



Mass General Brigham
Newton-Wellesley Hospital

Your guide to
**Knee
Replacement
Surgery**



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Welcome

On behalf of the orthopedic surgeons and staff at Newton-Wellesley Hospital, thank you for entrusting us with your care. We are pleased to offer this Guide to Knee Replacement Surgery to help you and your family understand what you can expect when you come to Newton-Wellesley Hospital for your knee replacement.

The information in this guide describes the typical routines and practices associated with the operation and the recovery from knee surgery. However, we understand that each of our patients is an individual, so we will personalize our care to fit your individual needs.

The information and advice in this guide comes from the collective experience of health care providers, patients and families at Newton-Wellesley Hospital. It is not intended to substitute for the communication you will have with your surgeon and the team involved in your care. We encourage you to carry this guide and refer to it throughout your experience.

We are proud of the care we deliver and are committed to providing you with an excellent experience. We welcome your comments and suggestions to let us know if there is anything we can do better.

Thank you again for choosing Newton-Wellesley and for entrusting your care to our team at the Newton-Wellesley Hospital Kaplan Joint Center.

SECTION 1

Understanding knee replacement surgery

Knee anatomy

The knee joint is a hinge joint that bends (flexion) and straightens (extension). It is formed by three bones:

- The lower end of your femur (thigh bone)
- The upper end of your tibia (shin bone)
- Your patella (knee cap)

Ligaments (bands of tissue) connect your bones and guide the motion of your knee. In a healthy knee joint, the ends of the bones are covered with articular cartilage, which allows smooth, pain free motion.

A common reason for knee replacement surgery is related to the wearing away of cartilage, leading to pain and limited mobility.



Reasons for knee replacement

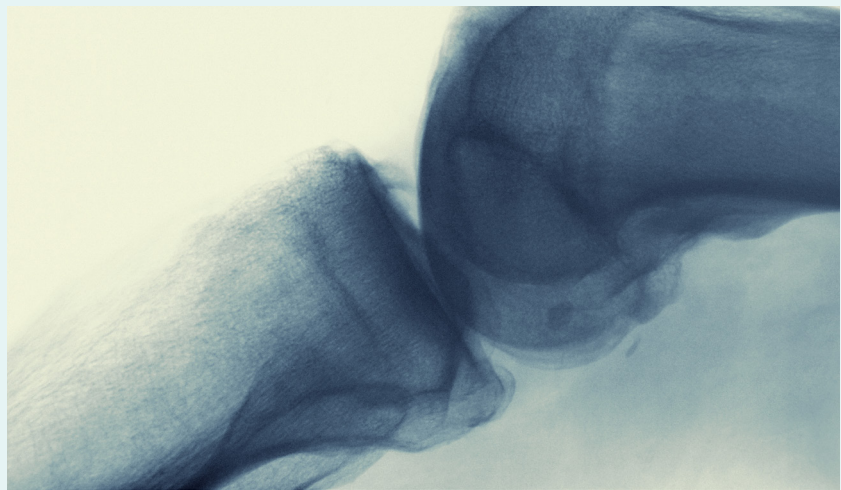
The most common reason for a knee replacement is the wearing away of cartilage in your knee joint, which is commonly referred to as arthritis. A knee replacement operation may be done when your arthritic knee joint causes intolerable discomfort and limitation of motion.

The most frequent causes of arthritic knee include:

- **Osteoarthritis (AH-stee-oh arthritis).**
In the case of osteoarthritis, your joint cartilage becomes frayed, pitted, and worn due to repeated motion or injury. When your cartilage is damaged, the normally

smooth movement of your joint is replaced by painful friction. Osteoarthritis occurs primarily in weight-bearing joints such as your hip, knee, or foot.

- **Rheumatoid (ROO-muh-toid) arthritis.** With rheumatoid arthritis, the membrane lining your knee joint (synovium) becomes inflamed, causing pain and damage to your cartilage.
- **A previous knee injury.** An injury of your knee can damage the cartilage in your knee joint at the time of the injury or many years later. This can lead to arthritic knees.



Overview of the operation

Total knee replacement surgery is performed to replace an arthritic or badly damaged knee joint with a man-made part called a knee implant or prosthesis (prohs-THÉE-sis). Total knee replacement is also called total knee arthroplasty (AR-throh-plas-tee).

Knee implants can be made of different materials including metal, polyethylene (plastic), or a combination of materials. Your surgeon will choose the prosthesis that is best for you.

The goal of knee surgery is to decrease your pain and increase your mobility.

About the procedure

Knee replacement

During knee replacement surgery, the surgeon makes an incision over your affected knee to expose your knee joint. The surgeon then moves aside your patella (kneecap) to reach the other joint surfaces.

The surgeon re-shapes the lower end of your femur and the upper end of your tibia in preparation for the prosthetic implants. The implants are designed to completely replace the surfaces of your knee joint.

