



Baystate Health

NEOS[®] NEW ENGLAND
ORTHOPEDIC SURGEONS

Total Knee Replacement
A Patient Guide

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You and your Doctor have decided that you need a knee replacement. Here is a summary of what you can expect.

☐ **Pre-op appointment**

- ☐ **Orthopedic Preop:** You will see your Nurse Practitioner or Physician Assistant to go over your surgical plan.
- ☐ **Past Medical History and current medication list:** Your provider will review your past medical history and current medication list. **Please bring your medication list with you.** If you take **diabetes medication, blood thinners, narcotics or narcotic-dependency treatment medication**, please discuss a plan with your Healthcare Provider. Many of these medications will require specific management.
- ☐ **Lab work and EKG** will be scheduled before surgery.
- ☐ **Medical consult:** You may be required to see more than one provider prior to surgery for medical clearance. This is based on your past medical history.
- ☐ **Post-op Prescriptions:** Your post-op prescriptions will be sent electronically to your pharmacy (i.e. Aspirin, Celebrex, Pantoprazole, narcotic pain medication, Colace). **Please ensure medications are picked up at least 5 days before surgery.**
- ☐ **Durable Medical Prescriptions:** You will be given a prescription for crutches/walker and a cane. See “Durable Medical Equipment & Outpatient Services” sheet in folder.
- ☐ **Total Joint Navigator:** You will sit with the Total Joint Navigator to discuss the folder of information and tell you what to expect before, during and after surgery.
- ☐ **Prehab/Physical Therapy:** You will be set up for the 2 required prehab (Physical Therapy) appointments and the Post-op Physical Therapy appointments.
- ☐ **CHG:** You will be given antibacterial soap to shower with the night before and the morning of surgery. See “Showering with Chlorhexidine Gluconate (CHG) Solution Before Surgery” sheet in folder.

☐ **Designate a “Home Recovery Caregiver”**

You must have someone reliable to bring you home and stay with you overnight after surgery.

If you live alone, it is very important that you choose someone who has the time to assist you.

Please note: Your surgery will be rescheduled if these arrangements have not been made.

My Home Recovery Caregiver will be: _____

<p>14 Days Before Surgery: Date _____</p> <p><input type="checkbox"/> Do not schedule any dental procedures.</p>
<p>10 Days Before Surgery: Date _____</p> <p><input type="checkbox"/> STOP NSAIDS: Stop all Anti-Inflammatory Medications (i.e. Aspirin 325mg, Motrin/Ibuprofen, Diclofenac, Meloxicam, Mobic, Naproxen/Naprosyn/Aleve, Fish Oil, Glucosamine, Vitamin E, Garlic Pills, Ginkgo Biloba). You MAY continue Aspirin 81mg (baby Aspirin), Tylenol, Celebrex and creams.</p> <p><input type="checkbox"/> Complete 2 pre-op Physical Therapy appointments.</p> <p><input type="checkbox"/> Prep your home: see “Home Safety Checklist” in folder.</p>
<p>8 Days Before Surgery: Date _____</p> <p><input type="checkbox"/> STOP GLP-1 Agonist Medications: (i.e. Ozempic, Trulicity, Byetta, Victoza, Mounjaro, Wejovy, Saxenda, Rybelsus). Please note: Your surgery will be rescheduled if this medication has not been stopped 8 days before surgery</p>
<p>5 Days Before Surgery: Date _____</p> <p><input type="checkbox"/> Prescriptions: Plan to pick up prescriptions AT LEAST 5 days before surgery.</p> <p><input type="checkbox"/> Do not shave operative site 5 days before surgery; this limits risk of infection.</p>
<p>3 Days Before Surgery: Date _____</p> <p><input type="checkbox"/> Begin prescribed Celebrex (if ordered by your physician).</p> <p><input type="checkbox"/> Begin over-the-counter Tylenol 3 times a day (every 8 hours).</p>
<p>Night Before Surgery: Date _____</p> <p><input type="checkbox"/> Do not eat or drink anything after midnight.</p> <p><input type="checkbox"/> Shower with soap provided in pre-op apt. See “Showering with Chlorhexidine Gluconate Solution Before Surgery”.</p> <p><input type="checkbox"/> Remove nail polish on fingers and toes/unless it is a clear coat.</p> <p><input type="checkbox"/> Sleep in clean pajamas in clean sheets.</p> <p><input type="checkbox"/> Put your walker/crutches in your car.</p> <p><input type="checkbox"/> Have the phone number of the person driving you home available.</p> <p><input type="checkbox"/> Make sure you can get in and out of the vehicle that will be transporting you home tomorrow.</p>
<p>Morning of Surgery: Date _____</p> <p><input type="checkbox"/> Take Tylenol, Celebrex and Pantoprazole at home (as directed by your physician).</p> <p><input type="checkbox"/> Shower again with provided soap. No powder, lotion, or deodorant.</p> <p><input type="checkbox"/> Put on clean, loose fitting, comfortable clothing.</p> <p><input type="checkbox"/> Remove all jewelry and piercings.</p>

Work/FMLA

- ☐ Call NEOS Medical Records department 413-233-1282 once you receive your surgical letter.
- ☐ Have your insurance information available.

Appointments and Follow Up

Patient information

Name _____

DOB _____

Surgery information

Date ____ / ____ / ____ Time ____ : ____ AM PM

Dr. _____

Outpatient testing/lab appointment(s)

Date ____ / ____ / ____ Time ____ : ____ AM PM

Dr. _____

Date ____ / ____ / ____ Time ____ : ____ AM PM

Dr. _____

Follow-up appointment(s)

Date ____ / ____ / ____ Time ____ : ____ AM PM

Dr. _____

Date ____ / ____ / ____ Time ____ : ____ AM PM

Dr. _____

Treatments/wound care

Important Phone Numbers

- Your surgeon: _____
- New England Orthopedic Surgeons: **413-785-4666**
- NEOS Nurse Navigator: **413-233-1158**

