction Fellowship at the OrthoCarolina Hip and Knee Center in Charlotte. From there he joined the academic practice at Medical University of South Carolina where he was the Director of Arthroplasty Research and was awarded the John A. Siegling Teaching Award. Most recently he has based his practice at Beth Israel Deaconess Medical Center, where he was the Chief of the Division of Arthroplasty and a dedicated teacher within the Harvard Combined Orthopedic Residency Program. He has been performing anterior approach hip replacement for over a decade and continues to evolve his clinical practice to incorporate advances in the field that will benefit his patients.

Dr. Drew treats a broad range of conditions affecting the hips and knees. He is a strong believer in a partnership between patient and physician and will provide a “menu” of both non-operative and surgical options from which the patient can choose the option most appropriate for their unique and particular situation and goals. For some, injections or physical therapy may be most appealing, while for others, partial or minimally invasive joint replacement may be appropriate alternatives.

In addition to routine hip and knee replacement surgery, Dr. Drew is an expert in revision arthroplasty, and is happy to evaluate patients with problematic joint replacements that have failed to live up to expectations. Dr. Drew performs surgery in a variety of settings including at New England Baptist Hospital, Beth Israel – Needham, Beth Israel Deaconess Medical Center, in addition to outpatient surgery centers. This allows the patient to participate in selection of the surgical location that suits their individual medical needs and comfort levels.

When away from the hospital, Dr. Drew can be found enjoying time with his wife and three children, most likely at a sporting event or fishing.

MATT ATTOLINO, PA-C

Matthew Attolino is the Physician Assistant to Dr. Jacob Drew, specializing in the total replacement of the hip and knee joints. He earned a Master’s degree in Physician Assistant Studies from Yale University and a Bachelor of Science from the University of Connecticut. Before joining the Boston Bone and Joint Institute, he worked as a physician assistant in arthroplasty at Beth Israel Deaconess Medical Center.

TARA MEADEN, SURGICAL COORDINATOR

Tara assists with all patient questions, appointment bookings, phone messages, physical therapy referrals, and medication refills for Dr. Drew and Matt. She is another bridge between patient and provider. She is able to answer common logistical questions before and after surgery, as well as connect patients with the team to answer any clinical questions. Tara can be reached at 617-751-5234.

Joint Hip/Knee Center Other Specialists

Dr. Braziel is a board-certified orthopedic surgeon specialist who focuses on total joint replacements of the knee and hip. He operates out of several surgery centers including New England Baptist Hospital in Boston, New England Baptist Outpatient center in Dedham, as well as two outpatient centers specializing in joint replacements in Salem and Hollis, New Hampshire. Dr. Braziel 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 currently the Co-Director of Outpatient Arthroplasty at New England Baptist. He is an active member of multiple academic societies, including the American Association of Hip and Knee Surgeons (AAHKS), and the American Academy of Orthopedic Surgeons (AAOS). He is also a fellow of the American Board of Orthopedic Surgeons (ABOS).

Dr. Nairus is a board-certified orthopedic surgeon who specializes in total knee and hip replacements. He operates out of New England Baptist Hospital and other local outpatient surgery centers for those that are candidates. Dr. Nairus earned his medical degree from University of Cincinnati College of Medicine, his residency from the University of Massachusetts and his fellowship from New England Baptist Hospital. He is currently a Clinical Instructor at Tufts University School of Medicine. Dr. Nairus has lectured at orthopedic conferences and authored numerous works of orthopedic literature. He also continues to have close ties to his alma mater Holy Cross, where he was a first team GTE Academic All-American in basketball. Dr. Nairus does utilize MAKO robotic technology for patients that are candidates for this specific procedure. He is also an active member of the American Academy of Orthopedic Surgeons (AAOS) and the New England Orthopedic Society (NEOS).

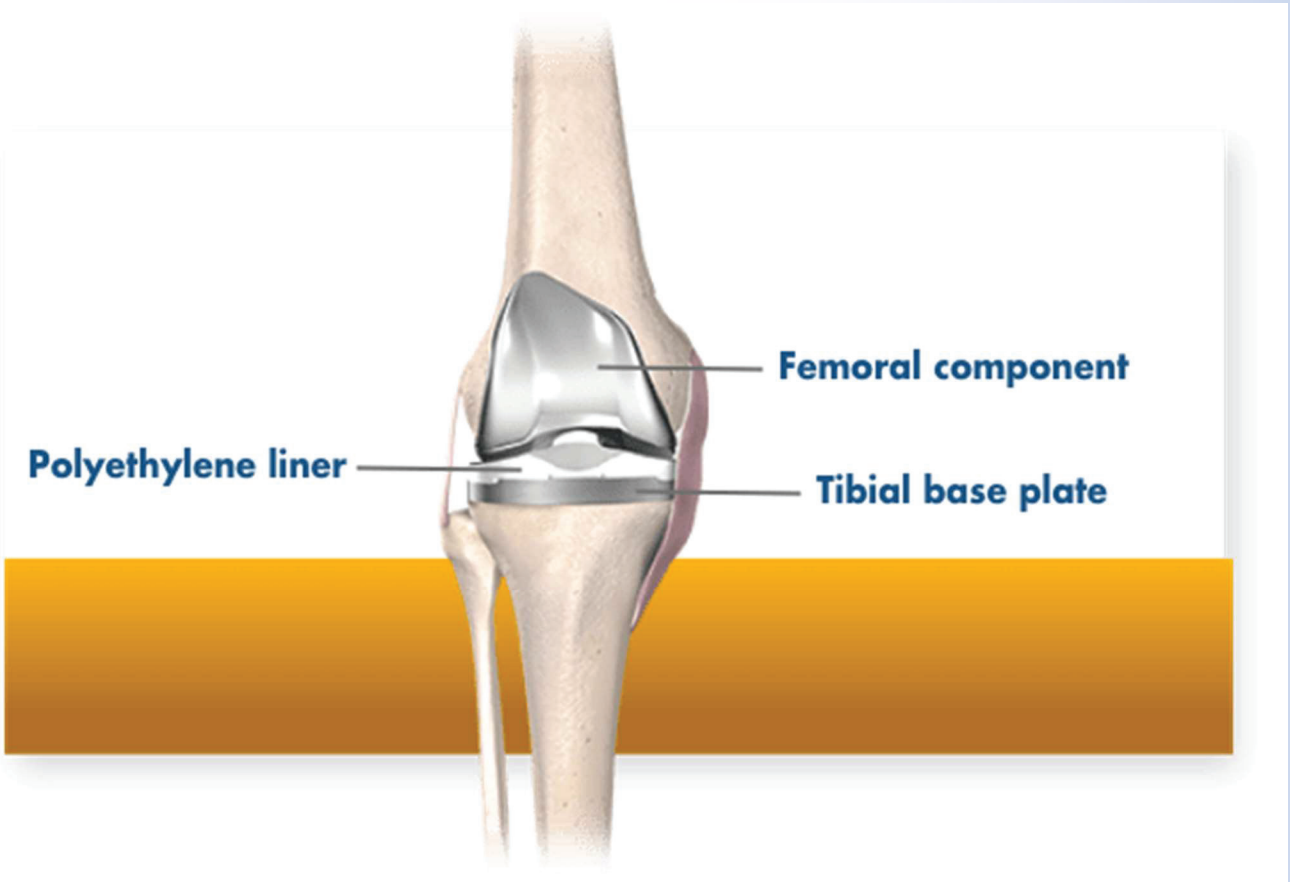
Dr. Geoffrey Van Flandern is a board-certified orthopedic surgeon specializing in the care of hip and knee diseases. Born and raised in Cincinnati, Ohio, he attended the University of Notre Dame, graduating in 1985. He went on to attend the Northwestern University School of Medicine in Chicago, and did his orthopedic residency at the Northwestern/McGaw Medical Center, also in Chicago.
Dr. Van Flandern completed the Otto E. Aufranc Fellowship in Hip and Knee replacement at New England Baptist Hospital in 1995. He then joined Longwood Orthopedic Associates in Boston, and continued to specialize in the reconstruction and replacement of hips and knees as an attending surgeon at New England Baptist Hospital. He is now the Director of the world renowned Aufranc Fellowship and also is an Assistant Clinical Professor at the Tufts University Medical School. Dr. Van Flandern maintains his place on the cutting edge of techniques in advanced hip and knee replacement and rapid postoperative recovery. His practice also focuses on the younger patient as he also performs hip arthroscopy and hip preservation techniques.

Understanding Knee Replacement Surgery

Total Knee Replacement is the care for knee arthritis or post-traumatic conditions that have not responded to any other conservative care (activity modification, exercise, NSAIDS, injections, etc.) The procedure is through an anterior approach in the front of the knee. A spinal or general anesthesiologist will perform the necessary anesthesia.

During the procedure we will only remove the damaged bone and cartilage – roughly 9 mm of bone. Multiple techniques are then used to correct leg alignment, height, and ligament balance. The damaged surfaces are covered with highly polished metal implants with super cross-linked plastics. The native knee cap is retained, but is resurfaced to prevent pain.

The surgery takes two hours and then to the recovery room for another two hours. Surgery is either done as an outpatient, or one overnight stay during which the patient learns physical therapy exercises, use of assistive devices, and is educated about pain management techniques. The patient is discharged and will have a follow-up visit in the office four weeks after the surgery with Matt Attolino, the Physician's Assistant.



Knee Anatomy

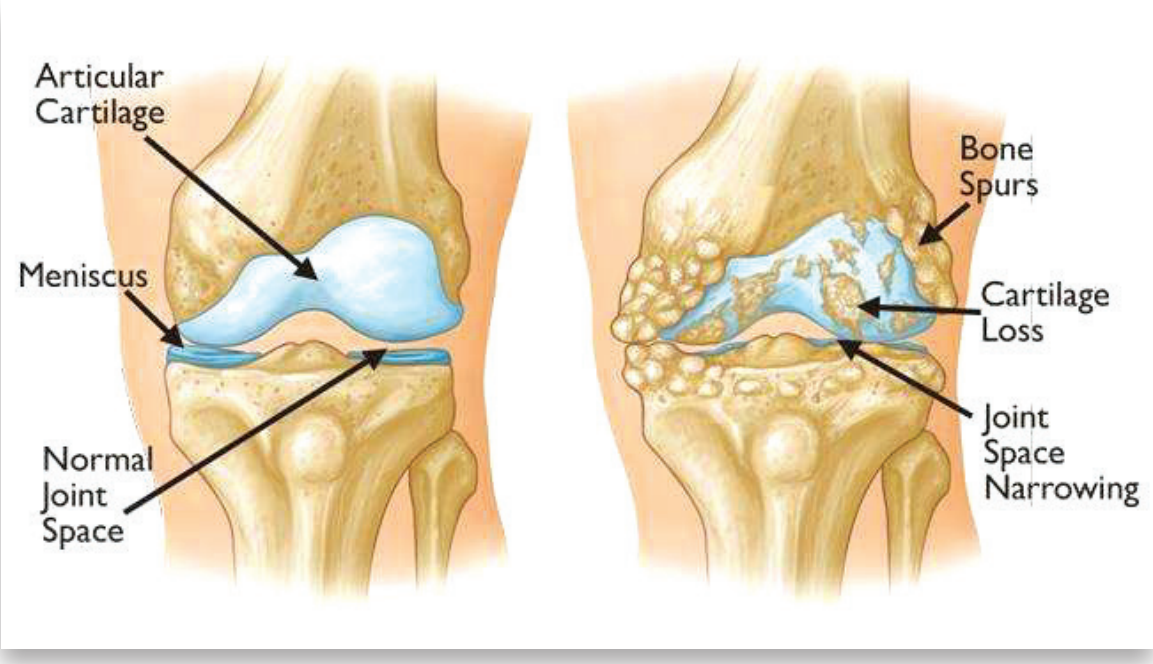
To understand a total knee replacement, also known as total condylar knee arthroplasty, you must be familiar with the structure of the knee, a complex joint that consists of three bones:

- the femur (thighbone)
- the tibia (shinbone)
- the patella (kneecap)

Strong ligaments connect the powerful muscles of the thigh and calf to the bones around the knee to control knee motion and function. Cartilage (such as the meniscus) and other soft tissues cover and cushion the bones to help them glide together smoothly.