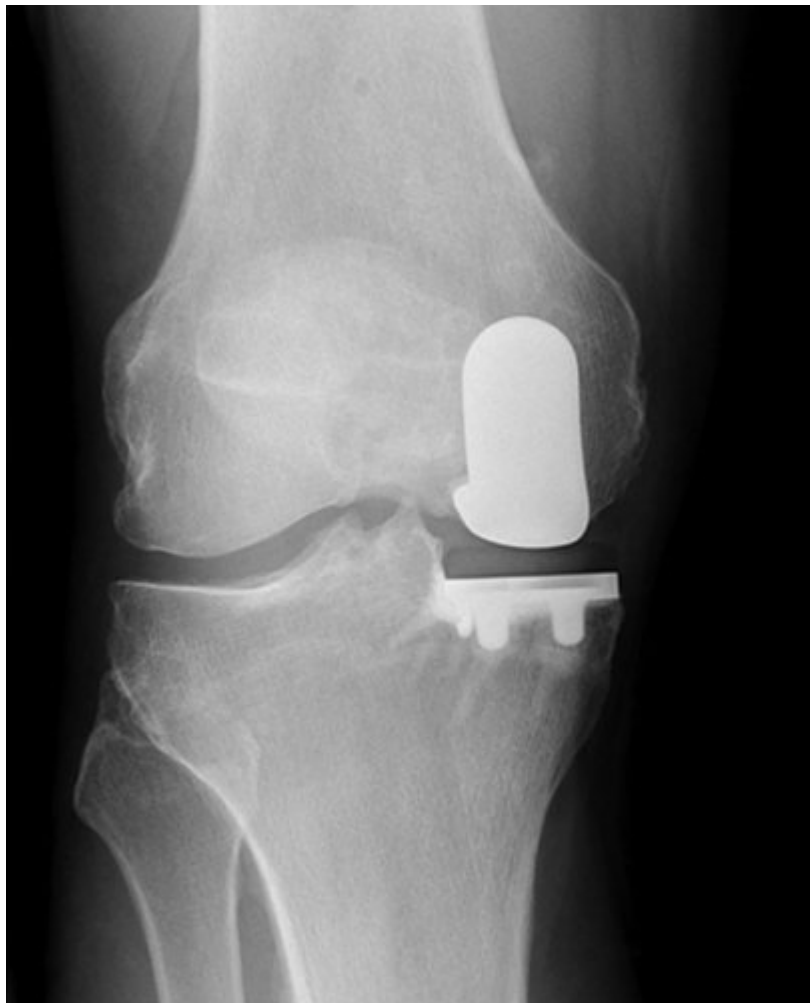
If cement is used, it is placed on the ends of your femur and tibia. The implants are inserted into the ends of those bones. A plastic “button” may be attached to the undersurface of your kneecap to replace the arthritic surface. In some cases, replacement of the kneecap is not necessary.

A drain tube **may** be placed into the wound, and the wound is closed using staples, sutures, or glue. A bandage is applied with an ice wrap over it.

Unicompartmental knee/ femoral-patella arthroplasty

If the damage to your knee is in limited areas, these other procedures can be done:

- A **unicompartmental** knee replacement is done when damage to your knee is limited to one side of the joint, a condition called single compartment degenerative disease. In this procedure, the worn portion of your knee joint is resurfaced while the remainder of your knee joint is left unchanged.
- **Femoral-patella arthroplasty** is done when the damage is limited to your femur and knee cap (patella). These procedures are done through a incision that is shorter than in a regular knee replacement. The materials used are the same, but the prostheses are smaller than the ones used for a full knee replacement. The operative time is about the same. Your activity progression may be quicker.



What you can expect

Outpatient total joint surgery

With the changes in surgical techniques and improved pain management protocols we are now able to perform total joint replacement surgery as an outpatient procedure.

These patients often have a faster recovery and lower risk for adverse effects. We find many patients do better in familiar surroundings, the comfort of their own home.

Patients are carefully screened for any health issues which would require an overnight stay. It is essential you have support at home to be successful. Our team will help coordinate the care for a smooth transition. More information about our Outpatient Total Joint Program will be discussed later in this guide.

Inpatient stay

If your team feels you need an overnight stay in the hospital you will be admitted the morning of your surgery. Most patients stay in the hospital for one night.

Routine care after joint replacement involves caring for your incision, managing any pain you may experience, and instructions on safe movement and activities by our physical therapists and occupational therapists. This information is presented in greater detail later in this guide. Full recovery from knee replacement takes time. While most people who have had knee replacement are out of bed on the day of surgery, complete recovery takes weeks to months. The goal of recovery is to comfortably return you to the activities that are important to you.

It is important to remember everyone progresses at his or her own pace.

SECTION 2

Our staff and team

Your health care team will work together to make your surgery and hospital stay a positive experience. Each staff member is committed to making your stay comfortable and your surgery successful. Please feel free to ask questions and share concerns with any member of your health care team.

Here are some of our staff members who will provide your hospital care.

Attending physician – This is your surgeon who will be primarily responsible for your care during your hospital stay. He/she will work with the following professionals to provide comprehensive and coordinated care.

- **Fellows** – Doctors who have completed residency training in orthopedic surgery and are specializing in joint replacement surgery
- **Residents** – Doctors who are training to be orthopedic surgeons
- **Physician Assistants (PA)** – Clinicians with specialized training who may assist your surgeon in the operating room help care for you in the hospital and at follow-up appointments
- **Nurse Practitioners (NP)** – Nurses with advanced training who may assist your surgeon in the operating room, during your hospital stay, and at follow-up appointments

Anesthesiologist – A medical doctor with advanced training in anesthesiology who will deliver your anesthesia

- **Nurse Anesthetist (CRNA)** – A nurse with advanced training who administers anesthetics under the supervision of an anesthesiologist

Hospitalist – A medical doctor who may see you at the request of your surgeon

Nursing staff – A registered nurse (RN) will care for you throughout your hospital stay. Your nurse will make sure you receive appropriate medications, medical treatments, and tests

ordered by your physicians. Your nurse will also provide information and education to prepare you for discharge. A nurse is always available to answer questions or to discuss concerns you or your family may have. The name of the nurse caring for you on each shift will be available at the nurses' station or listed on a board in your room.

- **Patient Care Assistant (PCA)** – This assistant will help your nurse provide your daily care. He or she may help with bathing, taking vital signs, walking on the unit, and transporting you to and from tests.

Care Coordination team – This team includes:

- **Case manager** – A nurse who may assist you with your discharge planning. These staff members are familiar with resources in your community and can help arrange home care or, if necessary, help you select an appropriate extended-care facility for your recovery. He or she can also help with any questions or problems about your medical insurance or financial issues during your hospital stay.
- **Social worker** – A social worker is always available to discuss any concerns that you or your family may have about coping with your hospitalization. He or she may also assist with arranging home care or placement in an extended-care facility.

Orthopedic Pre-op Coordinator (OPC) – The OPC is a physical therapist who will call you prior to surgery to assist with preparing you for surgery and to help with discharge planning to best meet your needs.