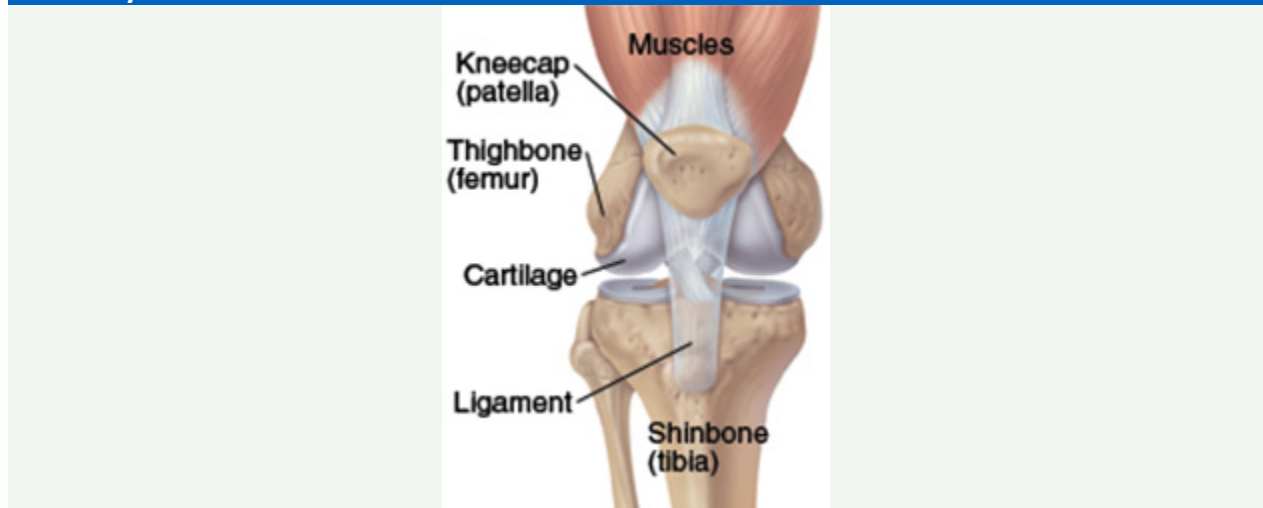
Baystate Medical Center

- Total Joint Replacement Unit, South 7: **413-794-3460**
- Total Joint Coordinator, South 7: **413-795-7405**
- Case Manager-Discharge Planning/Home Care : **413-794-3460**
- Nurse Manager : **413-794-5956**
- Patient Relations: **413-794-5456**
- Rehabilitation Department, South 7: **413-794-3467**
- Baystate Pharmacy: **413-794-3291**

Understanding Knee Replacement

The knee is a hinge-like joint, formed where the thighbone, shinbone, and kneecap meet. It is supported by muscles and ligaments and lined with cushioning cartilage. Over time, cartilage can wear away. As it does, the knee becomes stiff and painful. This painful wearing away of cartilage is known as arthritis. Knee prosthesis (artificial joint) can replace the painful joint and restore movement.

A healthy knee

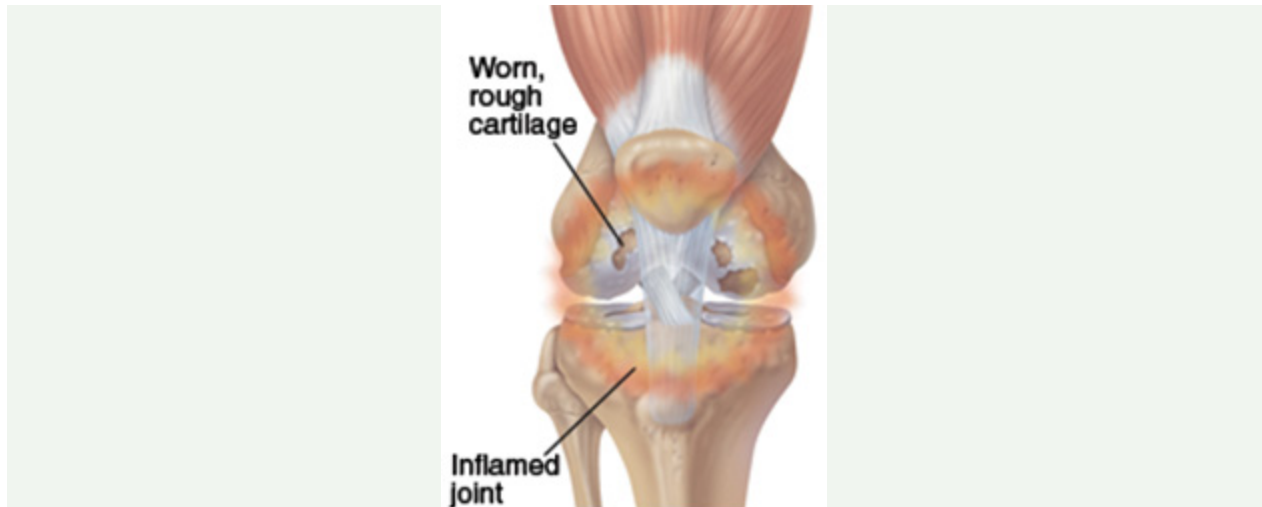


A healthy knee joint bends easily. Cartilage, a smooth tissue, covers the ends of the thighbone and shinbone and the underside of the kneecap.

Healthy cartilage absorbs stress and allows the bones to glide freely over each other.

Joint fluid lubricates the cartilage surfaces, making movement even easier.

A problem knee

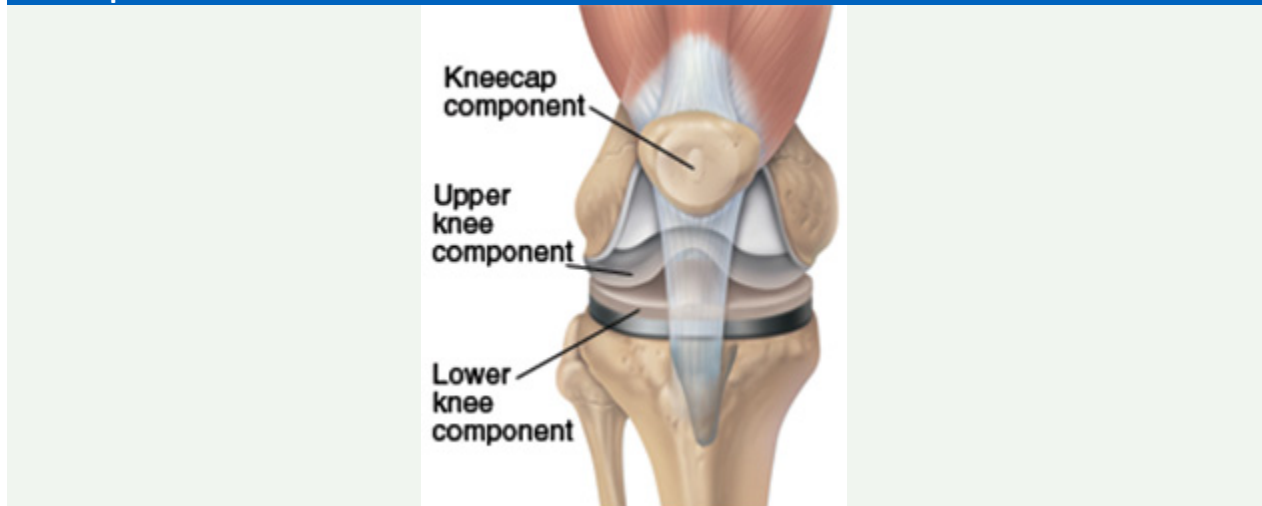


A problem knee is stiff or painful. Cartilage cracks or wears away due to usage, inflammation, or injury.

Worn, roughened cartilage no longer allows the joint to glide freely, so it feels stiff. As more cartilage wears away, exposed bones rub together when the knee bends, causing pain.

With time, bone surfaces also become rough, making pain worse.

A knee prosthesis



A knee prosthesis lets your knee bend easily again.

The roughened ends of the thighbone, shinbone, and, in most cases, the underside of the kneecap are replaced with metal and strong plastic components. With new smooth surfaces, the bones can once again glide freely.

Knee prosthesis does have limitations, but it can let you walk and move with greater comfort.

Preparing for Knee Replacement Surgery

You and your doctor have decided that you need a total joint replacement. In this book we will cover every detail so that you feel comfortable and prepared for your upcoming surgery. We will review all of the information you should expect the day of your surgery as well as your rehabilitation afterwards. Don't think you will have to memorize all this information coming at you, let this serve as a reference to guide you through this process. So, let's get you started and begin with what to expect in the weeks leading up to your surgery.