When you bend or straighten your knee, the end of the femur rolls against the end of the tibia, and the patella glides in front of the femur.

When the cartilage that cushions the joint degrades or is worn away completely, the bones rub together and become scraped and rough. This causes inflammation known as osteoarthritis, which results in pain and stiffness that make walking and other movement difficult. The implants used in knee replacement are smooth like the surfaces of a healthy knee.



Understanding Partial Knee Replacement Surgery

The knee joint is made up of three compartments consisting of the:

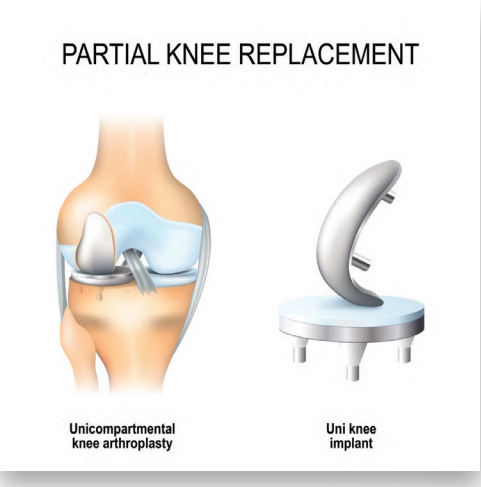
- Outside (lateral)
- Inside (medial)
- The kneecap (patella femoral)

Only one of the three compartments may experience osteoarthritic changes. The degenerative condition may spare the other knee areas, leaving good working cartilage. A unicondylar (one condyle) knee replacement is ideal when only one portion of the knee joint needs to be replaced. Often this surgery can relieve the pain of regional osteoarthritis and maintain a pain-free knee for an extended period.

In the event that the knee develops multiple compartment osteoarthritis, a total knee replacement can be utilized even after undergoing unicondylar replacement surgery. There are many advantages of a unicondylar replacement over a total knee replacement.

Unicondylar replacement does not prevent osteoarthritis from forming in the remainder of the knee and a future knee replacement may someday be required. As with any surgical procedure, there are risks to unicondylar knee replacement. These risks include but are not limited to infection, blood clot (DVT), bleeding, and nerve injury, at rates similar to total knee replacement.

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. For the appropriate patient, a partial knee replacement often outperforms a total knee replacement with nearly equivalent longevity.



Understanding Hip Replacement Surgery

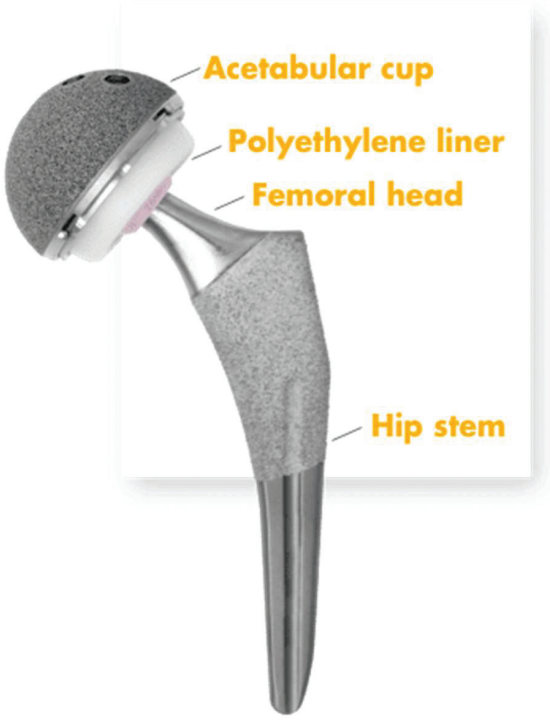
Hip replacement surgery is the care for arthritic or post-traumatic conditions that cannot be treated with conservative techniques. The procedure is initiated with anesthesia and then involves an incision followed by removal of the arthritic and damaged femoral head and replacement of the surfaces with high molecular weight cross-linked plastics and ceramics.

The implants are attached to the bone with titanium components textured to grow onto the bone. We do not use glue or cement.

Dr. Drew typically prefers to use an ***ANTERIOR HIP REPLACEMENT*** approach – the surgeon makes a small incision, approximately the length of your index finger, near the front of the hip in a natural tissue plane to allow for removal of damaged bone and cartilage, and implantation of an artificial hip without damaging surrounding muscle and tendons. Patients have NO precautions post-operatively on range of motion or weight bearing.

In cases of complex bone deformity, body habitus or obesity, a ***POSTERIOR HIP REPLACEMENT*** approach is used, which still allows for fantastic outcomes and limited post-op restrictions.

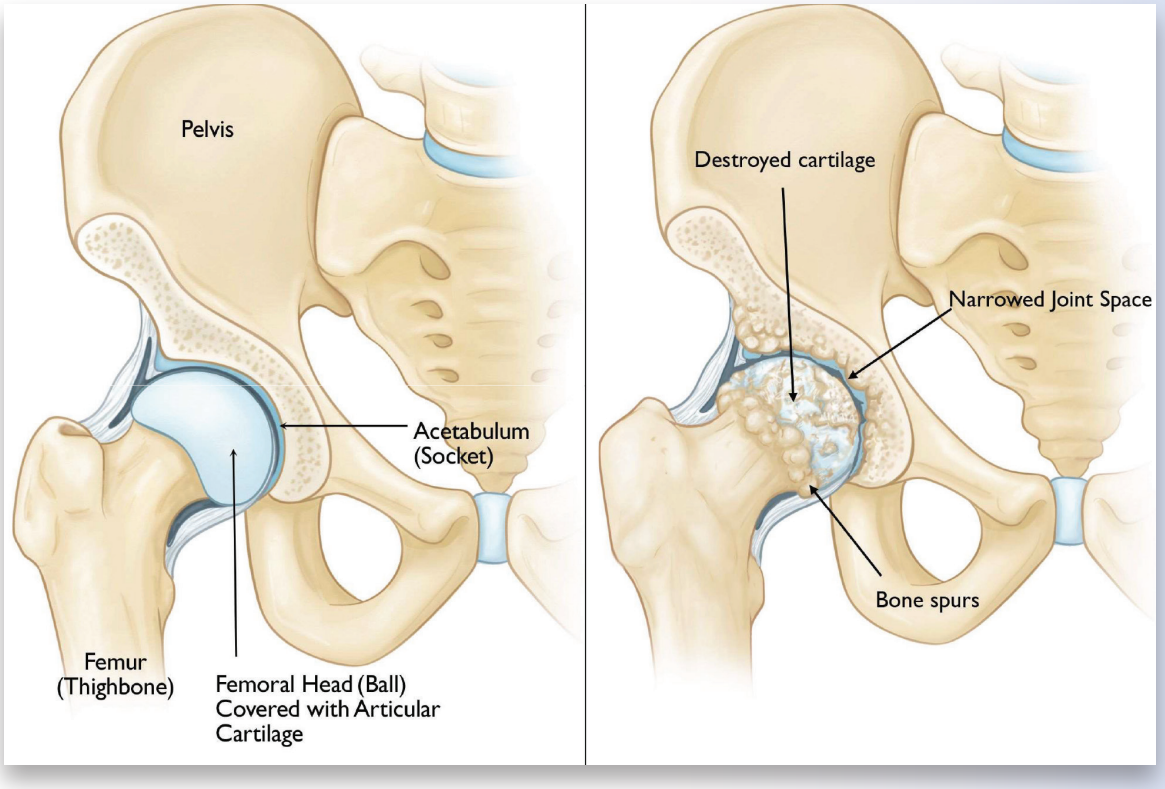
Hip replacement surgery takes about two hours. The patient then moves to the recovery area for approximately two hours. Healthy patients who have support at home will be discharged the same day, otherwise one overnight stay in the hospital. After discharge, the patient goes home with therapy services provided at home for a time. The follow-up visit is in our office at three weeks with Matt Attolino.



Hip Anatomy

The hip is a ball-and-socket joint. The ball at the top of your femur (thighbone) is called the femoral head. The socket, called the acetabulum, is a part of your pelvis. The ball moves in the socket, allowing your leg to rotate and move forward, backward and sideways.

In a healthy hip, soft tissue called cartilage covers the ball and the socket to help them glide together smoothly. If this cartilage gets worn down or damaged, the bones scrape together and become rough. This condition, osteoarthritis, causes pain and restricts motion. An arthritic hip can make it painful to walk or even to get in or out of a chair. If you have been diagnosed with hip arthritis, you may not need surgery. Nonsteroidal anti-inflammatory drugs (NSAIDs) and/or physical therapy may provide relief. But, if these efforts do not relieve symptoms, you should consult an orthopedic surgeon.



The normal anatomy of the hip.

A hip damaged by osteoarthritis.

Planning for Your Total Joint Replacement

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

- Preoperative education about the surgical procedure
- Preparation for surgery
- What to bring to the hospital
- Discharge planning
- Home preparation for after surgery

Preparing Your Home for After Surgery

- Move frequently used items, especially in the kitchen, bathroom, and bedroom, to easy-to-reach drawers and/or shelves.
- Make sure all your medications are within easy reach.
- Have a cell phone or cordless phone close to you.
- Place a list of emergency phone numbers by the phone.
- If possible, arrange assistance with laundry and cleaning.
- Clear pathways between your most commonly used areas – such as from your bedroom to your bathroom and kitchen, and between the living room, bedroom, and bathroom.
- Remove all clutter and keep stairs free of objects.
- Install night lights between bedroom and bathroom.
- Make arrangements to keep pets in another area of the house when you first get home. They can be an unintentional hazard.

Clothing for After Surgery

- Loose fitting clothing is recommended after.
- You may want to get a couple pairs of pants that have elastic waists.
- You will want to be sure to have a pair of slip on shoes. Do not wear flip flops, as it is too easy to trip.

Pre-Operative Testing Appointment

For Outpatient Surgical Center Patients –

Beth Israel Needham,
Lighthouse Surgical Center,
New England Baptist Hospital

You will be required to make an appointment with your Primary Care Physician for a History & Physical and Surgical Clearance. Tara Meaden will give you all required paperwork that needs to be completed for surgical clearance.

For Hospital Overnight patients –

Beth Israel Needham,
Lighthouse Surgical Center,
New England Baptist Hospital
BIDMC

A Pre-Operative testing appointment at Beth Israel or New England Baptist Hospital will be made roughly 6-8 weeks ahead of your surgical date. This appointment needs to be within 30 days of your scheduled surgery date.