Rehabilitation staff – These staff members have a very important role in helping you recover from your joint replacement surgery:

- **Physical Therapist (PT)** – The PT will work with you to have you moving safely with your new joint. The PT will teach you how to progress your activity, regain your range of motion, and strengthen your muscles. You will also learn how to protect your joint by using certain positions and avoiding others.
- **Occupational Therapist (OT)** – The OT will provide instruction in activities of daily living including bathing, dressing, grooming, and toileting so that you are as safe and independent as possible during your recovery.

The OT will work on your mobility and transfers and assess equipment needs in your bathroom with your toilet or tub/shower stall.

- **Physical Therapy Assistant (PTA)** – A PTA may assist your physical therapist with your exercises and mobility training.

Other hospital staff – Housekeepers, dietary workers, radiology technicians, chaplains, pharmacists, transporters, and other staff members are all part of your health care team.

Family – Your family is a part of your care team. Our staff will respect the role of your family as your advocate.

SECTION 3

Preparing for surgery

Preparation is one of the keys to success. Preparing yourself physically and mentally is important for a healthy recovery. Here are a few steps to help you get ready for your surgery.

It's important to reach out to family and friends to build your support system and identify a "coach" to help you through your recovery.

Preoperative education classes

Education is another key to success. Newton-Wellesley Hospital provides preoperative education classes to help you and your family prepare for knee replacement surgery. These classes are designed to provide information on the surgery, the postoperative course, and rehabilitation after knee surgery.

You are *strongly* urged to watch the preoperative class video. It can be accessed at the web site listed below.

www.nwh.org/hipkneeguides

You can contact Nancy Hiltz at the Kaplan Joint Center with any questions.

- By phone: **617-243-5597**
- By email: **nhiltz1@partners.org**

Surgery pre-registration

Before you come to Newton-Wellesley Hospital for surgery, you must complete your pre-registration. We encourage you to call us at **617-243-6122**. Otherwise, a member of our registration staff will call you.



PCP visit

- We ask that you are evaluated by your primary care provider 4-6 weeks before surgery.
- You will have tests ordered that include blood tests (CBC, BMP), a nasal swab for bacteria, you may have an EKG or chest xray if appropriate.

Pre-admission call

Once your surgery has been scheduled, your surgeon's office will arrange a pre-admission call. This will be scheduled as many as four weeks before your surgery. This is a separate appointment from your visit with your surgeon.

The purpose of this call is to make sure you are healthy and prepared for surgery.

On the day of your pre-admission call be sure to have the following information:

- A list of your medications, vitamins, herbs, and any other over-the-counter medications – and please include dosages
- A list of any allergies you may have
- Names, addresses, and phone numbers of all the doctors, including specialists, that you see
- Results of recent tests at other hospitals

During the pre-admission call, we will:

- Order tests that may include blood work, an EKG, a chest X-ray, and a nasal swab
- Conduct an assessment that includes your past medical conditions, previous hospitalizations, and a review of your medications
- Confirm any allergies you may have to drugs, food, or latex
- Review your bathing instructions before surgery

Anesthesia

You will have the opportunity to speak with a member of our Anesthesia Department. He or she will review your medical history and medications. You will be given instructions regarding the

medications you should take before your surgery, and if any medications need to be stopped before surgery. Anesthesia options will be discussed, and there will be time for you to ask questions.

Informed consent

Before surgery you will be asked to sign consent forms. You have the right to an explanation of your health condition and treatment options in words

you can understand. Your doctor will also tell you about the risks and benefits of each treatment. Please feel free to ask questions.

Preparing yourself for surgery

Having surgery can be stressful. It may help to learn as much as you can about the procedure and to share this information with family and friends who will be involved in helping you with recovery.

Here are some tips that will help you focus on a smooth recovery:

- Stay as active as possible.
- Continue your normal activity and exercise programs.
- If you smoke, stop.

Stopping your use of tobacco, even for a short time, can be helpful. For help, you may contact the Quit Smoking Programs at our partner hospitals:

- Brigham and Women's Hospital, 617-732-8983
- Massachusetts General Hospital, 617-726-7443

For further information, you may also call 1-800-TRY-TO-STOP or visit www.trytostop.org.

Smoking can cause complications with anesthesia. So if you smoke, try to stop or cut back on the number of cigarettes you smoke each day.

Planning for your return home

Before the day of your surgery, you, your "coach," and your support team will discuss plans for discharge from the hospital after your operation. Your health care team will be evaluating your progress and will make recommendations. This is a decision that will be made together with you.

A nurse case manager will assist in planning your discharge. He/she can arrange services from a home care agency if they are needed. Patients return directly to home the same day or after a one-night hospital stay.

Your eligibility for home services or extended care facility is determined by a number of factors, including your medical and rehabilitation needs and your insurance coverage. Your insurance company will need to authorize any services for home care or a stay at an extended-care facility.

If you have specific questions about planning for discharge prior to surgery, you may contact the Care Coordination Department at Newton-Wellesley Hospital at **617-243-6695**.

Here are the goals we will help you achieve prior to being discharged from the hospital:

- You are able to get in and out of bed by yourself.
- You are able to stand up and sit down by yourself.
- You are able to walk safely on level ground with crutches or a walker over a distance of 150 feet or more.
- If you have stairs at your home, you can go up and down the stairs using crutches.
- You are able to complete self-care tasks (such as dressing, bathing, and toileting) safely by yourself or with minimal assistance.

Please note: You will need to have a ride available the day of your discharge from the hospital.

Here are some tasks you should anticipate needing support for at home:

- Transportation
- Meal preparation
- Laundry
- Household chores
- Driving



Home safety checklist

The Newton-Wellesley Occupational Therapy Department has prepared a Home Safety Checklist and general post-operative tips to help you prepare yourself and your home for your recovery from knee replacement surgery.

We encourage you to review this list with family and friends and make any needed changes BEFORE your surgery. These recommendations can help you safely manage at home during your recovery period.