Designate a Recovery Coach

You're going to need assistance and support when you leave the hospital after your surgery. That's why you need to designate a "Recovery Coach." This person can be a family member or friend you can rely on for help during recovery and your return to everyday activities. Quite often, patients designate their spouses. If you live alone, it's very important that you choose someone who has the time to spend assisting you. (If you need help finding someone to act as your Recovery Coach, please mention it at your first intake appointment. We can provide some suggestions.

Recovery Coach Responsibilities

It's very important that your Recovery Coach understands what your needs will be. Your coach should come to your preoperative appointments, attend at least one physical therapy session, and join you for post-discharge planning.

Your coach should visit you as much as possible while you are at Baystate Medical Center. The more they know about your procedure, and what your condition will be after the surgery, the better they will be able to assist you in returning safely to your everyday environment and activities.

Please be sure to let your care team know who you have chosen as a Recovery Coach, and please provide contact information for them.

We cannot overstate the importance of support. It is the key to a faster recovery. Your coach should be able to help you with everyday life activities, such as climbing stairs and using bathroom facilities.

Most important of all, your Recovery Coach can cheer you on during each step you make on your path to pain-free mobility, encouraging you to do the movement and exercises assigned by your nursing staff or physical therapist.

Upcoming appointments

Following your appointment, you will receive a letter with a list of upcoming appointments. Please anticipate and keep note of your appointments over the next month. These will include:

- A physical exam and medical history with your surgeon's nurse practitioner or physician assistant
- A medical clearance for surgery. This may be at your PCP's office or at 3300 Main Street at the Pre-op clinic.
- Lab work, such as a blood test, urine test and EKG, at Baystate Reference Laboratories at 3300 Main Street or a lab of your choice.
- Education classes at the hospital. Please bring a list of your prescription medications, including the dosage and the way you take them. List over-the-counter medications (such as aspirin) and supplements (like vitamins). At this appointment, you will learn about some medications you will need to stop in preparation for this surgery.
- If applicable, pain consultation if on chronic narcotics, methadone, suboxone.

Smoking cessation

One of the very best things you can do for your health -- before and after surgery -- is to quit smoking. If you have never been a smoker, that's great. If you have quit smoking, congratulations! If you are a smoker, we can provide some information and resources to help you quit.

Smoking hurts your body in many ways

You know that smoking is bad for you. You may not know, however, that smoking significantly increases your risk of many complications after joint replacement, in particular deep and superficial infections. In some cases, these risks may be so great, that your surgeon will not perform joint replacement until you stop smoking.

You probably do know that smoking is bad for your lungs. Your lungs take in air to give your body oxygen by releasing it into the blood stream. Lungs, like all the tissue in your body, are made up of billions of tiny specialized cells. Old lung cells die and are replaced by identical new lung cells. This is a natural process that keeps your lungs healthy and functioning.

When you smoke, your lungs take in air plus all the nicotine, carbon monoxide (which takes the place of oxygen in your blood), sticky tar, and over 4,000 other chemicals, include arsenic, lead, and formaldehyde. Your lungs send that entire gunk out into the rest of your body. The result of all these toxins can:

- Increase your risk of cancer and not just lung cancer. Your poisoned blood flows through all your organs, so you are also at higher risk for bladder and cervical cancer.
- Raise your blood pressure, which increases your risk of a stroke or heart attack.
- Slow blood flow. This is especially important when you are having surgery because reduced blood flow can slow healing of surgical (and other) wounds.

Our goal is to help you return to your normal everyday life and the activities you enjoy. Quitting smoking will help the healing process work the way it should. We can't stress enough how important it is for your body to get enough oxygen and avoid all of the unhealthy ingredients that enter your bloodstream every time you smoke a cigarette.

Quitting smoking is tough

Most people know about the terrible health risks associated with smoking. In fact, about 70% of people who smoke wish they could quit.

It's hard. But there are new programs, treatments, and support resources to make it easier and help you succeed in quitting. Please contact your primary care doctor for help as soon as possible.

Questions?

American Lung Association Tobacco Quit-Line *1-800-LUNG-USA (1-800-586-4872)*;
www.lungusa.org

Preoperative Dietary Instructions

Getting your body ready for surgery and healing after surgery may increase your protein needs. You may also need extra minerals and vitamins, especially calcium, iron, phosphorous, and vitamins C and D.

- Protein helps your body heal itself and fight infection. Meat, fish, poultry, tofu, eggs, milk, cheese, and yogurt give your body protein as well as many vitamins and minerals. If your protein blood levels are particularly low, your surgeon may recommend oral protein shake supplements, such as Ensure.
- Calcium, phosphorous, and vitamin D are needed for healthy bones. Vitamin D fortified dairy products (milk, cheese, and yogurt) and tofu are your best sources of these nutrients.
- Iron is a key component of our blood. Meat, eggs, iron fortified cereals, and tofu are good sources of iron.
- Vitamin C includes citrus fruits (oranges, grapefruit, and tangerines), tomatoes, broccoli, sweet peppers, cantaloupe, papaya, and strawberries.

A nutritious diet is vital for your body to work at its best. Eating the right kinds of foods before and after surgery can help you heal better and feel stronger.

Eat a variety of foods each day.

Food groups	Suggested daily servings	What counts as a serving
Bread, cereals, rice, pasta, and other grain products Enriched whole grains products	6-11 servings from entire group (include several servings of whole-grain products daily).	1 slice of bread ½ hamburger bun or English muffin 1 small roll, biscuit or muffin 3 to 4 small or 2 large crackers ½ cup cooked cereal, rice or pasta 1 oz. of ready-to-eat breakfast cereal
Fruits Citrus, melon, berries, other fruit	2-3 servings from entire group.	Medium apple, banana, peach, pear, etc. 1 grapefruit half 1 melon wedge ¾ cup juice ½ cup berries ½ cup chopped, cooked or canned fruit ¼ cup dried fruit
Vegetables Dark-green leafy deep yellow Legumes (e.g. navy,	3-5 servings from entire group (include all types' regularity); use dark-green	¾ cup vegetable juice 1 cup leafy raw vegetables (e.g. spinach)

Food groups	Suggested daily servings	What counts as a serving
pinto and kidney beans, chickpeas) starchy & other vegetables	leafy vegetables and legumes several times a week.	½ cup non-leafy vegetables (cooked or chopped raw)
Meat, poultry, fish, dry beans, eggs and nuts	Amount should total 5-7 oz. of cooked lean meat, poultry, or fish each day.	Count 1 egg; ½ cup cooked dried beans, peas or seeds; 3 oz. tofu; and 2 Tbsp. peanut butter as 1 oz. of meat
Milk, yogurt, and cheese	2-3 servings from entire group.	1 cup of milk 8 oz. of yogurt 1½ oz. of natural cheese 2 oz. of processed cheese
Fats, oils, sweets, and alcoholic beverages	Use sparingly. Use unsaturated vegetable oils and margarines that list a liquid as the first ingredient on the label. If you drink alcoholic beverages, do so in moderation.	1 Tbsp. mayonnaise or dressing 1 tsp butter or margarine 2 Tbsp. sour cream or cream cheese 1 tsp. sugar, jam, or jelly 1–12 oz. soda ½ cup sherbet or gelatin 1 oz. candy 1 tsp salt 1 oz. (about 14) potato chips 1 Tbsp. catsup, mustard, steak sauce or soy sauce