The surgical centers or hospital will provide you with the information and perform any tests that may be required to have prior to surgery. The following are discussed with you at your pre-screening appointment:

- Medications
  - Please bring a list of your medications to your pre-operative visit.
- Blood/Urine tests
- Medical clearance from your doctors
  - You may have additional appointments with a specialist (cardiologist, hematologist) depending on your medical history.
- Pre-operative infection prevention
- Hospital Stay and Anesthesia Concerns
- Post-op home services including physical therapy

If you have not received your pre-admission testing schedule within 3 weeks before your surgery, or if you have questions regarding the dates or times, please contact Tara Meaden at Boston Bone and Joint Institute.

It is important to continue taking all your other prescribed medications until your pre-admission testing office visit. During this visit, you will be given specific instructions about all of your prescription medication(s).

Recovery Shop

Dr. Drew and Matt recommend several items to assist with your post operative healing such as ice machines, shower chairs, compression devices and daily living kits.
Please visit our recovery shop website at https://shop-recovery.net/drew

Diet

Healthy eating **before** surgery helps you heal and recover **after** surgery. Good nutrition is necessary for healing. During the healing process, the body needs increased amounts of calories, protein, vitamins A and C, and sometimes the mineral zinc. The following guidelines will help you choose “power” foods to promote healing. Eat a variety of foods to get all the calories, proteins, vitamins, and minerals you need. If you have been given a special diet, follow it as much as possible. It will help promote wound healing and may prevent infection and some complications.

Iron-rich foods

Eat iron-rich foods prior to surgery. Iron combines with protein to make hemoglobin, the substance that carries oxygen in the blood to all parts of your body. When hemoglobin is low, weakness and fatigue may result, causing a slower recovery.

Foods that contain a high amount of iron include:

- Lean red meat/liver
- Enriched bread, pasta, fortified cereals
- Dried beans and peas
- Dried apricots and raisins
- Green leafy vegetables

NOTE: Patients on Coumadin should talk with their physician

Vitamin C

Eating foods high in vitamin C along with iron-rich food will help your body absorb the iron.

Foods that are high in vitamin C include:

- oranges and orange juice
- cantaloupe
- tomatoes
- potatoes

Eating in the days leading up to surgery

Eat only light meals, especially the day before surgery. The combined effects of anesthesia and your medication may slow down your bowel function. This can cause constipation after surgery. Increase fluids (water) and fiber in your diet as well.

Preparing For Your Surgery

The Night Before Surgery

- Remember that you are to have ***nothing to eat or drink, unless prescribed by the facility you are having surgery with, after midnight*** the night before surgery. Do not eat or drink anything including gum, mints, or candy, and water or 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.
- Try to get a good night's sleep. It is important to be well-rested before surgery.
- Bathe or shower the night before or the morning of your surgery. A special wash may have been recommended by pre-screening at New England Baptist Hospital.
- All nail polish should be removed before your arrival for surgery. Your fingers will be used to accurately monitor your oxygen level during surgery.
- Creams and lotions should not be worn on the day of surgery. A light application of deodorant is allowed.

You will be admitted to the hospital or surgery center on the morning of your surgery. You are typically asked to arrive about three hours prior to your actual surgery time. **The hospital or the surgery center will contact you the day prior to your surgery with an exact time to arrive at the hospital registration area on the day of surgery.** Please make every effort to arrive on time!

Most patients are discharged the day after surgery, though some patients are able to go home the day of surgery. Patients are typically discharged to their home without the need for a rehab facility. It is important to prepare your home for discharge after surgery (see Preparing Your Home for Surgery section).

What to Pack for an Overnight Stay

Pack a bag or small suitcase with only the items you may need during your hospital stay. Please bring your own toiletries and any necessary personal items. While in the hospital you may opt to wear the hospital gown or you may bring your own clothes from home. Please review the following about what to and what not to bring with you.

What to Bring to Surgery Center or Hospital the Day of Surgery

- This Total Joint Replacement Guide.
- A full set of comfortable clothing. The clothing should be loose-fitting to allow room for any post-operative swelling.
- Shoes with non-skid soles.
- Personal items: contact lenses/denture care materials, glasses, hearing aids.
- CPAP/BIPAP machine (if routinely used). If you require a CPAP/BIPAP, you must stay overnight at the hospital for monitoring.
- A form of photo ID and insurance cards to present to the registration and admitting department.
- Cold therapy unit, if purchased ahead of time.
- Cell phone and charger.

What Not to Bring to the Hospital

- Money, jewelry, or other valuables.
- Medication – unless instructed by your surgeon/pre-operative nurse.
- Cigarettes, electric cigarettes, or tobacco.

Bring this Total Joint Replacement Guide with you on the Day of Your Surgery

Your Surgery Day

When You Arrive at the Hospital or The Surgery Center

On the day of surgery you will check in and proceed to the pre-operative 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 who are in charge of your care will ask you to repeat this information. Do not be alarmed, this is a routine safety measure. The nurse in the surgery area will take your vital signs, start an IV, and review your medical history.

You will also meet with the anesthesiologist. Anesthesiologists are physicians who administer the medication to make you fall asleep and provide pain management during and following the surgery. During surgery, anesthesiologists choose from a variety of medications for their different functions such as relieving pain, making the patient unconscious, and relaxing the body's muscles. The anesthesiologist balances all of these medications in accordance with medical and surgical needs of each patient.

Anesthesia Options

The most common method of providing anesthesia during joint replacement is **spinal anesthesia**, but occasional **general anesthesia** is used if certain risk factors contradict spinal anesthesia.

Spinal Anesthesia

In spinal anesthesia, numbing medication is injected into the fluid surrounding the spinal cord in the lower back. This will numb your legs and block all sensation in the lower half of your body for several hours.

Once you are in the operating room, routine monitors for blood pressure, heart rate, and oxygen saturation will be applied before you are given medication. While you are in a seated position, your skin is numbed with local numbing medication; a longer needle will then be applied through the numb area. After the needle reaches the desired space, numbing medication is injected into the fluid surrounding the spinal cord. You will then lie down on your back to allow the medicine to settle in. We will make sure that you are comfortable, safe, and sleepy.

You will not be awake during surgery. Spinal anesthesia provides surgical anesthesia and you will be given sedatives to help you relax and put you in a light sleep. The level of your sleepiness

can be adjusted and you can be easily awakened, if needed. In other words, you will be sleepy but not completely out.

If you are not a candidate for spinal anesthesia, or your surgery is expected to be longer or involve more blood loss, general anesthesia will be chosen.

Side effects of spinal anesthesia may include short-term back pain, rare headaches, and trouble urinating. Nerve injury from needle trauma is very rare. Most of our patients don't remember the spinal being performed. Patients sometimes ask if they should worry about spinal anesthesia causing paralysis. Spinal anesthesia is relatively safe and the chance of paralysis is very rare. The needles used are very small and we make sure that you are not taking any blood thinning medication prior to performance of spinal anesthesia. Advantages to using spinal anesthesia during hip or knee replacement surgery include:

- You avoid general anesthesia and receive less medication, thus having fewer potential side effects.
- After surgery, you are more awake with a lower chance of developing nausea and vomiting.
- You experience less bleeding during surgery and fewer complications from blood clotting after surgery.
- After surgery, spinal anesthesia usually lasts beyond surgical time. This makes your pain management after surgery much smoother.

General Anesthesia

General anesthesia keeps you in a deep sleep that affects your entire body. We will give you medicine through your vein that will put you to sleep.

Once you are asleep, the anesthesiologist will place a breathing tube down your windpipe. You will be breathing a mixture of oxygen, air and anesthetic gas that will make sure you stay asleep throughout the surgery.

Side effects of general anesthesia may include nausea, vomiting, sore throat/hoarse voice, or the potential for dental damage. General anesthesia can have more serious side effects that are far less common. Your anesthesia team will monitor your heart rate, blood pressure, breathing and body temperature throughout surgery to ensure your safety.

Advantages to using general anesthesia during hip or knee replacement surgery include:

- May be used for longer surgeries or when surgery may cause much blood loss
- Used if patient is not a candidate for spinal anesthesia

Nerve Block

You may have a nerve block to control your pain before surgery. A nerve block is used when pain from surgery affects a smaller area of your body, such as an arm. There are several potential

advantages of a nerve block. One advantage is that nerve blocks may allow for a significant decrease in the amount of opioid (narcotic) medication needed, which may result in fewer side effects such as nausea, vomiting, itching, drowsiness, constipation, and light-headedness. Nerve blocks generally last for 18-24 hours after surgery. We recommend taking pain medication prior to when your block wears off even though you are not experiencing pain; therefore, you do not fall behind in pain management when the block wears off.

Other Items

Hearing Aids

If you use hearing aids, wear them to the hospital on the day of your surgery. Wearing them will help you hear everything we need to tell you.

Dentures

You will be asked to remove all non-permanent dental work before your surgery.

Contact Lenses

Wear glasses if possible. If contact lenses must be worn, bring your lens case and solution. If glasses are worn, bring a case for them.

Hair

Wear your hair loose. Do NOT use clips, pins or bands in your hair. Do not use hair spray. A head cover will be provided on the way to the operating room. Before going to surgery, patients are asked to remove wigs and hairpieces.

Family Waiting Area

When you are taken to the operating room, your family will be directed to the family waiting area, where they will wait during your surgery. Once the surgery is completed, your surgeon will call or visit your family to update them on your condition.

During Surgery

Once in the surgery suite, you will be assisted onto the surgical table. The surgery room itself is kept cool and the nurses will give you warm blankets if needed.

The anesthesiologist will attach monitoring equipment and check your IV. They will constantly monitor your vital signs, including your heart rate and rhythm, blood pressure, and amount of oxygen in your blood throughout your 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 begins:

- the correct patient
- the correct side and site marking
- the correct procedure
- the correct position on the operating table
- the correct implants, special equipment, and X-rays (when applicable)

Your surgery will last approximately 2 hours, possibly longer.

Post-Anesthesia Care Unit (PACU)

After surgery, you will be taken to the recovery room/Post-Anesthesia Care Unit (PACU) where a nurse will care for you for at least the next 2-3 hours. The total time spent in recovery varies for each patient. The nurse will take your temperature, pulse, and blood pressure and assess your pain level. Pain medication will be started. You may feel very cold after surgery and may be warmed with blankets. Your leg will have the surgical dressing on, and nurses will continue to check on you for the duration of your stay.

To assist your breathing, you may receive oxygen through a small nasal tube or mask. Circulation aids will be applied to your lower legs to prevent blood clots. A cold pack system may be wrapped around your surgical site to reduce swelling and pain.

At the **Hospital**, friends and family cannot visit with you in the PACU but can meet you in your hospital room. Dr. Drew or the hospital staff will inform your family members that once they leave you in the pre-operative waiting area it may be a number of hours before they see you again.

At **The Outpatient Surgery Centers**, your accompanier will be brought into the recovery room when you are ready to see them.

Going to Your Room in the Hospital

After leaving PACU, you will be transferred to a nursing unit. The nurses will check your vital signs and make you comfortable.

A member of your surgical team will visit you daily. Many times, this visit will occur early in the morning. You are encouraged to write down any questions you may have for your surgical team so they may be answered during the visit. In addition to your surgical team, you may also be treated by an internal medicine doctor, or his/her nurse practitioner or physician assistant. They will also be aware of your plan of care and will assist as needed.

Circulation Aids

Compression stockings: You will not be as active as you usually are; therefore, you have a greater chance of developing blood clots. To help prevent them from forming, you will need to wear TED stockings. They are to be used at all times for four weeks after surgery. You may take them off at night and during therapy sessions.