- Remove all loose rugs and electrical cords from areas where you walk in your home, as they can easily become caught under walkers or crutches.
- Make sure carpet edges are tacked down to reduce the risk of falling.
- Be sure all walking areas are free of clutter and well lit.
- You will need a stable chair with a firm back. Seat height can be built up with a firm pillow or folded linens. A chair with arms is recommended.
- Place a lamp or light switch within reach from your bed.
- Place needed items in the bathroom, bedroom, kitchen and living areas within easy reach (not too high, and not too low).
- Keep a cordless phone or cell phone with you during the day.
- Place rubber mats or non-slip decals in your tub or shower.
- If you have equipment such as a commode or tub seat, check it out before your surgery to make sure it is in good working order.
- Consider having grab bars installed in your tub or shower wall and near your toilet for added safety when toileting or bathing.

- Put nightlights in your bathroom and in the hallway leading from your bedroom to bathroom.
- Ensure that stair handrails are securely fastened and extend the full length of the stairs.
- Be sure that outdoor walkways, steps, and porches are free of rocks, loose boards, and other tripping hazards.
- If you have young children or pets at home, be sure to arrange for assistance with their care prior to coming in for surgery.
- Depending upon your level of flexibility, you may need long-handled equipment to help with getting dressed after surgery. Your occupational therapist will make recommendations regarding equipment needs once you are evaluated post-operatively. If you feel that you may benefit from having a "knee kit" for home use prior to surgery, they can be purchased at most medical supply stores and pharmacies, as well as at the Newton-Wellesley Gift Shop.

Tips for using a walker or crutches:

- Always use your walker or crutches when walking until cleared by your home therapist.
- You will not be able to carry things in your hands while using crutches. Wearing an apron with pockets or a belt pack is a good way to transport items from room to room when walking with crutches.
- If you are using a walker, consider buying a walker bag or basket for use in carrying items.

Kitchen tips:

- If possible, move your kitchen table close enough to the counter so you can easily pass food items back and forth without twisting.
- To move an item from one part of the counter to the other, simply slide it along the countertop. If the item is hot, place a potholder under it.
- If you must set your crutches aside temporarily while preparing food at the counter, make sure they are within reach in a safe place where they will not fall to the floor.

- Frequently used refrigerated items should be within easy reach (between your waist and shoulder level). Arrange kitchen cabinets so that frequently used items are within easy reach, to avoid excessive bending or stretching.
- Keep your freezer stocked with ready-to-eat foods.
- Lighter-weight and single-serving items are easier to handle than large containers.
- Use only stovetop or counter-level appliances to prepare food. Do not use low ovens or attempt to load or unload the bottom rack of the dishwasher.

Bathroom tips:

- Do not use towel bars, soap-dish handles, shower curtain rods, or toilet paper dispensers for support when getting in and out of the shower or on and off the toilet.
- It is important that you can reach your soap, shampoo, washcloth, and long-handled sponge in the shower without too much bending.
- Always make sure there is no water on the floor when stepping in and out of the tub or shower. If necessary, get help to dry the area before getting in and out of the shower.
- Sitting down to dry off after showering is recommended.

Assistive equipment frequently used following joint replacement:

- Raised toilet seat or 3-in-1 commode chair to increase the height of a low toilet, and includes grab bars to assist with getting on and off your toilet.
- A tub bench or shower chair is helpful if you have weight-bearing restrictions following surgery or if you do not have good balance.
- A hand-held showerhead can also be helpful when bathing after surgery.

Medication guidelines

You will receive specific instructions for medications during your pre-admission phone call.

You will be asked to stop taking aspirin and other anti-inflammatory medications before surgery. Your medication instructions will be included in your after-visit summary (AVS) given to you at the end of your pre-test visit.

A list of medications and substances to stop before surgery is provided here. Our anesthesiology staff will review this with you. Some things to keep in mind:

- Do not take vitamin E or any herbal supplements for one week before surgery.
- If aspirin is prescribed for your heart or problems with your blood vessels, you will be given instruction on taking it.
- You may take acetaminophen (Tylenol).
- You may not be aware of the many medicines that contain aspirin. Most medicines that help to relieve the symptoms of cold or sinus congestion contain aspirin. Look at the ingredients on the label.
- Notify your surgeon if you are on warfarin (Coumadin) or another blood-thinning medication.



The following is a partial list of other over-the-counter products that contain aspirin or aspirin-like medicine. These may affect bleeding during and

after surgery. If you take any of these medicines, check with your surgeon or anesthesiologist about temporarily stopping them.

Advil	Bayer Aspirin	Empirin	Percodan
Alka-Seltzer	Bufferin	Excedrin	Plavix
Aluprin	Cephalgesic	Fiorinal	Phenergan
Anacin	Children's Aspirin	Four-Way Cold Tabs	Robaxisol
A.P.C. (P.A.C.)	Congesprin	Ibuprofen	Sine-Aid
Arthritis-Strength	Cope	Indocin	Sine-Off
Bufferin	Coricidin	Midol	Talwin
A.S.A and Codeine	Coumadin	Motrin	Tolectin
Compound (Capsules	Darvon	Nardil	Triaminicin
No. 2 and No. 4)	Dristan	Naprosyn	Trigesic
Ascriptin	Duragesic Tablets	Norgesic Tablets	Vanquish
Aspergum	Ecotrin	Pepto Bismol	Zactrin Zoma
Aspirin			

SECTION 4

Anesthesia

Our anesthesiologists and nurse anesthetists are responsible for your safety and for your comfort during surgery. Your anesthesiologist will work with you and with your surgeon to plan the best type of anesthesia for you.

Before surgery, your anesthesiologist will discuss your medical history, describe your options with their benefits and risks, answer questions from you or from your family, and ask you to sign a consent form for anesthesia. This is separate from your consent for surgery.

Described below are two types of anesthesia used for joint replacement surgery. Both are safe and effective. A member of the Anesthesia Department will be with you at all times in the operating room.

Spinal anesthesia

Spinal anesthesia involves medication injected into your back through a needle to make your body numb from the waist down. This procedure is performed in the operating room after you are sedated with intravenous medication.

When the spinal anesthetic is beginning to take effect, before surgery begins, a stronger sedative is given through your IV to make you even more relaxed and sleepy. Most patients remember little if anything about their time in the operating room. The few who do occasionally feel pressure

or hear talking or equipment sounds during surgery are not bothered by it.