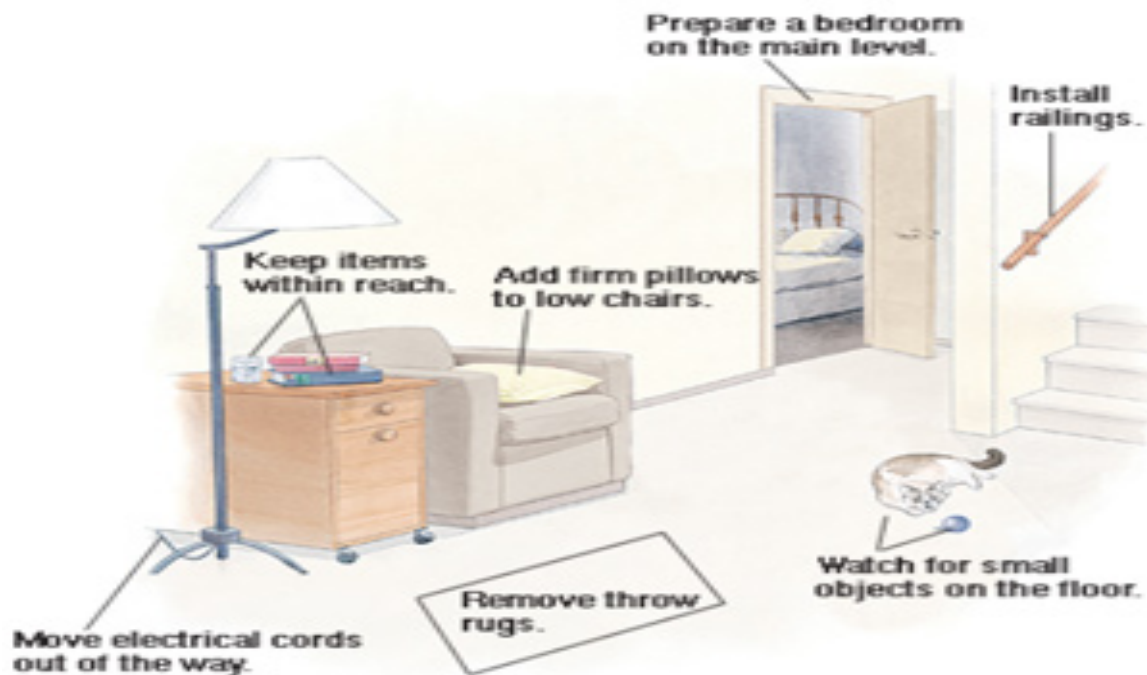
Home Preparation and Safety

It's best to prepare your home in advance of your surgery, and make any necessary change or arrangements in advance so that everything is ready when you return home after surgery. In most cases, patients can go home same day or one day after joint replacement.

You and your health care team will assess how well you can care for yourself at home. Your occupational therapist will teach you the skills needed for daily living with your new knee. You may need friends, family, or a home health aide to help with chores and errands, on a short- or long-term basis.

Remember there's no place like home

General home safety

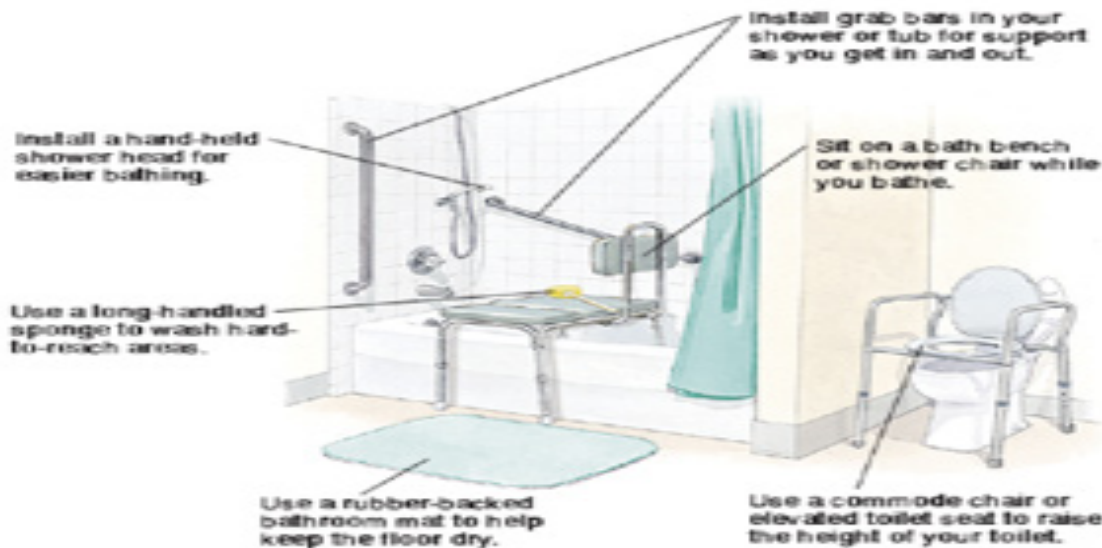


Make sure your house is free of hazards before you return. Ask friends or family to help you rearrange rooms as needed.

- Remove throw rugs to prevent slipping or tripping on them.
- Check for tripping hazards like electrical cords, small objects on the floor, or obstacles that might be in your way while walking and recuperating.
- Install a rail along at least one side of staircases.

- Prepare meal list, Place foods at an accessible level. Store foods and other supplies between waist and shoulder level. This makes it easier to reach things without straining.
- Stock up on foods that are easy to prepare, and other items you'll need during recovery. Prepare food in advance, if possible.
- If you don't already have one, buy or borrow a portable land line phone and/or a cell phone and keep it within easy reach.
- Ask your doctor whether you need to limit using stairs. If you do, and you normally sleep upstairs, prepare a bedroom on the main living level.
- Make sure rooms are well lit.
- Watch for pets -- they can move quickly and get underfoot. Make arrangements for their care if necessary.
- Add firm pillows to any low chair to make it easier to sit down and get up.

Bathroom safety



You may need to adjust your bathroom to make it safer and easier to use. Your occupational therapist can help you choose the right equipment. He or she will also teach you to bathe, dress, and sit more easily in the bathroom.

- Prepare bathing area with hygiene supplies and hand grips, if possible.
- Stock up on toiletries.
- Use dressing and bathing equipment and follow precautions while washing and dressing.
- Use rubber-backed bath mats in front of the toilet, sink, shower stall and other areas to help keep the floor dry and prevent slipping.
- Sit on a shower chair while you wash up or shower.
- Have someone assist you the first time you use the shower — and for as long as you feel the need for help getting in and out of the shower.

- Use a commode chair or elevated toilet seat to raise the height of your toilet. And be sure you have hand- rails. If your knee is bending well without discomfort you may not need the elevated seat.

Preventing Surgical Site Infections

When you have a surgical procedure, including joint replacement, there is the risk of infection at the surgical site. This section tells you more about surgical site infections: what we do to prevent them; how they are treated if they do occur; and what you can do to keep infection away.

Risk factors for surgical site infection

- Are you an older adult?
- Are a smoker?
- Have a weakened immune system?
- Have a serious health problem, such as diabetes?
- Don't eat enough healthy food?
- Are very overweight?