Sequential Compression Calf Sleeves: Another device to assist with preventing lower leg clots. The sleeves inflate every 20 to 60 seconds and make it feel as though your calves are being massaged. These sleeves are a very important part of your care while at the hospital.

Cough and Deep Breathing

Coughing and deep breathing are extremely important to your recovery after surgery.

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 and help you with deep breathing exercises. It is important that you use the incentive spirometer 10 times every hour while you are awake. Use this for 3-4 days after returning home from the hospital. Using it helps reduce the chance of developing pneumonia after your surgery and helps to keep your lungs clear and active during your recovery. Having good lung function will help you perform activities of everyday living once you return home.

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 some discomfort following surgery.

You will be asked about your level of pain upon admission, and this will continue throughout your stay. You will be asked to “rate” your level of pain on a scale from 0 to 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 level of pain. The doctors and nurses will ask you how the pain medicine is working and adjust the dose as needed. Again, remember to take pain medication before your block wears off to stay ahead of your pain.

Most commonly, post-operative pain is best managed with oral pain medications.

The following information will help you understand your options for pain treatment, describe how you can help your doctors and nurses control your pain, and empower you to take an active role in making choices about pain treatment.

- You may receive more than one 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.
- It is important that you DO NOT DRIVE while on pain medications.

Why is pain control so important?

In addition to keeping you comfortable, pain control can help you recover faster and may reduce your risk of developing certain complications after surgery, such as pneumonia or blood clots. If your pain is well controlled, you will be better able to complete important tasks such as walking and deep breathing exercises.

IMPORTANT! Do not wait until your pain is severe before you ask for pain medications.

Please give our office 24-48 hours’ notice for all narcotic refills!

Bowel Management

Some patients become constipated because of the pain medication and inactivity. We recommend staying on a stool softener (Colace, Senokot, Milk of Magnesia) or laxative while you are taking pain medication. If you have not had a bowel movement within three days after surgery, you may try an over the counter suppository, Fleet enema, or magnesium citrate. If still no bowel movement, please call our office for further recommendations.

Physical Therapy

The goal of therapy on the day of surgery is to begin working with the assistive devices (crutches, walker, etc.) while doing activities that will help you move at home. Doing these activities will help you gain confidence. These activities may be performed at bedside by your nurse or a physical therapist.

Occupational Therapy

Occupational therapy is the part of your care plan that centers on teaching you how to take care of yourself once you return home.

Occupational therapy focuses on such things as:

- Activities of Daily Living (ADLs), which includes bathing and bathroom safety, dressing, toileting, and homemaking tasks
- Advice on possible equipment needed
- Education about restrictions

Care Coordination

During your surgical stay at the hospital, a care coordinator will visit with you to assist in making your discharge plans. You have already discussed your options in the pre-operative stage, but the care coordinator is there to help make the final arrangements. Most patients plan to be discharged home after surgery. Generally, outcomes after surgery are much better when patients go home. However, if there is concern about your ability to manage at home, the care coordinator will help discuss post-operative rehabilitation in the facility of your choice. The referral process will be started and you will be informed of the status and anticipated day of your discharge.

If you are going to a community skilled nursing or rehab facility, you may want to consider having a family member/friend drive you to the facility on the day of discharge from the hospital. Transportation can also be arranged through an ambulance service; however, there may be a cost for this service.

After Discharge

You will be discharged from the hospital or the outpatient surgical suites when it is felt that you are safe to be discharged and your pain is under control. This is a collaborative decision made by you, your nurse, and the physical therapist. It varies for each individual patient.

Your nurse will review your discharge instructions, medications, and address any questions you may have.

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. The facility will be informed of your hospital stay and a time of anticipated arrival will be arranged.

Please have your ride available on this day. Your team will let you know the approximate time. When notifying the person coming to pick you up, ask them to bring a pillow for your comfort. If you chill easily, it would be a good idea to have them bring a blanket.

Narcotic Fact Sheet for Patients

Please read the information below regarding what to expect following your surgery, the goal of post-operative pain management, and the side effects of the medications prescribed.

What to expect after surgery

- Almost all surgical procedures result in some level of pain and discomfort. Pain and discomfort are generally greatest immediately after surgery and subside as time goes on.
- Reducing your pain is a priority for caregivers.
- Over time, your pain will reduce and may be eliminated completely.
- Oral narcotic medication is frequently administered to patients after surgery to help control post-operative 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.
- It is vital that you discontinue the use of these medications as soon as your pain allows. Specifically, the medication should only be taken as needed as prescribed (usually every four hours). The medication is not required for the prescribed time interval.

Narcotic medication: Facts you need to know

- Physical dependence on opioids (which means the absence of opioids can produce withdrawal symptoms) can occur at prescribed doses.
- Opiate abuse is on the rise in recent years and has tripled in the US since 1990.
- 5 million people in the United States are addicted to opiates.
- There are 17,000 opiate overdoses per year in the US.
- There were nearly 5 million drug related ER visits in 2010; 425,000 from narcotic pain relievers.
- Every day in the US, 46 people die of prescription drug overdoses. Unintentional deaths from prescription narcotics outnumber those of heroin or cocaine.

Adverse reactions to opioids include:

- Sleepiness or insomnia
- Difficulty controlling arms/legs
- Constipation
- Limited ability to fight infection
- Itching
- Decreased breathing
- Drug interactions
- Death
- Decreased coordination
- Slower reaction times

Early symptoms of withdrawal:

- Agitation
- Anxiety
- Muscle aches
- Insomnia
- Sweating

Potential risk factors for opiate abuse:

- Age 18-34
- Male
- Four or more opioid prescriptions
- Refilling prescriptions early
- Opioid prescriptions from two or more pharmacies or physicians

Late symptoms of withdrawal:

- Abdominal cramping
- Diarrhea
- Nausea
- Vomiting

Other Concerns/Considerations

Infection

What is a surgical site infection (SSI)?

A surgical site infection (SSI) is an infection (although VERY rare) that occurs after surgery in the part of the body where the surgery took place. Most patients who have surgery do not develop an infection.

Some common symptoms of surgical site infection are:

- Increased redness and pain around the area where you had surgery
- Drainage of cloudy fluid from your surgical wound
- Foul odor from the incision site
- High fever

DVT/Blood Clot

Deep Vein Thrombosis (DVT) is a formation of a blood clot. This is a potential complication following a total hip/knee replacement. A blood clot from your leg can travel to your lungs and cause a serious complication called a pulmonary embolism.

Sudden onset of shortness of breath and chest pain are warning signs of this condition. If you develop any of these signs, call 9-1-1.

Symptoms of a DVT may include:

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

Prevention of blood clots is the best treatment:

- Exercise, increased mobility
- Blood thinners, including aspirin
- Support stockings

Future Procedures – Dental work

- You must wait **3 MONTHS** from your day of surgery before any routine dental procedures, including cleaning. Please call our office if there is need for an emergent visit.
- Beyond three months, taking antibiotics before dental appointments is required for a year then optional after that time. If you choose to take antibiotics we will provide the prescription and refills.

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 that is used for surgery. 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. Stopping smoking helps to:

- Prolong your life
- Decrease your risk of disease, including heart disease, heart attack, high blood pressure, lung cancer, throat cancer, emphysema (a type of lung disease), ulcers, gum disease and other conditions
- Help you to feel better (if you stop smoking, you won't cough as much, have as many 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 your surgery. Speak with your primary care physician for information on how to stop smoking. For more information about other smoking cessation programs in your community, please contact your local The American Heart Association at 1-800-242-8721 or the American Cancer Society at 1-800-227-2345.

Alcohol Use

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. Tell your health care provider how many drinks you have per day (or per week). Although it may be difficult to discuss alcohol use with your healthcare team, it is done for your safety and to improve the outcome of your surgery.

During your pre-surgical visit, 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. Alcohol withdrawal is a serious condition that occurs when someone stops using alcohol after prolonged periods of heavy drinking. Symptoms include headaches, nausea, tremors, anxiety, hallucinations, and seizures. Alcohol withdrawal can be life-threatening. To appropriately gauge your risk for alcohol withdrawal while in the hospital, please respond to the questions as honestly as possible. Remember, any information provided is held in strict confidence. We are here to help you prepare and recover from your surgery as quickly and safely as possible.

Discharge Information After: Total Hip Replacement

Activity:

- You may WBAT – weight bear as tolerated (unless otherwise indicated)
- NO dislocation precautions, NO restriction on ROM – range of motion (unless otherwise indicated)
- Gentle stretching to increase range of motion daily
- Use proper form with assistive devices, crutches/walker/cane – do your best to walk standing tall without a limp
- Use common sense with activity - if you feel severe pain or discomfort, back off exercise

Ice:

- An ice device or ice bag (not directly touching the skin) should be utilized to reduce swelling and pain. Please ice every 3-4 hours for about 15-20 minutes each time until swelling subsides.
- ICE is the best post-op pain medicine!

Wound Care:

- A waterproof "Aquacel" dressing will be applied to your incision after surgery. *This may be removed **1 week** after surgery.* You may shower with this dressing, but no soaking in baths, pools or hot tubs. You may notice staining (darkening) of the dressing; this is normal, but if there is seepage through the dressing please contact the office.
- Under the Aquacel, the wound is closed with sutures entirely under the skin and sealed with glue. The glue will flake off after a few weeks. Sometimes small amounts of suture may emerge from the wound. These tend to disappear within a week or two.

** Please avoid tub baths, swimming, and submerging incision until your follow-up visit.

Bruising and swelling in the operative leg may occur in the days following surgery and is not uncommon.

Pain Medication:

You will be prescribed one of the following:

- Oxycodone 5 mg 1-2 tabs every 4 hours as needed for pain
- Dilaudid 2 mg 1-2 tabs every 4 hours as needed for pain
- Tramadol 50 mg 1-2 tabs every 6 hours as needed for pain
- Celebrex or Mobic 1 tab every day as needed for pain

You should continue to take over the counter Tylenol as directed for pain control. You may take this IN ADDITION to the narcotic pain medicine.

- Tylenol (acetaminophen) – 2 tabs (extra strength Tylenol, 500 mg each) every 8 hours as needed, DO NOT exceed 3,000 mg (6 tablets) in a 24-hour period

Anti-Nausea:

- Zofran 4 mg by mouth every 8 hours as needed.

Anti-Coagulants (NSAIDs):

You will be prescribed ONE of the following below – either ECASA (enteric coated aspirin) or Eliquis for DVT prophylaxis (prevention of blood clots).

Please check discharge instructions carefully for which post-op regimen below has been prescribed based off your risk factors (medical history, family history, BMI, etc.).

- ECASA 81 mg by mouth twice a day for 4 weeks
- Eliquis 2.5 mg by mouth twice a day for 4 weeks

PRILOSEC OTC *20 mg by mouth DAILY for 6 weeks is recommended for all post op patients to help with GI issues, upset stomach.*

ANTIBIOTICS:

Outpatient same day surgery patients only. (Inpatients will receive antibiotics via I.V.)

- Keflex 500 mg by mouth every 6 hours x 4 doses.

ANTI-INFLAMMATORIES (NSAIDs):

- You may take the Celebrex or Mobic that is sent for you.

Follow-Up

Please call Tara at the office to schedule a post-operative visit with Matt Attolino, PA-C, 3 weeks after your Total Hip Replacement.