You are able to communicate with your anesthesia team about anything that you need during the procedure. You are more likely to be clear-headed sooner and less likely to have nausea and vomiting after spinal anesthesia, partly due to the fact that you will require less pain medication. You will remain in the PACU until your legs move normally, which usually happens within two hours after surgery ends.

General anesthesia

With general anesthesia, you are completely unconscious and asleep during surgery.

Medications to begin anesthesia are given intravenously (IV) through a vein. Unconsciousness is maintained using both IV medication and medications you breathe in through a mask.

Pain or discomfort from your surgery is managed even before your operation begins, with a combination of medication you take before your

anesthesia is started and IV medications given before you wake up. If needed, additional pain medication is available in the post-anesthesia care unit (PACU), also called the recovery room.

Some common side effects of general anesthesia include sleepiness, nausea with or without vomiting, and sore throat. You will be given medication to help prevent nausea.

SECTION 5

Surgery

Day before surgery

On the day before your knee replacement surgery, make sure to follow these specific instructions:

- Shower and wash your body with the special soap as directed.
- Follow the medication instructions you received at your pre-admission testing call.
- **Do not eat after midnight.** This includes solid food of any kind, milk or coffee lightener,

orange juice, alcohol, gum, candy and mints.

- Clear liquids are allowed up to two hours before surgery and include water, black coffee, clear tea, apple juice (no cider), and cranberry juice.

You should have absolutely nothing to eat or drink within two hours of your surgery.



What to take to the hospital

Bring to the hospital:

- Asthma inhalers and any eye drops
- Personal toiletries
- Comfortable clothing such as shorts, pajama bottoms, and loose comfortable pants and shirts – elastic waistbands or draw-string closure is recommended
- Flat comfortable shoes/sneakers and socks
- Glasses for reading (leave contact lenses at home)

- Cell phone and charger
- Your Health Care Proxy document (this will be explained to you in advance)

Do NOT bring:

- Do not bring a purse, wallet, and other valuables including watches, earrings, and other jewelry.
- Do not bring medications UNLESS instructed to do so.

Arriving at the hospital

You will be admitted to Newton-Wellesley Hospital on the day of your surgery. You will be asked to arrive at the hospital 1½ – 2 hours before your operation.

After checking in at the Surgical Center Registration, you will be taken to the pre-operative area. Your belongings will be stored and delivered to your room later in the day. A nurse in the pre-operative area will coordinate your preparation for surgery, which includes:

- Meeting the team who will assist your surgeon, which includes nurses, an anesthesiologist and/or nurse anesthetist, and a fellow, resident or PA
- Site verification, in which you will be asked

multiple times to verify what type of surgery and on which side – this is a routine hospital procedure and is necessary for your safety

- Checking your vital signs, including temperature, blood pressure, pulse, and breathing
- Placing an intravenous (IV) tube in your arm so that you can receive fluids, medications, and blood transfusions if necessary

Your family is welcome to stay with you until you go to the operating room (OR). When you are taken to the OR, your family will be directed to the family waiting area where they can wait during your surgery.

Going to surgery

In the OR, the surgical team will work to ensure your operation goes smoothly. They will be continuously watching your heart rate, blood pressure, and breathing. A catheter (small tube) **may** be placed in

your bladder to keep track of fluids during surgery. Your surgeon will speak with your family when surgery is completed.

After surgery: Post Anesthesia Care Unit

After surgery, you will wake up in your bed in the post anesthesia care unit (PACU), known as the recovery room. You may not remember much of this part of your stay there.

Here are some of the routine activities that will be happening as you wake up from your surgery:

- Your vital signs will be taken frequently.
- You will have oxygen and heart monitoring while you wake up from the anesthesia.
- You will be wearing compression



boots on your legs to help your blood circulation.

- You **may** have a small drain from your incision to drains extra fluid from under your skin.
- You **may** have the catheter (tube) leading from

your bladder to drain urine.

- The nurse will check on the IV fluids and antibiotics you receive.
- You will be asked to cough and breathe deeply every hour while you are awake.

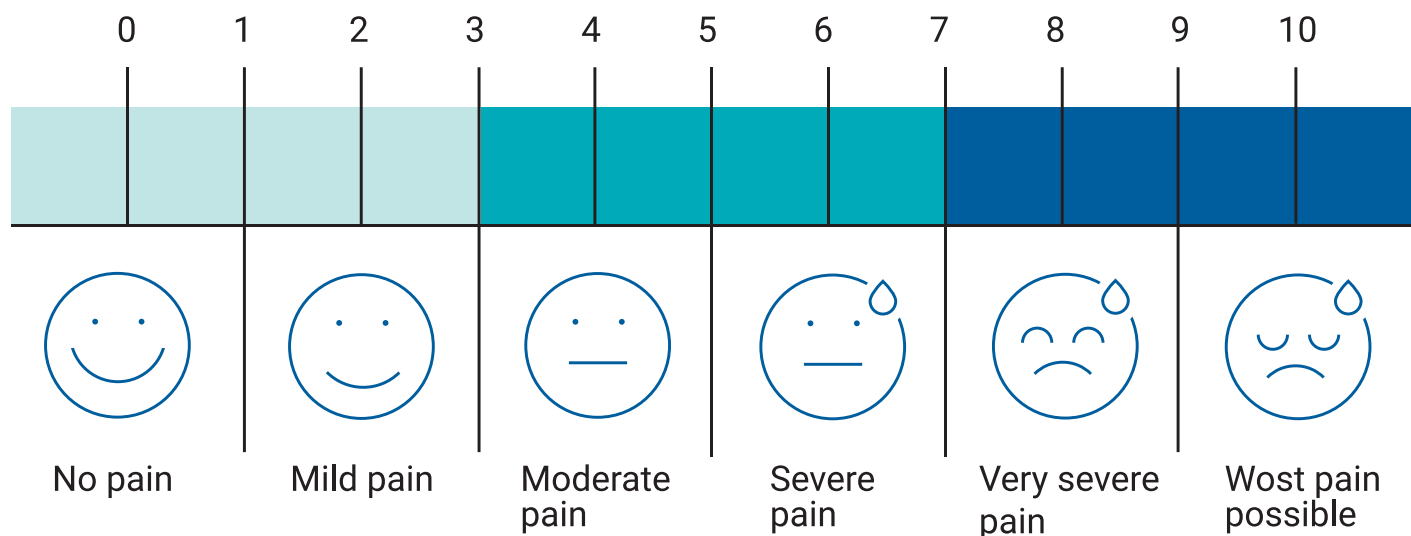
Pain management

You will have discomfort after knee replacement surgery. Your pain management begins before your operation and continues through anesthesia and after your operation.