What you can do to help prevent infection

- Be sure to follow the preoperative instructions given to you by your surgeon or other member of Baystate's Total Joint Replacement Care team - for example, you will be asked to wash with a special antibacterial soap the evening before and morning of your operation.
- If you smoke, quit or cut down. This Patient Information Kit includes a Quit Smoking section.
- Lose weight. Obesity significantly increases your risk of infection.
- Avoid getting cuts or scrapes near your incision; call your surgeon with any questions.
- Make sure your diabetes is as well controlled as possible.
- Take antibiotics ONLY when told to do so by a health care provider. Unnecessary use of these medications can build up resistance and create germs that are harder to kill.
- Be sure health care workers clean their hands thoroughly before and after caring for you; don't be afraid to remind them if you don't see them do it.
- Eat healthy meals after surgery
- Be sure to follow all the incision care instructions given to you by your doctor or nurse.

What we do at Baystate Medical Center to help prevent infection

Prior to your procedure, the surgeon and the operating room staff will scrub their hands and arms with antiseptic soap. They will wear "space" suits, scrub suits, masks, caps, shoe covers, and surgical gloves. You will be fully covered with a surgical drape (a large sterile sheet) except for the area where incisions will be made, which will be carefully cleaned with an antiseptic solution.

The operating room itself has special air filters and positive pressure airflow to prevent unfiltered air (that might have germs, microorganisms, and other pollutants) from entering the room. Once the procedure is finished, the surgical team will close the wound area with surgical glue or staples if necessary.

You may also have a drain placed at your incision site. This helps reduce swelling and fluid collection, decrease pain, and reduce the risk of infection. The drain will be removed the next day.

After surgery, your closed wound will be covered with a sterile waterproof dressing; this dressing will remain on for 7-14 days then your incision will be open to the air. Your care team will monitor your body temperature, blood pressure and pain control, give IV fluids, and if you are a diabetic watch your blood sugar, as a normal range promotes healing.

What to look for and when to call your doctor

- Wound drainage or seepage that stains your clothes or the dressing more than five days after surgery.
- Increased redness and swelling around the incision. If you think your surgical incision site may be infected, call your doctor immediately.
- Please note that infections can appear any time from hours, weeks, months, or even many years after surgery.

If you have any questions about surgical incision site infections, please ask any of the nurses or other clinicians on your Total Joint Replacement Care team.

Day of Surgery Instructions

The information below can help assist you prepare for your surgery. It includes very important details, so please read it carefully, and don't hesitate to ask us if you have any questions.

Please follow all instructions.

These instructions are for your safety.

Eating and drinking

- Do not eat any solid food after midnight the day before your surgery; you may drink clear liquids up to 6 hours before your surgery. Take only the medications you are told to take at your pre-op visit on the morning of surgery.
- Do not smoke cigarettes on the morning of your surgery.
- Do not chew gum on the morning of your surgery.
- Do not eat candy on the morning of your surgery.
- Do not receive communion on the morning of your surgery.

Clothing, make-up, and jewelry

- Wear comfortable, loose-fitting clothing, especially if you will be going home the same day after your surgery. The hospital will provide you with a patient gown for surgery.
- Do not wear any makeup or nail polish. We must be able to see your fingernails, eyelids, and toenails to check for changes in circulation.
- Do not wear jewelry. Remove wedding rings and all body piercings. No Exceptions

Bathing

Bathing is very important prior to surgery. Shower the night before surgery and the morning of your surgery, using the antibacterial soap provided.

Chlorhexidine solution wash procedure:

- Lay out clean, freshly-washed clothes to put on after your shower
- You will need to use chlorhexidine solution (we will provide this for you), one clean washcloth, and one clean towel.
- Wash and rinse your hair first using your normal shampoo. Make sure you completely rinse the shampoo from your hair and body.
- Shower with chlorhexidine solution (red liquid antibacterial soap we will provide for you).
- Lather your entire body from the neck down only. Never use the chlorhexidine solution on your hair, face or genitals (private areas).
- Once you have completed the wash, step back into the running water and rinse the solution completely off your skin, using water only.
- Do not wash with regular soap after you have used the chlorhexidine solution.
- Pat yourself dry with a clean dry towel. Do not apply any powders, deodorants, lotions, or perfumes. (Deodorant use is fine on days prior to surgery, but please do not wear on day of surgery).

- When you are in the hospital you will wash your operative leg with a special antibacterial sponge. Remove one chlorhexidine solution sponge from the package and wet it enough to produce lather. Throw away the plastic nail pick that is imbedded in the sponge. Gently wash your leg for about three minutes and focus on the knee area where the incisions will be located. Avoid scrubbing your skin hard. Rinse off this soap and pat dry. This will be done the morning of surgery at the hospital.
- You may wash hands after each bathroom use before your surgery, but don't wash any other areas of your body with regular soap after the chlorhexidine solution wash.

Guests

We try to maintain privacy for all of our patients. You are allowed one family member to go with you to the prep area and be with you until you go in for surgery. While you are in the operating room, your loved ones may wait or go home and come back when you return to your floor. Your surgeon will call your family while you are recovering. It is best to make other arrangements for small children and not bring them with you.

Smoking

We maintain a non-smoking facility for the health and comfort of all patients. You will not be allowed to smoke at any time you are a patient.

If you become ill prior to surgery

If you become ill or develop a cold or flu prior to your surgical appointment, please call your surgeon. The surgeon may decide to reschedule your surgery to reduce your risk of complications. This is an elective surgery so you need to be healthy.

What to bring to the hospital:

- DO NOT bring any medication (pills) into the hospital. You may bring eye drops, inhalers.
- DO NOT bring your C-PAP or BI-PAP machines or mask.
- Personal care items for bathing, oral hygiene, or other daily hygiene items.
- Loose-fitting comfortable clothing.
- Supportive, comfortable shoes for walking.
- Bathrobe or other button-on lounge wear as desired.
- Items for entertainment such as I-pad, cell phone, laptop. You may also want to bring books or other reading material.
- List of phone numbers for easy access.
- Total Joint education book for reference

Anesthesia

You will meet your anesthesiologist on the day of surgery. They will review with you the plan for anesthesia and you will sign the consent for the type of anesthesia that will be used.

Spinal with Sedation

A spinal block is a very common type of anesthesia used to numb the lower part of the body. With a spinal block, the anesthesiologist puts numbing medicine into the spinal fluid but not the spine itself. He or she may also give you some medicine to help you relax. You will usually either sit up or lie on your side for the block. After the block is in place, the anesthesiologist will give you medicine to make you sleepy. You will be completely asleep but breathing on your own without the need for a breathing tube. You and your anesthesiologist can discuss how much or how little sedation you want. Regardless of the level of sedation, the anesthesiologist will monitor you throughout the surgery. In addition to numbing your legs during the surgery, a spinal block may help with pain relief long after surgery although the numbness usually wears off after 2 or 3 hours.

General Anesthesia

General anesthesia makes you completely unconscious for the surgery. Even though we call it “sleep,” general anesthesia is really like a coma. Your anesthesiologist will record your vital signs before you go to sleep. You will be given a mask with oxygen to breathe. The anesthesiologist will give you medicine through your IV to begin the anesthesia and will insert a breathing tube after you are under general anesthesia. The anesthesiologist will continue to give you anesthetic medicine, either through the IV or in the gas you breathe, the whole time you are in surgery. When the surgery is over, you will stop receiving anesthesia and you will wake up. The anesthesiologist will carefully monitor you throughout the entire surgery.