WHEN TO CONTACT YOUR DOCTOR AFTER SURGERY

- **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**
- **Chest pain or shortness of breath**
- **You have questions regarding activity or your medications**
- **Between 8a-5p – call BBJI main number: 781-890-2133**
- **If you had surgery at NEBH: Night and Weekends call the on-call physician at 617-754-5000 (for medical issues only)**
- **If you had surgery at BI Needham please call 781-890-2133 and the on call-physician will assist you (for medical issues only)**

Total Hip Replacement Exercise Guide

Regular exercise to restore strength and mobility to your hip and a gradual return to everyday activities are important for your full recovery after total hip replacement. Your orthopedic surgeon and physical therapist may recommend that you exercise for 20 to 30 minutes a day, or even 2 to 3 times daily during your early recovery. They may suggest some of the exercises shown below.

This guide can help you better understand your exercise and activity program, supervised by your physical therapist and orthopedic surgeon. To ensure your safe recovery, be sure to check with your therapist or surgeon before performing any of the exercises shown.

Early Post-operative Exercises

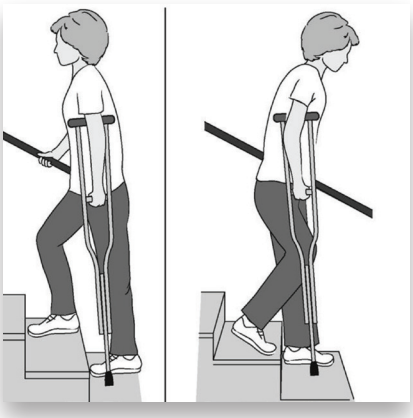
The following exercises will help increase circulation to your legs and feet, which is important for preventing blood clots. They will also help strengthen your muscles and improve hip movement.

Start the exercises as soon as you are able. You can begin them in the recovery room shortly after surgery. You may feel uncomfortable at first, but these exercises will enhance your recovery and actually diminish your post-operative pain.

Stair Climbing and Descending

Stair climbing is an excellent strengthening and endurance activity, and it also requires flexibility.

- At first, you will need a handrail for support and will be able to go only one step at a time. Always lead up the stairs with your good leg and down the stairs with your operated leg. Remember, “up with the good” and “down with the bad”.
- You may want to have someone help you negotiate stairs until you have regained most of your strength and mobility.
- Do not try to climb steps higher than the standard height (7 inches) and always use a handrail for balance.
- As you become stronger and more mobile, you can begin to climb stairs foot over foot.



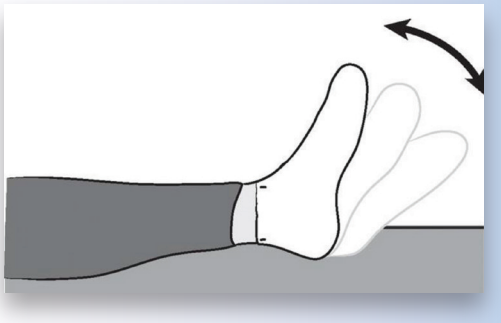
Walking

Proper walking is the best way to help your hip recover. At first, you will walk with a walker or crutches. Your surgeon or therapist will tell you how much weight to put on your leg.

Early on, walking will help you regain movement in your hip.

- Stand comfortably and erect with your weight evenly balanced on your walker or crutches.
- Advance your walker or crutches a short distance; then reach forward with your operated leg with your knee straightened so the heel of your foot touches the floor first.
- As you move forward, your knee and ankle will bend and your entire foot will rest evenly on the floor.
- As you complete the step, your toe will lift off the floor and your knee and hip will bend so that you can reach forward for your next step. Remember, touch your heel first, then flatten your foot, then lift your toes off the floor.
- Walk as rhythmically and smoothly as you can. Don't hurry. Adjust the length of your step and speed as necessary to walk with an even pattern.
- As your muscle strength and endurance improve, you may spend more time walking, and you will gradually put more weight on your leg.
- When you can walk and stand for more than 10 minutes and your leg is strong enough so that you are not carrying any weight on your walker or crutches, you can begin using a single crutch or cane. Hold the aid in the hand opposite the side of your surgery.

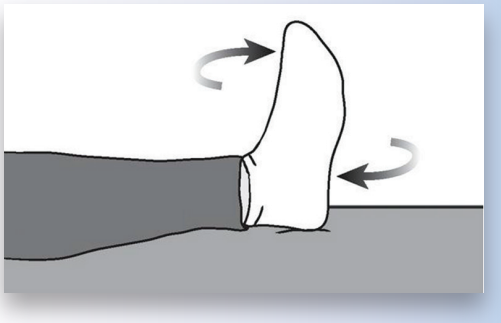
Ankle Pumps



- Slowly push your foot up and down.
- Repeat this exercise several times, as often as every 5 or 10 minutes.
- If you are watching television, you should pump your feet every time a commercial comes on.

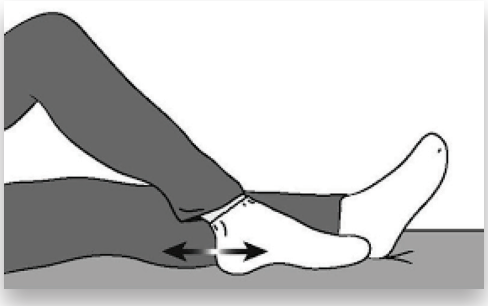
Begin this exercise immediately after surgery and continue it until you are fully recovered.

Ankle Rotations



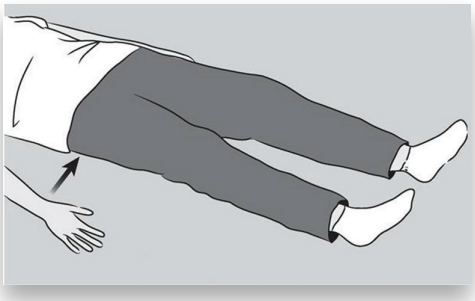
- Move your ankle inward toward your other foot and then outward away from your other foot.
- Repeat 5 times in each direction.
- This exercise should take 3 minutes.
- Do 3 to 4 sessions a day.

Bed-Supported Knee Bends



- Slide your foot toward your buttocks, bending your knee and keeping your heel on the bed. Do not let your knee roll inward.
- Hold your knee in a maximally bent position for 5 to 10 seconds.
- Straighten your leg.
- Repeat 10 times.
- This exercise should take 3 minutes.
- Do 3 to 4 sessions a day.

Buttock Contractions

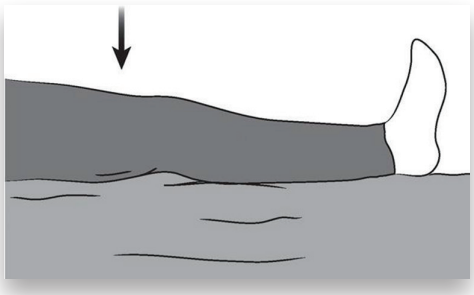


- Tighten your buttock muscles and hold to a count of 5.
- Repeat 10 times.
- This exercise should take 90 seconds.
- Do 3 to 4 sessions a day.

Abduction Exercise

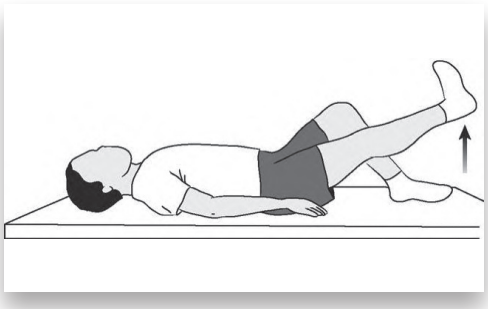
- Slide your leg out to the side as far as you can and then back.
- Repeat 10 times.
- This exercise should take 90 seconds.
- Do 3 to 4 sessions a day.

Quadriceps Set



- Tighten your thigh muscle. Try to straighten your knee. Hold for 5 to 10 seconds.
- Repeat this exercise 10 times during a 10-minute period, rest one minute and repeat.
- Continue until your thigh feels fatigued.
- This exercise should take 2 minutes.

Straight Leg Raises



- Tighten your thigh muscle with your knee fully straightened on the bed.
- Lift your leg several inches. Hold for 5 to 10 seconds.
- Slowly lower your leg.
- Repeat until your thigh feels fatigued.
- This exercise should take 2 minutes.

Standing Exercises

Soon after your surgery, you will be out of bed and able to stand. You will require help at first but, as you regain your strength, you will be able to stand independently. While doing these standing exercises, make sure you are holding on to a firm surface such as a bar attached to your bed or a wall.

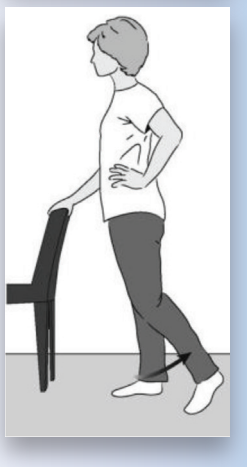
Standing Knee Raises

- Lift your operated leg toward your chest. Do not lift your knee higher than your waist. Hold for 2 or 3 counts.
- Put your leg down.
- Repeat 10 times.
- This exercise should take 3 minutes.
- Do 3 to 4 sessions a day.

Standing Hip Abduction

- Be sure your hip, knee and foot are pointing straight forward. Keep your body straight. With your knee straight, lift your leg out to the side.
- Slowly lower your leg so your foot is back on the floor.
- Repeat 10 times.
- This exercise should take 2 minutes.
- Do 3 to 4 sessions a day.

Standing Hip Extensions



- Lift your operated leg backward slowly. Try to keep your back straight. Hold for 2 or 3 counts.
- Return your foot to the floor.
- Repeat 10 times.
- This exercise should take 2 minutes.
- Do 3 to 4 sessions a day.

Discharge Information After: Total Knee Replacement

Activity:

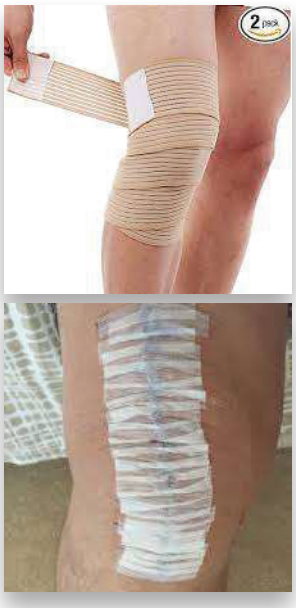
- You may WBAT – weight bear as tolerated (unless otherwise indicated)
- NO precautions, NO restriction on ROM – range of motion (unless otherwise indicated)
- Gentle quad and hamstring stretching to increase range of motion daily
- Use proper form with assistive devices (crutches/walker/cane); do your best to walk standing tall without a limp
- Use common sense with activity – if you feel severe pain or discomfort, back off exercise

Ice:

- An ice device or ice bag (not directly touching the skin) should be utilized to reduce swelling and pain. Please ice every 3-4 hours for about 15-20 minutes each time until swelling subsides.
- Keep leg straight and ELEVATED above heart when icing.
- ICE is the best post-op pain medicine!

Wound Care:

- TED compression stockings should also be worn to help with swelling and to help prevent against DVT / Blood Clots.
- A waterproof "Aquacel" dressing will be applied to your incision after surgery. This may be removed 1 week after surgery. You may shower with this dressing, but no soaking in baths, pools or hot tubs. You may notice staining (darkening) of the dressing, this is normal, but if there is seepage through the dressing, please contact the office.
- Under the Aquacel, the wound is closed with sutures entirely under the skin and sealed with glue. The glue will flake off after a few weeks. Sometimes small amounts of suture may emerge from the wound. These tend to disappear within a week or two.