Your comfort is important to us. Do not wait for

someone to offer you medicine. Let your nurse and doctor know right away if you are uncomfortable.

Your nurse will check to make sure you are as comfortable as possible. You will be asked to rate your pain. We will use a scale from 1 to 10.



Please be sure to tell your nurse if your pain becomes worse. We want you to be as comfortable as possible while you heal.

Although feeling pain is a natural occurrence after surgery, there are many pain control methods available:

- If you are not taking fluids, the PACU nurse can give you pain medicine through your IV.
- We use a combination of medications, cold therapy, and injection of medication in the joint at the end of surgery to provide comfort. You may receive Tylenol, Lyrica and Celebrex before surgery.

- You may be offered a nerve block that assists with pain management.
- The medication combination after surgery includes Tylenol, Toradol, oxycodone or tramadol, and ice. Other pain medicines are available if you are unable to take any of these medications.
- Cold (Ice) therapy can help with pain relief.
- Mobility (moving around) may help with muscle discomfort after surgery.

SECTION 6

After surgery

During your recovery, the focus of your care will be on managing your medications, caring for your incision, encouraging you to move as much as possible, and keeping your new joint safe.

It is difficult to describe a typical day in the hospital, because each person's care depends on his or her specific needs. One thing is fairly certain: you will be busy.

Your plan of care

Day surgery

Vital signs

A nurse or patient care assistant will take your vital signs several times. This may include your temperature, blood pressure, heart rate, oxygen level, and pain levels.

Medications

Your physician will order your medications. If you have any questions about your medicines, please be sure to ask your nurse. **DO NOT take medications from home unless instructed by your nurse or doctor.** After surgery, you will be on a blood-thinning medication to help prevent blood clots.

Managing your pain

Some discomfort is expected after joint replacement surgery. Your care team will make every effort to keep you comfortable. If you ever feel that your pain is not well controlled, you should tell your nurse as soon as possible.

Most patients do well with a multimodal approach to manage pain. We use a combination of Tylenol, Toradol, narcotics, movement, and cold therapy to help provide comfort.

Once home the numbing meds begin to wear off. It is important to take your pain medicine when you begin to feel more pain. This will prevent the pain from spiking. Also take it easy the first 24 hours to allow the soft tissues to settle down.

Keep in mind that it is important to take pain medicine when you are having pain to maximize your ability to tolerate activity. This will help optimize your recovery.

Care of your incision

You may have a wound drain that will be removed before you go home. Your incision will be covered with a bandage (dressing) for the first few days to a week after surgery. Before you leave the hospital, we will give you instruction for wound care at home.

IV (intravenous catheter)

Your nurse will also check on IV fluids and antibiotics you receive.

Incentive spirometer (IS)

You will be asked to cough and breathe deeply every hour while you are awake, and to use an incentive spirometer. This is a clear plastic tube to help you with deep breathing.

Diet

Your diet will go from liquids to solids. It is important to stay hydrated, water & sports drink will help.

Activity and mobility

Our nursing staff will assist you with walking. You will be walking once back in day surgery with a physical therapy and/or nurse. The goals for physical therapy are outlined in the next section.

You may be wearing elastic stockings to promote circulation and help control swelling.



Proper positioning is important for the safety and recovery of your new joint. Your nurse and therapists will teach you how to protect your joint when in bed and moving around. These positions will be reviewed with you.

Ice and elevation

You should apply ice 3-4 times a day for 20 minutes. Always have a cloth between skin and ice. You should elevate the extremity 3-4 times a day with the foot higher than the knee and the knee higher than the heart.

Discharge planning

Your health care team will work with you and your family to plan for your needs after leaving the hospital.

Inpatient stay

Much of your care is the same. If you are overnight you may have more tests including lab work or X-rays.

Rounds

Your surgeon is the leader of your health care team. During your hospital stay, various members of your health care team may visit you.

Activity and mobility

You will continue walking with physical therapy and/or nurse. You may have compression boots over your elastic stockings to promote circulation.

Your nurse and therapists will review proper positioning after hip surgery.

Discharge planning

The case manager will arrange for home care.

Your recovery

Everyone progresses at his or her own pace. Listed below are guidelines for what to expect from therapy during your hospital stay. Your safety and independence guides your stay.

Physical Therapy

Physical Therapy sessions will include:

- Progression of strengthening and range of motion exercises
- Progression of bed mobility, transfers between bed and chair, and walking
- Practice stair climbing

Goals for home:

- You will be independent getting in and out of bed.
- You will progress to being able to walk household distances.
- If you have stairs at home, you will practice stair climbing with your therapist.
- Your therapist will provide a list of exercises and activity instructions for you to follow.

Occupational Therapy

Will see you if needed.

- Instruction in self-care activities such as bathing, dressing, grooming, and toileting to maximize your safety and independence
- Training in the use of long-handled adaptive equipment such as a “knee kit,” if needed
- Instruction in mobility and transfers including to and from the toilet and tub

Goals for going home:

- You will progress in self-care tasks such as bathing, dressing, grooming, and toileting after instruction by your occupational therapist.
- The occupational therapist will instruct you in using any adaptive equipment for performing tasks at home, to ensure your safety and independence.

Preparing for discharge

Your nurse will review your discharge instructions, which includes wound care and any medications you will be taking at home such as:

- Pain medication
- Anticoagulation medication
- Medication to prevent constipation

Some prescription pain medications can cause constipation. The best way to prevent constipation is to eat healthy and drink plenty of water. It is a good idea to pick up a stool softener (such as Miralax) to take after surgery if needed.