Adductor Canal Block

To reduce your pain after surgery, your anesthesiologist will perform a one-time nerve block using a local anesthetic into the upper thigh of the knee you are having surgery on. This is called an adductor canal block. As a result, the front of your thigh down through your knee may feel numb after the nerve block and will help with pain control.

After Surgery

Your health care team will monitor your progress as you wake from surgery. They will use support equipment to help you recover and to keep you both safe and comfortable. Be sure to let them know how you feel and how well your pain is controlled.

A physical therapy (PT) professional will visit you soon after surgery — in most cases, the same day as your surgery. They, or your nurse, will get you up and walking around to the extent your surgeon and other team members deem safe. Walking will get your blood circulation moving to all parts of your body. Your PT professional will also show you some exercises you will need to know and perform to assist in your recovery.

You will also be visited soon after surgery by an occupational therapist to instruct you about and help you with your ADL (activities of daily life) needs. These can include activities such as getting in and out of bed and using the bathroom.

You will also have a visit the day after your surgery by a case management professional to discuss your discharge plans.

Special tubes and machines help you recover after surgery. They may include:

- Intravenous (IV) line to provide needed fluids and medications.
- A drain in your knee to decrease excess fluid and reduce swelling.
- Ice pack to reduce inflammation of the knee joint.
- Compression sleeves to prevent blood clots by gently squeezing your leg then releasing.

Managing pain

Periarticular Injection

Your surgeon will inject a combination of local anesthetic and other medicines around your knee at the end of surgery to help with pain relief.

Combinations of local anesthetic blocks and pain medications that you take by mouth form the foundation of multimodal analgesia and can give excellent pain relief after total knee replacement.

When pain is controlled, you'll walk sooner and recover faster. So be honest about how much pain you feel. And don't be afraid to ask for pain medication when you need it. Your nurse will

start you on pain medication by mouth. Tell your nurse if the medications don't reduce pain or if you suddenly feel worse.

Post-surgical coughing and deep breathing

This is strongly encouraged. Deep coughing helps keep your lungs clear. If you've had surgery, it will help you get better faster. It may also prevent a lung infection. If you have lung problems, it will help you breathe better. Here's what to do:

1. Breathe out normally.
2. Breathe in slowly and deeply through your nose. Then breathe out fully through your mouth.
3. Repeat.
4. Take a third deep breath. Fill your lungs as much as you can.
5. Cough two or three times in a row. Try to push all of the air out of your lungs as you cough.
6. Then relax and breathe normally.
7. Repeat as directed.

Using an incentive spirometer

An incentive spirometer is a device that helps you do deep breathing exercises. These exercises will help you breathe better and improve the function of your lungs. Deep breathing expands the lungs, aids circulation, and helps prevent pneumonia. The incentive spirometer provides a way for you to take an active part in your recovery.



How to use your incentive spirometer:

1. Inhale normally. Relax and breathe out.
2. Place your lips tightly around the mouthpiece.
3. Make sure the device is upright and not tilted.
4. Breathe in slowly and deeply. Fill your lungs with as much air as you can. If you inhale too quickly, the spirometer may make a noise. If you hear this noise, inhale more slowly.
5. Hold your breath long enough to keep the balls (or disk) raised for at least three seconds. Rest for a few seconds and repeat steps 1 through 5 at least 10 times.
6. Perform this exercise every hour while you're awake or as often as your doctor instructs.

Exercises after surgery

Drop and Dangle

For most patients recovering from extensive joint surgery, attempts at joint motion cause pain and, as a result, the patient fails to move the joint. The lack of joint movement causes the tissue around the joint to become stiff and form scar tissue, resulting in a joint with limited range of motion. It can take months of physical therapy to recover that motion.

Sitting Knee Flexion Exercise

Sit on side of bed or chair with pillow under knees and legs dangling. Straighten operated leg, using foot of good leg for support, let it drop by gravity, then force it to bend, using other foot to exert pressure on top of the ankle to limits of pain tolerance; repeat.



Movement with assistance from healthy leg

Sitting on the chair or bed, let operated leg dangle with minimal or no support, and tighten hamstring muscles. Use opposite foot to gradually bend the operated leg by exerting pressure on the TOP of the ankle.



Compression sleeves

Compression sleeves can help you recover from surgery and speed the recovery process. Bed rest during your hospital stay can cause the blood flow in your legs to slow. This can lead to blood clots, which often cause permanent damage to the veins.

The compression sleeves help prevent these clots by intermittently squeezing your leg muscles. This pumps the blood out of your legs and lessens the risk of clot formation.

The sleeves should fit snugly but not too tight. You should be able to slide two fingers between the sleeve and your leg just below the knee. If the sleeves are too loose or tight, ask your nurse or care associate to adjust them.

Deep Vein Thrombosis (DVT)

A deep vein thrombosis (DVT) is a blood clot that forms in a deep vein. If not treated, a part of the clot (embolus) can travel to the lungs and cause a life-threatening complication. Over time, the clot can also permanently damage leg veins. To protect your health, DVT must be treated right away.

Risk factors

Anyone can get deep vein thrombosis. But the following risk factors make the condition more likely to occur:

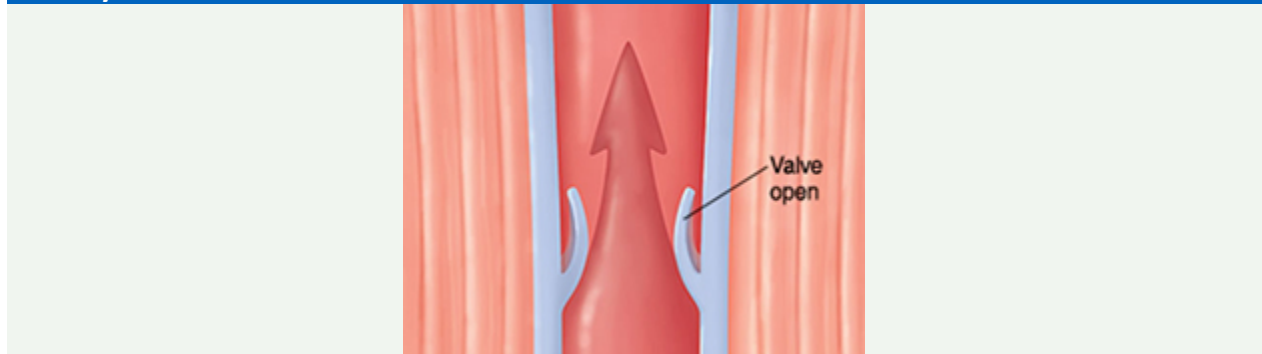
- Being inactive for a long period (such as when you're bedridden due to illness or surgery).
- Injury to a vein.
- Family history of blood clots.
- Recent surgery.
- Other factors such as age, pregnancy, having another vein problem, or being overweight can also put you at higher risk of DVT.