Bruising and swelling in the operative leg may occur in the days following surgery and is not uncommon!

Pain Medication:

You will be prescribed one of the following:

- Oxycodone 5 mg 1-2 tabs every 4 hours as needed for pain
- Dilaudid 2 mg 1-2 tabs every 4 hours as needed for pain
- Tramadol 50 mg 1-2 tabs every 6 hours as needed for pain
- Celebrex or Meloxicam 1 tab every day as needed for pain

You should continue to take over the counter Tylenol as directed for pain control. You may take this IN ADDITION to the narcotic pain medicine.

- Tylenol (acetaminophen) – 2 tabs (extra strength Tylenol, 500 mg each) every 8 hours as needed, DO NOT exceed 3,000 mg (6 tablets) in a 24-hour period.

Anti-Nausea:

- Zofran 4 mg by mouth every 8 hours as needed for nausea.

Anti-Coagulants (NSAIDs):

You will be prescribed ONE of the following below – either ECASA (enteric coated aspirin) or Eliquis for DVT prophylaxis (prevention of blood clots).

Please check discharge instructions carefully for which post op regimen below has been prescribed based off your risk factors (medical history, family history, BMI, etc.).

- ECASA 81 mg by mouth twice a day for 4 weeks
- ECASA 325 mg by mouth twice a day for 4 weeks
- Eliquis 2.5 mg by mouth twice a day for 4 weeks

PRILOSEC OTC *20 mg by mouth DAILY for 6 weeks is recommended for all post-op patients to help with GI issues, upset stomach.*

ANTIBIOTICS:

Outpatient same day surgery patients only. (Inpatients will receive antibiotics via I.V.)

- Keflex 500 mg by mouth every 6 hours x 4 doses.

ANTI-INFLAMMATORIES (NSAIDs):

YOU MAY NOT TAKE AN NSAID IF YOU ARE TAKING ELIQUIS. If on ECASA protocol – you may take:

- Advil or Motrin (ibuprofen, available over the counter) – **2 tabs (200 mg each) every 8 hours as needed. Do not exceed 2,400 mg of ibuprofen in a 24-hour period.**
- You may take Aleve or Naprosyn (naproxen) instead of ibuprofen, but Aleve dosage differs, and is **1-2 tablets (225 mg each) every 12 hours as needed. Do not exceed 1,000 mg of naproxen in a 24-hour period.**
- You may take the Celebrex or Mobic that is sent for you.

Follow-Up

Please call Tara at the office to schedule a post-operative visit with Matt Attolino, PA-C, 3 weeks after your Total Knee Replacement.

WHEN TO CONTACT YOUR DOCTOR AFTER SURGERY

- **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**
- **Chest pain or shortness of breath**
- **You have questions regarding activity or your medications**
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Total Knee Replacement Exercise Guide

Regular exercise to restore strength and mobility to your knee and a gradual return to everyday activities are important for your full recovery after total knee replacement. Your orthopedic surgeon and physical therapist may recommend that you exercise for 20 to 30 minutes daily, or even 2 to 3 times daily; and walk for 30 minutes, 2 to 3 times daily during your early recovery. They may suggest some of the exercises shown below.

This guide can help you better understand your exercise and activity program, supervised by your physical therapist and orthopedic surgeon. To ensure your safe recovery, be sure to check with your therapist or surgeon before performing any of the exercises shown.

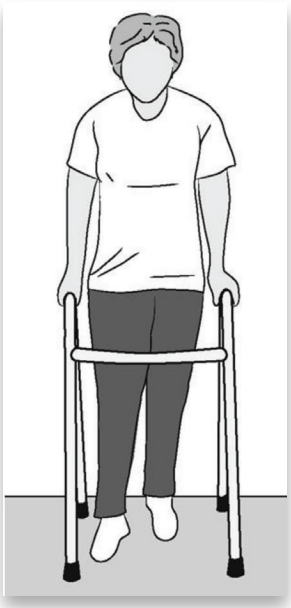
Early Post-operative Exercises

The following exercises will help increase circulation to your legs and feet, which is important for preventing blood clots. They will also help strengthen your muscles and improve knee movement.

Start the exercises as soon as you are able. You can begin them in the recovery room shortly after surgery. You may feel uncomfortable at first, but these exercises will help speed your recovery and actually diminish your postoperative pain.

Remember to ICE and ELEVATE (with leg straight) after you put in the hard work!

Walking

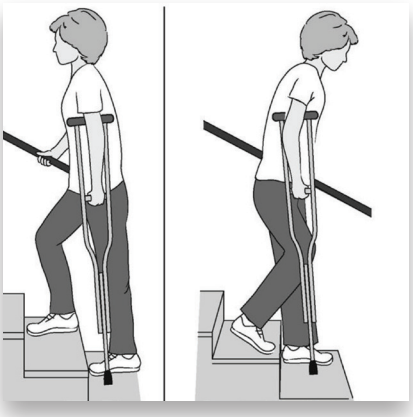


Proper walking is the best way to help your knee recover. At first, you will walk with a walker or crutches. Your surgeon or therapist will tell you how much weight to put on your leg.

- Stand comfortably and erect with your weight evenly balanced on your walker or crutches.
- Advance your walker or crutches a short distance; then reach forward with your operated leg with your knee straightened so the heel of your foot touches the floor first.
- As you move forward, your knee and ankle will bend and your entire foot will rest evenly on the floor.
- As you complete the step, your toe will lift off the floor and your knee and hip will bend so that you can reach forward for your next step. Remember, touch your heel first, then flatten your foot, then lift your toes off the floor.
- Walk as rhythmically and smoothly as you can. Don't hurry. Adjust the length of your step and speed as necessary to walk with an even pattern.
- As your muscle strength and endurance improve, you may spend more time walking, and you will gradually put more weight on your leg. When you can walk and stand for more than 10 minutes and your knee is strong enough so that you are not carrying any weight on your walker or crutches (often about 2 to 3 weeks after your surgery), you can begin using a single crutch or cane. Hold the aid in the hand opposite the side of your surgery. You should not limp or lean away from your operated knee.

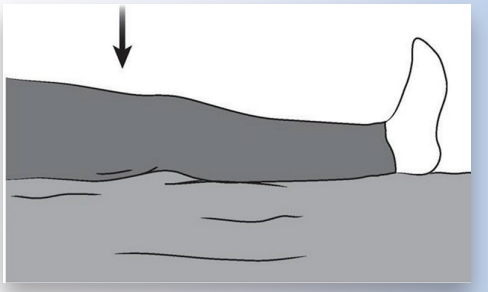
Stair Climbing and Descending

Stair climbing is an excellent strengthening and endurance activity that also requires flexibility.



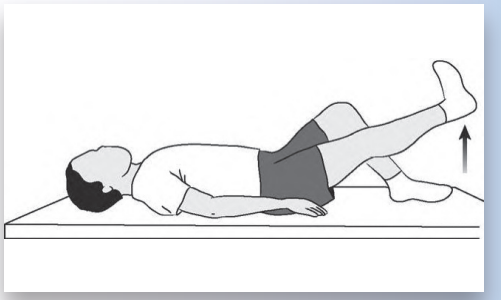
- At first, you will need a handrail for support and will be able to go only one step at a time.
- Always lead up the stairs with your good knee and down the stairs with your operated knee. Remember, "up with the good" and "down with the bad".
- You may want to have someone help you negotiate stairs until you have regained most of your strength and mobility.
- Do not try to climb steps higher than the standard height (7 inches) and always use a handrail for balance.
- As you become stronger and more mobile, you can begin to climb stairs foot over foot.

Quadriceps Set



- Tighten your thigh muscle.
- Try to straighten your knee. Hold for 5 to 10 seconds.
- Repeat this exercise approximately 10 times during a 2-minute period, rest one minute and then repeat.
- Continue until your thigh feels fatigued.

Straight Leg Raises



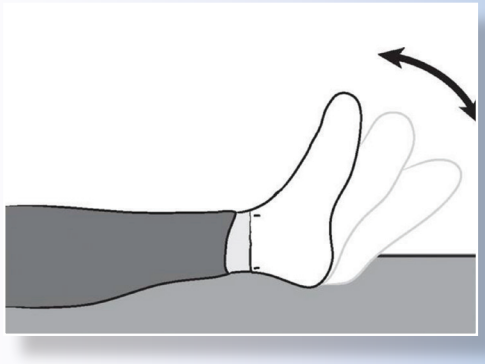
- Tighten your thigh muscle with your knee fully straightened on the bed, as with the quadriceps set above.
- Lift your leg several inches. Hold for 5 to 10 seconds.
- Slowly lower.
- Repeat until your thigh feels fatigued.
- This exercise should take 3 minutes.

You also can do leg raises while sitting.

- Tighten your thigh muscle and hold your knee fully straightened with your leg unsupported.
- Repeat as above.

Continue these exercises periodically until full strength returns to your thigh.

Ankle Pumps

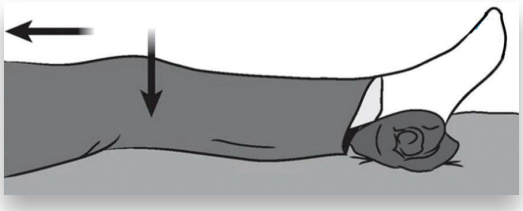


- Move your foot up and down rhythmically by contacting your calf and shin muscles.
- Perform this exercise for 2 to 3 minutes, 2 to 3 times an hour in the recovery room.
- If you are watching TV, do this exercise during every commercial break.

Continue this exercise until you are fully recovered and all ankle and lower-leg swelling has subsided.

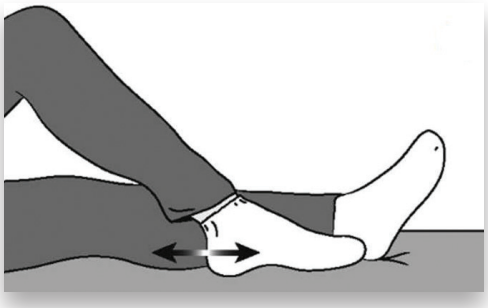
Knee Straightening Exercises

- Place a small rolled towel just above your heel so that your heel is not touching the bed.
- Tighten your thigh.
- Try to fully straighten your knee and to touch the back of your knee to the bed. Hold fully straightened for 5 to 10 seconds.
- Repeat until your thigh feels fatigued.
- This exercise should take 3 minutes.



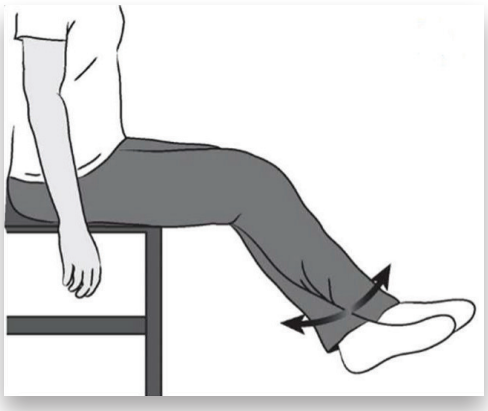
Bed-Supported Knee Bends

- Slide your foot toward your buttocks, bending your knee and keeping your heel on the bed. Hold your knee in a maximally bent position for 5 to 10 seconds.
- Straighten your leg.
- Repeat several times until your leg feels fatigued or until you can completely bend your knee.
- This exercise should take 2 minutes.