A case manager or social worker may come to see you to confirm your discharge plan and address any outstanding questions you may have.



SECTION 7

Leaving the hospital

Discharge from the hospital can be a bit worrisome, but please be assured that your care team will not discharge you until it is safe for you to leave. We will encourage you to leave the hospital as soon as possible, because this is known to speed recovery after knee replacement surgery.

Daily guidelines

The guidelines below will generally apply whether you are going directly home or to an extended-care facility. Your health care team will also provide you with additional instructions depending on the type of surgery.

In the first week after leaving the hospital, please follow these daily guidelines:

- Take all your medications as directed.
- Follow the “knee precautions” you have received to protect your knee.

- Continue your exercise routine on your own or with a physical therapist.
- Follow your instructions for wound care.
- Drink plenty of liquids and eat healthy foods.
- Take a stool softener or laxative if needed while taking narcotics for pain management.

Signs and symptoms to report

If you experience any of the following signs and symptoms when you leave the hospital, call your surgeon right away.

- More than one temperature reading greater than 101.5°
- Signs of infection (redness, swelling, draining wound, increasing pain) at the surgical wound
- Arm, leg or calf tenderness or pain
- Leg pain not relieved by rest, ice, and pain medication
- Nausea and vomiting that won't go away
- Inability to urinate that lasts longer than 24 hours

- Inability to move your bowels that lasts longer than 48 hours
- Swelling in either leg that does not decrease when your leg is elevated for a few hours or overnight (but it is common to have swelling of your lower leg that decreases each morning after you have been in bed all night)
- Sudden pain or an inability to walk

Please seek emergency treatment if you experience:

- Chest pain
- Shortness of breath
- Rapid heart beat
- Abdominal pain

Protecting your joint from infection

After knee replacement surgery, it is important to protect your new joint from infection. An infection in one part of your body can travel in your blood and possibly spread to your new joint.

Here are some types of infections that can cause problems. If you have any of these symptoms, you should report them immediately to your primary care doctor.

- **Urinary tract infections.** Symptoms of a urinary tract infection include a frequent and urgent need to pass urine, pain in your lower back or lower pelvic area, cloudy or foul-smelling urine, chills or fever, lack of energy or appetite, or sand-like material in your urine.
- **Skin infections.** Injuries to your skin should receive prompt care. After an injury, wash the area with soap and water and apply a bandage. Serious cuts may require stitches. If an injury develops swelling, redness, drainage,

enlargement, or blistering, or if you develop a temperature, immediately call your primary care physician.

- **Dental infections.** Good dental hygiene is important. You should see your dentist regularly for dental care even if you are not having any dental problems. When you see your dentist, be sure to inform him or her that you have had joint replacement surgery. We ask you not have teeth cleaned for 3 months after surgery. We will prescribe antibiotics to take prior to this appointment. This continues the first 2 years after surgery.

If you have a dental or surgical procedure for which the surgeon or dentist feels it is possible that you may get an infection, you should take antibiotics before the procedure. The dentist or surgeon performing the procedure can prescribe an appropriate antibiotic.

Getting back to your usual activities

During the first few weeks at home, you can adapt what you learned at the hospital to your own setting. You should continue doing the exercises provided by your therapist.

Staff from a home-care agency, such as a nurse or therapist, may visit as you make the transition to home. Home therapists may update your exercises and work further on home management activities.

Many people feel very tired when they leave the hospital. For this reason, it is best to pace yourself as you return to your daily routine. If you feel tired, take a short morning or afternoon nap. As you recover, your energy will increase.

Keep in mind that you cannot do everything yourself. Don't be afraid to ask for help with daily tasks such as grocery shopping, laundry, and housecleaning. Take care of yourself. Try to find ways to be good to yourself during this time.

Outpatient rehabilitation services

For your convenience, an appointment for outpatient physical and/or occupational therapy can be scheduled with the Newton-Wellesley

Hospital Rehabilitation Department by calling **617-243-6172**, Monday through Friday between 7 a.m. and 8 p.m.

SECTION 8

Frequently asked questions after knee replacement

Q: What is the recovery time?

A: Everyone heals from surgery at a different pace. The average recovery time is 3 to 6 months; your recovery may take less time or more.

Q: How long do I need a bandage on my incision?

A: Specific instructions will be reviewed with you before you leave the hospital. You may continue to wear a bandage to protect your incision from the irritation of clothing.

Q: How long should I use elastic stockings?

A: Some surgeons will want you to wear elastic stockings after surgery. These can be used for the first two weeks to help reduce swelling and improve circulation. You may remove stockings at night and put them back on in the morning. You may wear them longer, especially if you find that your ankles swell without them.

Q: Should I expect swelling after surgery?

A: Post-operative swelling is to be expected at your knee and leg. Applying cold packs and raising your leg above the level of your heart has been shown to reduce swelling. The swelling resolves gradually over several weeks or months.

Q: Should I use ice or heat?

A: Ice should be used for the first several days, particularly if you have a lot of swelling or discomfort. Many patients benefit from ice during the first few weeks.

Q: When can I shower and get my incision wet?

A: Your doctor will let you know when it is okay to shower. You will receive additional instructions

on showering and wound care. **Do not soak in a bath or hot tub.**

Q: How long will I be on pain medicine?

A: For the first few days you may take a strong pain medicine, such as a narcotic. Most people taper off narcotics and change to Tylenol within the first few weeks. If you are taking Coumadin (warfarin) or any blood thinner, you should talk with your primary care physician before making any changes in your pain medicine. You may take Tylenol while you are taking Coumadin.

Q: Can I drink alcohol?

A: Alcohol use is not advised until you have stopped your narcotic pain medicine and are walking steadily. Alcohol is also not advised if you are taking Coumadin.

Q: How long should I take iron supplements?

A: Four weeks of iron supplements is usually enough time to build up your blood after surgery.

Q: What should I do about constipation after surgery?