Common symptoms

DVT does not always cause obvious symptoms. If you do have symptoms, they usually occur suddenly and in only one leg. Symptoms can include:

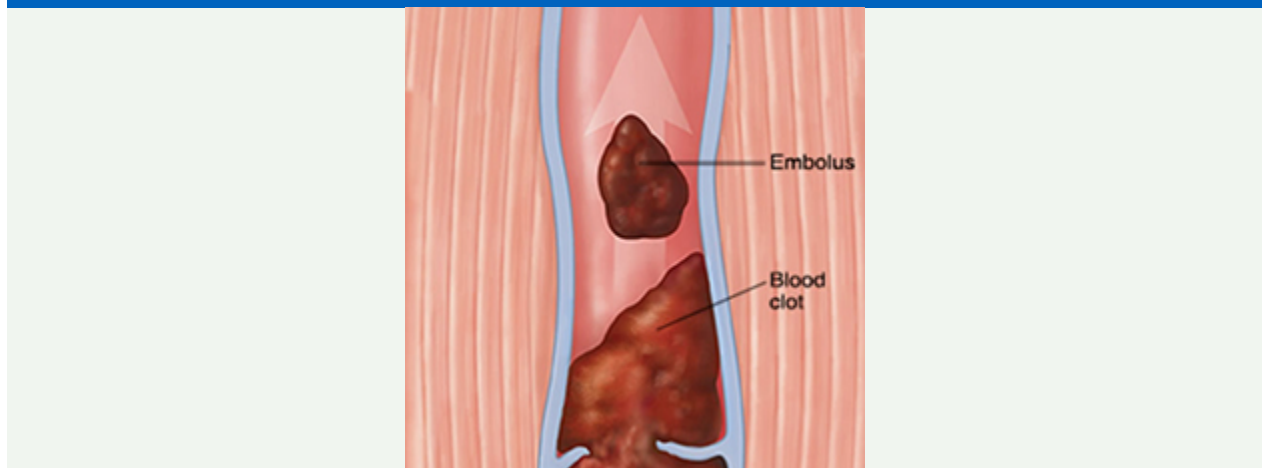
- Pain, especially deep in the muscle.
- Swelling.
- Aching or tenderness.
- Red or warm skin.

Healthy vein



When a muscle contracts, the valve opens and blood is squeezed up the vein toward the heart.

Vein with DVT



When blood moves slowly in a vein, a clot can form and a part of the clot can break off and travel in the bloodstream.

How DVT develops

The leg muscles have deep veins. These help carry blood from the legs to the heart. When leg muscles contract and relax, blood is squeezed up the veins toward the heart. One-way valves located along the walls of the veins help keep blood moving upward. When blood moves too slowly or not at all, it can pool in the veins. This makes a clot more likely to form.

Diagnosing DVT

Your doctor will evaluate your veins to see if you have a blood clot. This includes taking a health history and performing a physical exam. During the health history, tell the doctor if your family has a history of vein problems and if you've had any blood clots, leg injuries, recent surgical procedures, or pregnancies.

Special instruction if you take anticoagulants or blood thinners

If you take anticoagulants:

- Be sure to take the right amount of medicine at the right time each day as specified by your physician.
- You may need blood test on a regular basis. Follow your health care provider's schedule for having these tests.
- Before taking any new medications, even non-prescription drugs, contact your health care provider. Most medicines, including some antibiotics, can interfere with or increase the effects of blood thinners.
- Tell all of your health care providers, such as dentists or podiatrists, that you are taking blood thinners.
- Do not take aspirin or anti-inflammatory medication unless specifically prescribed by your doctor while on blood thinner medications.

If you are taking blood thinner, call your health care provider right away if you have any of the following symptoms:

- A feeling like you are going to faint.
- Dizziness.
- Severe headaches.
- Severe stomach aches.
- Increased weakness.
- Red or brown urine.
- Unusual bruising.
- Red or black bowel movements.
- Cuts that do not stop bleeding.
- Coughing up blood.
- Unexpected bleeding from any part of your body.

Important note:

If you have been diagnosed with DVT and you suddenly start having shortness of breath or chest pains, or you begin coughing up blood, the clot may have broken loose and moved to your lungs. Call 911 or your local emergency service right away. This can be a life-threatening emergency.

How you can help prevent DVT

If you have had a DVT or are at risk for having a DVT, you can help prevent it by following these guidelines:

- Avoid sitting for long periods of time. When you are traveling, move your feet and legs often. Go for short walks if possible.
- Avoid crossing your legs and ankles when you sit.
- Get regular exercise, according to your health care provider's advice.
- Leg exercises are important to prevent pooling of blood in the legs. If you have had major surgery, walking as soon as possible after the surgery will help lower your risk of having DVT. If you are unable to exercise, ask your health care provider if you should have someone massage your lower legs and move your legs through some range of motion exercises. If you are currently being treated for DVT, do not massage your legs. Massage could cause the blood clot to break loose.
- If you are scheduled for surgery, ask your surgeon what you can do to prevent blood clots after surgery.
- Stop smoking. Smoking increases the risk of blood clots.

Leg Swelling

After a total knee replacement, most patients develop swelling in their operative leg. The swelling can vary from patient to patient; it can be the entire leg, knee, ankle or foot and is sometimes accompanied by bruising behind or around the knee and sometimes include the entire leg. This may take a few weeks to resolve.

To prevent or decrease leg/ankle swelling:

- Keep your leg elevated as much as possible and use ice often! Lie down on your back and prop your foot up on some pillows so that your leg is higher than the level of your heart.
- Keep moving your ankle, too; this helps keep fluid moving instead of allowing it to pool in your leg. It is also not uncommon to have visible bruising around the knee or calf.
- During the day, try not to remain sitting or lying down for more than 45 minutes. Set alarms to remind yourself if needed. Get up, walk (use your walker/crutches/cane) into another room, do one or two of your exercises (the stair lunge is a good one!), get yourself something to drink, and then go back and elevate/ice that leg!

Pain Management

This section is designed to help you understand and manage your pain while you are at Baystate Medical Center and after you go home to recover and return to your normal, everyday activities.

Talking about your pain

While you are in the hospital, your team will frequently ask you about your pain levels. Pain can change over time — even from hour to hour. Your health care providers need to know how you are feeling so they can help you alleviate pain.

Why you need to tell us about your pain

Don't try to "tough it out." If something hurts, say so. Your care provider may ask you to describe how bad your pain is on a scale of zero to 10, with 10 being the worst pain. Tell them where and when it hurts. The more they know about your pain, the better they can treat it.

Here are some words you can use to describe the type and level of pain you are experiencing:

- aching
- throbbing
- sharp
- burning
- shooting
- tightness
- pressure
- numbing
- constant
- dull

If, at any time, your pain gets worse, be sure to tell your health care provider. Tell them how bad the pain is, how often you feel it, and if the medicine or other recommended treatment is not working.

Non-medicine pain management

While you will likely use medicine right after surgery — and perhaps for a short time following your procedure, there are other effective ways to manage pain. It all depends on the cause, type, and amount of pain you have. You might try:

- Taking your mind off the pain by reading, watching TV or movies, and talking with friends and family members.
- Physical therapy — your health care provider may prescribe a PT plan for you. This can include a variety of activities and treatments.

- New technology to block pain through electrical stimulation.
- Massage.
- Hypnosis.
- Exercise.
- Cold compress.
- Reiki
- Relaxation (guided relaxation)

Medicines

Medicines are one of the ways health care providers can alleviate your pain. If you are having major surgery it is likely you will need prescription medicine for some time during your recovery period.

Opiates are commonly prescribed for moderate to severe pain following surgery. Your physician may prescribe one of several types of pain medications for a period of time after your surgery. Side effects of narcotics may include: nausea, vomiting, anorexia, constipation, cramps, light-headedness, dizziness, sedation, and sometimes urinary retention. Let your care provider know if you have trouble with any of these.