Sitting-Supported Knee Bends

- While sitting at your bedside or in a chair with your thigh supported, place your foot behind the heel of your operated knee for support.
- Slowly bend your knee as far as you can. Hold your knee in this position for 5 to 10 seconds.
- Repeat several times until your leg feels fatigued or until you can completely bend your knee.
- This exercise should take 2 minutes.



Checklist for your Upcoming Surgery at The Hospital

After Booking Surgery:

- ☐ Contact any specialists (i.e. cardiology, hematology/oncology, rheumatology) for documentation and clearance that they are comfortable with you proceeding with joint replacement surgery.
- ☐ If you take any medications such as immunosuppressants, hormone replacement, 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 post-operative concerns.
- ☐ Make sure that no dental appointments are booked for three months after your surgical date.
- ☐ You cannot have a cortisone injection into the operative joint within three months of surgery.
- ☐ If you have ever had reactions to anesthesia or pre-surgical prep (chlorhexidine gluconate or iodine), be sure that Dr. Drews staff are aware so these issues can be addressed early, preventing delays to your surgery.
- ☐ Visit and view the NEBH patient education video series for THA/TKA at: https://www.nebh.org/patients-care-partners/patient-education/
- ☐ Consider purchasing a cold therapy unit for your joint. These are available online, as well as through the BBJI. Contact the office at BBJI to purchase.

Within Two Months of Surgery:

- ☐ Make sure to check the mail; a letter will be coming with your pre-screening appointment.
- ☐ Notify Dr. Drew's staff of any change in medical conditions such as open wounds, rashes and any infections, as they could impact your surgery.
- ☐ If you are on a blood thinner, consult with the provider who prescribed it for a plan to stop safely before surgery. Be sure to know the details of this plan and when exactly to stop.
- ☐ If considering staying at a hotel near the hospital the night before surgery, contact New England Baptist Hospital at 617-754-5800 for further information.
- ☐ Begin to make arrangements to have someone (spouse, children, friend, etc.) at home with you for a few days after surgery, to help you with day-to-day tasks.

Within One Month of Surgery:

- ☐ If you have not received the date for your pre-screening appointment, contact Dr. Drew's office.
- ☐ If you are prescribed prednisone for a medical condition, contact Dr. Drew's office.
- ☐ Be proactive in keeping healthy. Even simple illnesses such as a common 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.
- ☐ Your pre-screening at the hospital will last between 3-6 hours. There can be delays, but this day is vital to ensuring you have a safe and comfortable experience for surgery. At this appointment you will be able to discuss any concerns you have with regards to medications, including anesthesia. You will also be able to inquire about VNA or rehab at this appointment and coordinate that care for after surgery.
- ☐ If you are a smoker, remember that you need to be completely off of cigarettes by the time of your surgery, or it may be canceled.

Within One Week of Surgery:

- ☐ Stop all anti-inflammatories, unless otherwise directed by a physician, 7 days prior to surgery. Tylenol is okay to continue.
- ☐ If you ordered a cold therapy unit through BBJI, arrange to pick it up at the Waltham office.
- ☐ Make any necessary arrangements at home to ensure safety after surgery.
- ☐ Be sure to know the date, time and location of your post-operative appointments.
- ☐ Make sure to use the Hibiclens soap as recommended, 3 days prior to surgery.
- ☐ Expect a call from the hospital between 12-4 pm the day prior to surgery informing you of your arrival time.

Checklist for your upcoming surgery at our Outpatient Surgical Centers

After Booking Surgery:

- ☐ Register for BBJI's patient portal. This can be an effective way to relay any pre and post-operative concerns.
- ☐ Make sure that no dental appointments are booked for 3 months after your surgical date.
- ☐ You cannot have a cortisone injection into the operative hip/knee within 3 months of surgery.
- ☐ If you have ever had reactions to anesthesia or pre-surgical prep, be sure that Dr. Drew's staff are aware so these issues can be addressed early, preventing delays to your surgery.
- ☐ Inform Dr. Drew's staff immediately if you have ever tested positive for MRSA.
- ☐ Book a pre-surgical clearance with your primary care physician within 30 days of surgery. They will need to complete a History & Physical. If you are over the age of 65, they will also need to complete an EKG.

Within Two Months of Surgery:

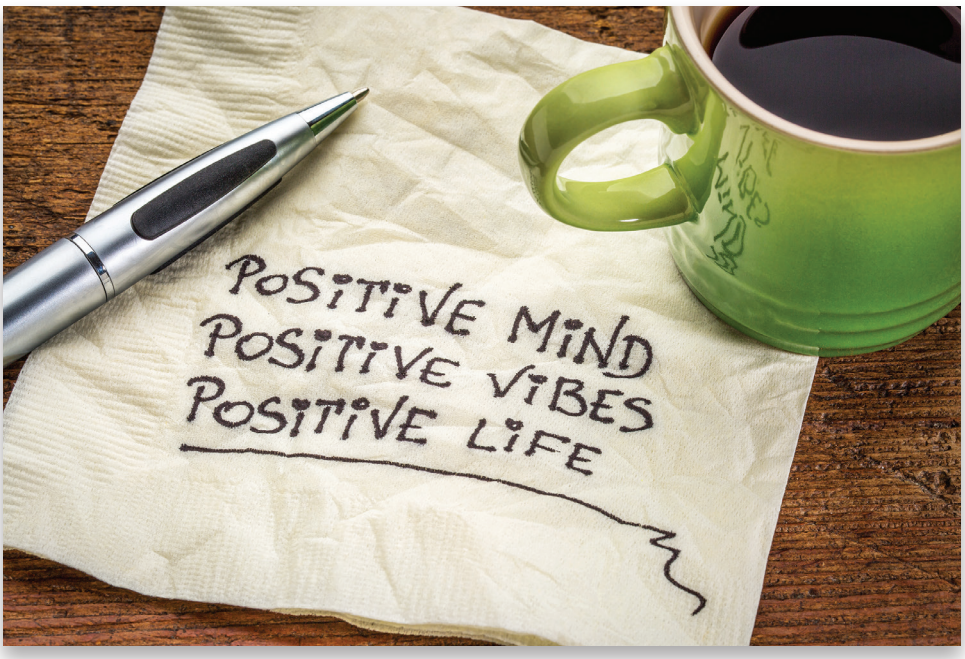
- ☐ Make sure to check the mail; a letter will be coming with instructions on presurgical medications.
- ☐ Notify Dr. Drew's staff of any change in medical conditions such as open wounds, rashes and any infections, as they could impact your surgery.
- ☐ Begin to make arrangements to have someone (spouse, children, family member, friend, etc.) at home with you for a few days after surgery, to help you with day-to-day tasks such as preparing meals, medications, dressing yourself, etc.

Within One Month of Surgery:

- ☐ If you are prescribed prednisone for a medical condition, contact Dr. Drew's office.
- ☐ Be proactive in keeping healthy. Even simple illnesses such as a common cold could cancel surgery.
- ☐ If any dental work took 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.
- ☐ Make sure you have registered with the surgical center, and that your surgical clearance is sent to them.
- ☐ If you are a smoker, remember that you need to be completely off of cigarettes by the time of your surgery, or it may be canceled.
- ☐ Consider purchasing a cold therapy unit for your surgery. These are available online, as well as through the BBJI. Contact the office at BBJI to purchase.

Within One Week of Surgery:

- ☐ Stop all anti-inflammatories, unless directed by a physician, 7 days prior to surgery. Tylenol is okay to continue.
- ☐ Make any necessary arrangements at home to ensure safety after surgery.
- ☐ If you ordered a cold therapy unit through BBJI, arrange to pick it up at the Waltham office.
- ☐ Be sure to know the date, time and location of your post-operative appointments.
- ☐ Expect a call from the Surgery Center the day before your scheduled procedure with an arrival time.



Please Review the Following BEFORE your first Post-Op Visit

3 week Post-Op TKA (Total Knee Arthroplasty) Visit

BBJI
Boston Bone & Joint Institute

Joint Replacement Center

Dr. Jacob Drew, MD *Matt Attolino, PA-C*

TOTAL KNEE REPLACEMENT
FOUR WEEK POST-OPERATIVE INSTRUCTIONS

Medications:

Pain

- At this point, you should have weaned off the narcotic pain medicine.
- You may take Tylenol and ibuprofen as needed for pain.
- If intolerable pain persists, this will be evaluated further at today's office visit.
- ICE is the best medicine for pain and swelling. Always make sure to protect the skin and do not apply for more than 20 minutes.

Anticoagulants

- You should stop all anticoagulants at this point (aspirin, Eliquis, Warfarin, etc.).
- If you were on an anticoagulant prior to surgery, you should resume the medication as directed and make a follow up appointment with your primary care physician.

Antibiotics for Dental Visits

- Please wait 3 months from the day of surgery for any dental visit. We ask our patients to take a dose of either Amoxicillin or Clindamycin one hour prior to the procedure for the first year after surgery. After the first year the antibiotics are optional. We are happy to provide a prescription for you to keep at home; instructions will be on prescription bottle.

*****AT THIS POINT RESUME ALL PREVIOUS HOME MEDICATIONS*****

(Any questions regarding these should be directed to your Primary Care Physician.)

Physical Therapy:

- Today you will be given a prescription for outpatient physical therapy (if you have not already received one).
- Continue to perform the exercises given to you by your physical therapist at home on a daily basis – work throughout the day to maximize range of motion. It is crucial to maximize your ROM in the first 2-3 months following surgery before scar tissues occur.
- Ice and elevate (above your heart) throughout the day to help with the remaining swelling. Swelling can linger for a few months – icing, elevation, and compression socks/knee wrap can be helpful.
- NO PRECAUTIONS. Listen to your body; increase activity as tolerated. Walk, walk, walk!
- Important to focus on your gait; better to go slow and use a cane if needed to avoid developing a limp.

Wound Care:

- You may shower, swim, and submerge your incision if cleared by MD or PA-C at today's visit (pools and hot tubs are ok!).
- You may apply lotions or scar creams once the incision has healed.
- Sunscreen should be applied to the incision if it is exposed.
- Do not pick at any remaining scabs! Let them dry and fall off on their own.
- The "bumpy" nature of the incision will fade over time. We use dissolving sutures that can take 3-4 months to absorb.
- It is common to have some numbness on the outside of your incision. This sensation should continue to fade over the next year, but often a very slight sensation of numbness does persist.
- Report any fevers over 101.5 degrees, increased redness, swelling, or ANY drainage from incision.

Frequently Asked Questions:

- You may drive, as long as you are not taking any pain medicine and you feel strong enough to operate the vehicle.
- You may return to work as tolerated; we are happy to provide a letter for your employer adjusting your schedule or activity if needed.
- Airports/Flying: You may fly; there are no implant cards issued any longer – just report to TSA personnel that you have a joint replacement.
  * It is beneficial the day of flying to take a baby aspirin and wear compression stockings during the flight.

Follow-Up:

- Feel free to call or email through the patient portal with any questions or concerns.
- We will see you back in the office in 10 weeks from today's visit for evaluation.
- The next visit will then be one year from the date of surgery for a repeat X-ray to evaluate implant component position.