A: It is very common to have constipation after surgery, especially when taking narcotic pain medicine. A simple over-the-counter stool softener (such as Colace) is the best way to prevent this problem. Increasing fruits and vegetables in your diet will also help. In rare instances, you may require a something stronger, so check with your doctor's office.

Q: How long will I be on blood-thinning medication?

A: You will be on a blood thinner to help prevent blood clots. You may be on aspirin, Coumadin, or other blood thinner that you take by mouth, or you may receive Lovenox, which is given in a shot. Your doctor will let you know when you can stop taking your blood thinner. Your nurse will review your instructions for blood thinners at the time of discharge.

Q: Do I need physical therapy?

A: Yes! Therapy plays a very important role in your recovery.

Q: Can I go up and down stairs?

A: Yes. You will be taught to walk stairs during your hospital stay. Initially, you will lead with your non-operated leg when going up stairs and lead with your operated leg when going down stairs. You can use the phrase, “up with the good, down with bad” to help you remember. You will need to use crutches or a cane in one hand and hold the handrail with the other.

Q: How long do I have to use my crutches or walker?

A: In most cases, you will need to use a walker or crutches for two to four weeks after surgery. You may be advised to use a cane after you have stopped using crutches. Most patients use an assistive device (walker or crutches) until they can walk without a limp.

Q: When can I put more weight on my leg?

A: Your weight-bearing status will be explained to you before you leave the hospital. Most patients are allowed to bear as much weight on their operative leg as is comfortable.

Q: What exercises should I do?

A: You will be instructed by your physical therapist on appropriate exercises and given a list to follow. Be sure to talk with your surgeon and

your therapists about when you can begin new activities.

Q: Can I have sex?

A: For the most part, you can gradually resume sexual activity when you are comfortable. Speak with your physician and/or therapist.

Q: What activities can I do after surgery?

A: You may return to most activities when you feel up to it. Your surgeon may have specific restrictions that will be discussed with you.

Q: When do I need to follow up with my surgeon?

A: Follow-up appointments are usually made after surgery anywhere from 2 to 5 weeks, at 12 weeks, and then yearly after that. Check with your surgeon.

Q: When do my stitches come out?

A: If your stitches are absorbable, they do not need to be removed. If your stitches are not absorbable or you have skin staples, they're removed after 10 to 14 days. The steri-strips can be kept in place until they fall off on their own. They will help keep the skin edges together. If they have not fallen off by three weeks, it is okay to peel them off.

Q: When can I drive?

A: You should not drive until you are no longer taking narcotics and have good strength and leg control. Safety is the main priority.

Q: When can I return to work?

A: This depends on the type of work you do. You may be able to return to a sedentary work after about 3 to 4 weeks. If your work is more rigorous, you may need up to 3 months before you can return to full work. In some cases, more time may be needed.

Q: Where will I go after my hospital stay?

A: Most patients are able to go home after surgery. Your health care team will evaluate your discharge needs post-operatively. If an extended-care facility is determined to be medically necessary, the team will discuss this with you. Many factors will be considered in this decision. Your case manager will assist you with discharge planning.

Q: When can I travel?

A: You may travel as soon as you feel comfortable, but avoid long-distance travel for 4 to 6 weeks or until after seeing your surgeon. We advise you to get up to stretch or walk at least once an hour when taking long trips. This is important to help prevent blood clots.

Q: Should I tell my dentist or doctor that I have had a knee replacement?

A: Yes. For some procedures they will want to give you antibiotics to prevent infection of your new joint. We prefer that you not have dental appointments the week before your surgery and in the three months following surgery.

Q: Will my knee implant set off the machines at airport security?

A: The increasing sensitivity of security detectors at airports and public buildings may cause your prosthesis to trigger an alert. We recommend you tell airport security that you have had a knee replacement. In some situations, security guards may also move a wand up and down your leg to locate your joint replacement. They may also pat you down on the area that triggers the wand.

Q: I feel depressed and I cannot sleep. Is this normal?

A: It is common to have feelings of depression or trouble sleeping after surgery. This may be due to a variety of factors such as difficulty getting around, discomfort, or increased dependency on others. These feelings will typically fade as you begin to return to your regular activities. If they continue, consult your primary care doctor.

Q: How long will my joint replacement last?

A: This varies from patient to patient. For each year after your surgery, you have a one percent chance of requiring additional surgery. So, for example, at 10 years after surgery there is a 90% success rate.

Q: What are good positions for my knee, and what positions should I avoid?

A: You should spend some time each day working on straightening your knee (extension) as well as bending your knee (flexion). Avoid using a pillow or towel roll behind your knee for any length of time. Elevating your leg while keeping your knee joint straight will help reduce swelling. Please refer to exercise guidelines given to you by your therapist.

Q: When can I place my knee in water to take a bath or use a swimming pool or hot tub?

A: Confirm with your physician, but you can usually do this about 6 weeks after surgery.

Q: Where can I get more information about knee replacement?

A: We recommend that you visit the American Academy of Orthopedic Surgeons website at www.orthoinfo.aaos.org. Under "Treatment," select "Joint Replacement."

Wishing you a healthy recovery

In the months after your knee replacement surgery, you will gradually move toward greater independence in all your activities. Continuing to exercise will help you build stamina and endurance. You may find it challenging at times. Sometimes you may need to find a new way to do things.

As you recover from your surgery, try to be active and stay healthy. Keep your weight at a level that is appropriate for your height and body type. Adding pounds can put stress on your new joint.

As your muscles get stronger, it is important to stick with a regular exercise program to maintain total body fitness. No one is too old to exercise. If you have questions on how to keep active and stay healthy, talk to your primary care physician, surgeon, nurse, physical therapist, occupational therapist, or case manager.

We hope this guide has answered many of your questions about having total joint replacement surgery and what to expect after surgery. We believe that the most satisfied patients are those who are well informed. If you have any other questions, please do not hesitate to contact your surgeon.

Thank you for entrusting your care to the orthopedic surgeons at Newton-Wellesley Hospital.

Best wishes for success with your new joint and continued health.