3 week Post-Op THA (Total Hip Arthroplasty) Visit

BBJI
Boston Bone & Joint Institute

Joint Replacement Center

Dr. Jacob Drew, MD *Matt Attolino, PA-C*

TOTAL HIP REPLACEMENT
SIX WEEK POST OPERATIVE INSTRUCTIONS

Medications:

Pain

- At this point, you should have weaned off the narcotic pain medicine.
- You may take Tylenol and ibuprofen for pain. Always take the medicine with food.
- If intolerable pain persists, this will be evaluated further at today's office visit.
- Ice! Very helpful to decrease the swelling. May ice on and off throughout the day – make sure to protect the skin!

Anticoagulants

- You should stop all post op anticoagulants at this point (aspirin, Eliquis, etc.).
- If you were on an anticoagulant prior to surgery you should resume the medication as directed and make a follow up appointment with your primary care physician or cardiologist for monitoring.

Antibiotics for Dental Visits

- Please wait 3 months from the day of surgery for any dental visit. We ask our patients to take a dose of either Amoxicillin or Clindamycin one hour prior to the procedure. We are happy to provide a prescription for you to keep at home; instructions will be on prescription bottle.

*****AT THIS POINT RESUME ALL PREVIOUS HOME MEDICATIONS*****

(Any questions regarding these should be directed to your Primary Care Physician.)

Physical Therapy:

- Today you will be given a prescription for outpatient physical therapy (if you have not already received one.).
- Continue to perform the exercises given to you by your physical therapist at home on a daily basis – work throughout the day to maximize range of motion. Stretch the hip daily and work towards comfortably putting on socks and shoes.

- Ice and elevate (above your heart) throughout the day to help with the remaining swelling. Swelling can linger for a few months – icing, elevation, and compression socks/knee wrap can be helpful.
- NO PRECAUTIONS. Listen to your body; increase activity as tolerated. Walk, walk, walk.
- Important to focus on your gait; better to go slow and use a cane if needed to avoid developing a limp.
- LEG LENGTHS: We use intraoperative X-ray to try and precisely measure/match your leg length.
- Occasionally, patient's operative leg will feel long/short for the first few months after surgery while the pelvis and lower back settles. Please try and avoid the use of additional shoe lifts or inserts for the first three months post op.

WOUND CARE:

- You may shower, swim, and submerge your incision if cleared by MD or PA-C at today's visit (pools and hot tubs are ok!).
- You may apply lotions or scar creams once the incision has healed.
- The "bumpy" nature of the incision will fade over time. We use dissolving sutures that can take 3-4 months to absorb.
- Sunscreen should be applied to the incision if it is exposed to decrease scarring.
- Do not pick at any remaining scabs! Let them dry and fall off on their own.
- It is common to have some numbness on the outside of your incision and into the outside of your thigh. This sensation should continue to fade over the next year, but often a very slight sensation of numbness does persist.
- Report ANY drainage from incision, fevers over 101.5 degrees, or increased redness and swelling.

FREQUENTLY ASKED QUESTIONS:

- You may drive, as long as you are not taking any pain medicine and you feel strong enough to operate the vehicle.
- You may return to work as tolerated; we are happy to provide a letter for your employer adjusting your schedule or activity if needed.
- Airports/Flying/Long Car Rides: You may fly; there are no implant cards issued any longer – just report to TSA personnel that you have a joint replacement. Try to stand and stretch often.
  * It is beneficial the day of flying to take a baby aspirin and wear compression stockings during the flight.

FOLLOW-UP:

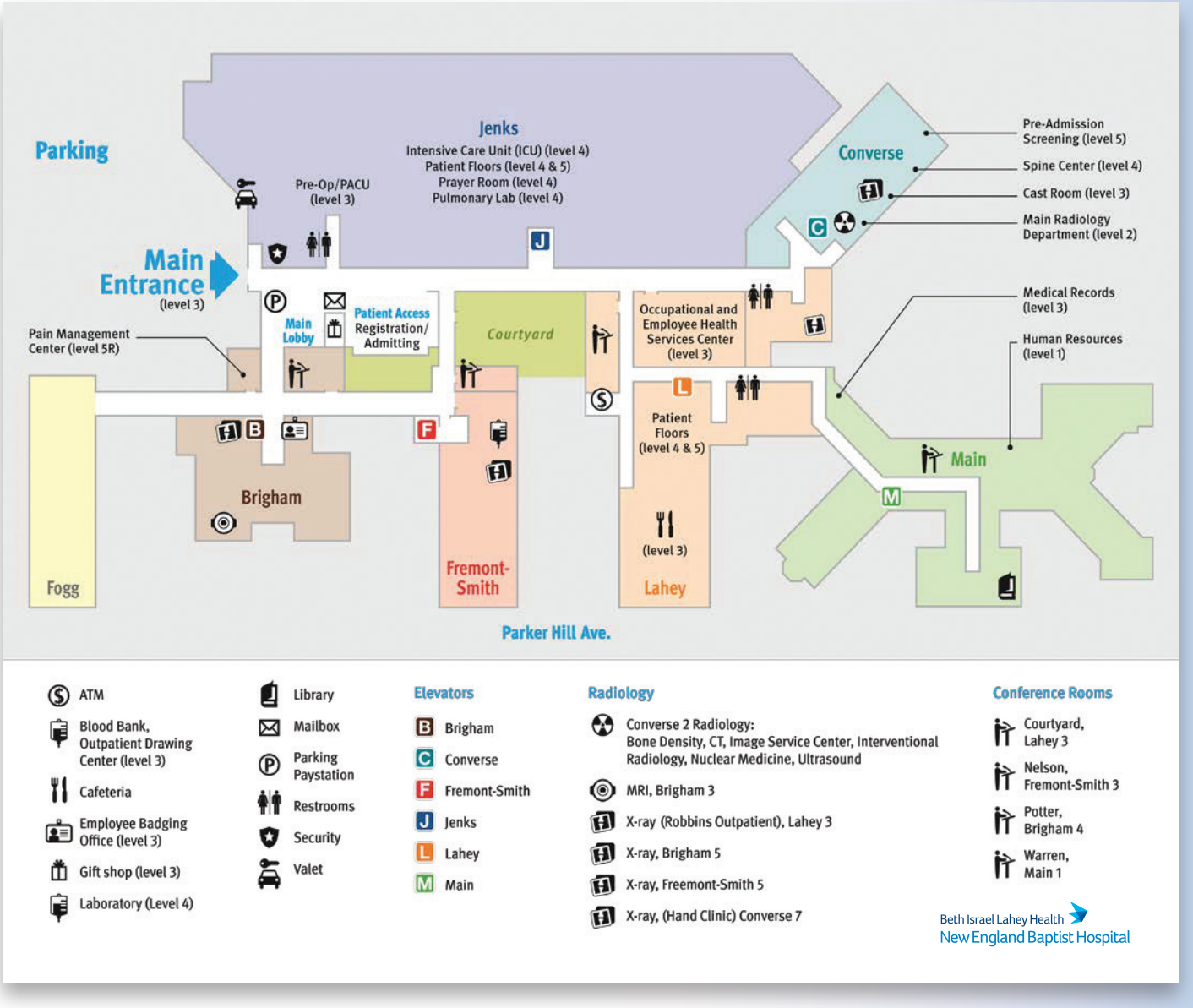
- Feel free to call or email through the patient portal with any questions or concerns.
- We will see you back in the office in 10 weeks from today's visit for evaluation.
- The next visit will be one year from the date of surgery for a repeat X-ray to evaluate implant component position.

Surgical Locations

Main Hospital (overnight stays):

Beth Israel Lahey Health
New England Baptist Hospital

New England Baptist Hospital
125 Parker Hill Ave, Boston, MA 02120
(617) 754-5800



Outpatient Surgical Centers

Beth Israel Lahey Health
Beth Israel Deaconess Needham

Beth Israel Needham
48 Chestnut St, Needham, MA 02492
(781) 453-3000

LIGHTHOUSE
SURGICAL SUITES, LLC

Lighthouse Surgical Suites, LLC
2 Market Pl, Ste 100, Hollis, NH 03049
(603) 600-6175

Beth Israel Lahey Health
New England Baptist Hospital

New England Baptist Outpatient Surgical Center
40 Allied Drive, Dedham, MA 02026
(617) 754-5000

BBJI
Boston Bone & Joint Institute

Donating to Research

A core principle at the Boston Bone and Joint Institute is to promote education, training, and advancement of knowledge in the field of orthopedic shoulder surgery, specifically shoulder replacement. We are committed to ongoing research that will help to improve shoulder surgery, patient outcomes, and the creation of innovative techniques to help patients recover quickly and return to a full life. Your charitable donation also ensures the education and training of tomorrow's leaders in shoulder surgery through the gift of fellowship and research.

How are donations used?

1) Essential support for peer-reviewed research studies, including a research assistant
2) Supports fellowship education and training through the Boston Shoulder Institute

Contact Us

For additional information, or if you would like to make a gift,
please contact us at 781-890-2133.

Thank you for your interest and support.

Best,

Jacob Drew, MD

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 Matt Attolino, PA-C, with your request, so please be sure to leave a detailed message, including verifying your pharmacy.

FMLA/Disability Paperwork

These requests can be faxed to our office at 781-890-2177. Please be sure they include your name, and where they should be faxed after completion. There is roughly a 7-day turnaround for these forms, so please allow enough time before surgery for their completion.

Patient Portal

If you have not yet registered for our patient portal, please consider doing so. If you need any assistance, please contact Tara at 617-751-5234. 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 often come up during non-business hours. Once your message is sent, it is received by our clinical staff who can triage it appropriately (please note that urgent matters should not be sent in this manner).

Leaving Voicemails for Tara

Please be sure to leave detailed messages if you reach a voicemail. This is especially helpful if your question is more clinical in nature; they can transcribe the message and send it to Matt Attolino, PA-C, thus expediting a response.

Recovery Shop

Dear Patient,

Dr. Jacob Drew, MD, has identified a list of products you will need at your pre-operative visit to assist in your recovery following your surgery. These products can be useful as part of a protocol to help reduce pain and swelling and may improve your recovery post-operatively or when surgery is not necessary.

These products are not covered by your insurance and may be purchased using an HSA account or other payment method.

We do not process these orders through our office. To streamline this process and ensure you are receiving products appropriate for you, we have partnered with The Recovery Shop.

These products have been reviewed by Dr. Drew and are specific to your recovery and wellness needs. **Cold Therapy is recommended.**

To purchase these products please follow these steps:

1.) Please go to https://shop-recovery.net/drew
2.) Review Recommended Products
3.) Select products
4.) Checkout & Pay
5.) Receive products in 1 - 3 Business Days

Or Scan the QR Code Below:

We recommend you purchase these products as soon as possible, so you have them immediately post-op to aid in your recovery.

If you need any assistance with your order, are unable to purchase online, or have product-related questions, please feel free to contact The Recovery Shop directly:

Phone: 860.500.5020

Email: info@shop-recovery.com

Sincerely,
Boston Bone & Joint Institute (BBJI)

Dr. Drew has a financial relationship with The Recovery Shop. Patients may select an alternative vendor. For information ask the office staff.

Notes

BBJI
Boston Bone & Joint Institute

Notes

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Notes

BBJI
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BBJI

Boston Bone & Joint Institute

Joint Replacement Center

BBJI Waltham
71 Border Road, Suite 300
Waltham, MA 02451
Tel: 781-890-2133
Fax: 781-890-2177

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

BBJI Woburn
800 West Cummings Park, Suite 2250
Woburn, MA 01801
Tel: 781-890-2133
Fax: 781-890-2177