Your surgeon does not routinely prescribe long-acting opioids. You will not receive more than a short-course of short acting opioids.

Precautions: You should not drive, work, or consume alcohol while taking opioid pain medications.

Refill instructions

- Plan ahead and allow 24 hours for refills. Do not wait until you're completely out of your medication to call in for a refill.
- **Some prescriptions, including narcotics, cannot be called into a pharmacy and must be picked up in person at the physician's office.**
- Please remember that requests for medication refills should be called in to the office during normal office hours of 8:30 am to 4:30 pm.
- Please have the name of the medication, dosage, and the pharmacy name and phone number when you call.
- A member of the NEOS staff will contact you only if your medication will not be refilled.
- If your medication has not been refilled after 24 hours please notify the office.

For refills, please call 413-785-4666.

Opioid Prescription Safety Tips

- Take your medications only as directed by your doctor. DO NOT share your medications with anyone - sharing your prescriptions is illegal and could endanger other people's health.
- If you are taking benzodiazepines (Xanax, Valium, etc.), consult with your prescriber on the management of these medications with opioids. Combining opioids with these medications can slow or stop breathing. DO NOT mix opioid medications with alcohol. Avoid driving or operating heavy machinery until you know how your medications affect you.
- Store your prescriptions securely in their original containers. Keep them out of sight and out of children's reach, preferably in a locked cabinet or high shelf.
- Unused medications are best disposed of at a take back facility/pharmacy
- Dispose of medications immediately after your pain symptoms have resolved.

MISUSE AND OVERDOSE RISKS

When misused, prescription medications may be just as dangerous as illegal drugs. Misusing your medications can have serious consequences including lack of energy, inability to concentrate, physical weakness, nausea, vomiting, and suppressed breathing to the point of death. If you have not taken your medications as directed and you experience any of these symptoms, please go immediately to an emergency room. If you feel that you have taken more medication than what was prescribed, seek immediate medical attention. Misusing your medications may also lead to addiction – it is imperative that you take your medications only as prescribed. As you recover from surgery your opioid use should decrease. If severe pain persists or your opioid requirements increase, please notify your surgeon.

FOR YOUR SAFETY WE DO NOT ROUTINELY:

- Prescribe more than a short course of short-acting opioids.
- Refill lost stolen or destroyed prescriptions.

ADDITIONAL RESOURCES:

- National Institution on Drug Abuse: <http://www.drugabuse.gov>
- Substance Abuse & Mental Health Services Administration:
<http://oas.samhsa.gov/prescription.htm>
- FDA recommendations: <http://www.fda.gov/Drugs/ResourcesForYou/default.htm>

Short-Term Opioid Use and Tapering

Some patients who have been taking opioid medications for two weeks or less may be able to stop without feeling withdrawal. While this is unique to every patient, in most instances, the body has not developed tolerance during that time frame. For patients who have been taking more than six tablets per day, tapering use down by one tablet every 2 to 3 days is recommended (see a detailed tapering plan for these instances below). A tapering plan may be beneficial for patients who have been taking opioid medications multiple times a day for more than two weeks but less than six months

- Maintain the same interval between doses and instead cut down the every 3 to 4 days. For example, if you are taking eight tablets per day, start by lowering one tablet every 3 to 4 days until you are down to one tablet every six hours.
- Then, every 3 to 4 days, eliminate one tablet from the daily regimen and increase the interval to one tablet every eight hours, then one every 12 hours and, finally, one tablet daily. The last dose that should be eliminated is the evening dose.

Change Dose, then Interval

Regardless of whether you are tapering down from a long-term or short-term opioid use, it is important to change the dose first and the interval second. This is to maintain consistent levels of medication your body. If you just stop all of your opioids this could lead to increased withdrawal symptoms and make tapering much harder. Recommend that the interval between doses remain the same and lower the dose itself until it cannot be lowered any further.

Once that final lowered dose is taken, it becomes appropriate to start increasing the interval between doses.

Questions

If you have any questions, remember we are here to help you. Please call us at 413-794-8179.

Stool Softener (Docusate Calcium Oral Capsule)

Docusate is stool softener. It helps prevent constipation and straining or discomfort associated with hard or dry stools. This medicine may be used for other purposes; ask your health care provider or pharmacist if you have questions.

What should I tell my health care provider before I take this medicine?

They need to know if you have any of these conditions:

- Nausea or vomiting.
- Severe constipation.
- Stomach pain.
- Sudden change in bowel habit lasting more than 2 weeks.
- An unusual or allergic reaction to docusate, other medicines, foods, dyes, or preservatives.

How to take this medicine?

- Follow the directions on the label.
- Take this medicine by mouth with a glass of water.
- Take your doses at regular intervals.
- Do not take your medicine more often than directed.
- Drink plenty of water while taking this medicine. Drinking water helps decrease constipation.
- Do not use for more than one week without advice from your doctor or health care professional. If your constipation returns, check with your doctor or health care professional.

Over dosage: If you think you have taken too much of this medicine contact a poison control center or emergency room at once.

If you miss a dose, take it as soon as you can. If it is almost time for your next dose, take only that dose. Do not take double or extra doses.

This medicine may interact with mineral oil. Other interactions are possible. Give your health care provider a list of all the medicines, herbs, non-prescription drugs, or dietary supplements you use. Also tell them if you smoke, drink alcohol, or use illegal drugs as some may interact with your medicine.

Possible side effects of this medicine

Report to your doctor or health care professional as soon as possible if you experience:

- Any rectal bleeding, or if you do not have a bowel movement after use. These could be signs of a more serious condition.
- Allergic reactions like skin rash
- Itching or hives
- Swelling of the face, lips, or tongue

Other side effects

These usually do not require medical attention, but report to your doctor or health care professional if they continue or are bothersome:

- Diarrhea
- Stomach cramps
- Throat irritation

This list may not describe all possible side effects. Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

Important notes

- This medicine is only for you. Do not share this medicine with others.
- Keep out of the reach of children.
- Store at room temperature between 15 and 30 °C (59 and 86°F). Keep container tightly closed
- Dispose of any unused medicine properly after the expiration date.

Blood Thinners

Aspirin

You will take full strength buffered aspirin (325mg) twice a day for one month to prevent blood clots. However, depending on certain risk factors and/or past medical history, some patients will receive a prescription for Warfarin or Eliquis.

Apixaban (Eliquis)

Apixaban (Eliquis) is a prescription medicine used to reduce the risk of forming a blood clot in the legs and lungs of people who have just had hip or knee replacement surgery. This medication can increase your risk of bleeding.

While you are taking ELIQUIS you could notice that it takes longer for bleeding to stop as well as it can cause you to bruise more easily.

Do NOT STOP TAKING this medicine without talking to the doctor who prescribes it.

This drug is NOT for use in people with mechanical heart valves. If you have questions about or if you are experiencing side effects of Apixaban (Eliquis®), call your doctor.

HOW and WHEN to take apixaban (Eliquis®) :

- Take your dose every morning and every night with or without food. Follow the instructions provided by your doctor. This medicine is available in different pill sizes and shapes. Be sure you know your pill size, shape and dose instructions.

- o The dose you take could be different depending on age, weight, kidney function and other drugs you may take.

Missed Doses:

- If you miss a dose, take it as soon as you remember on the same day. Tell your doctor if you miss any doses. Take your usual dose on the next day. Do not take two doses at once. Missing doses increases the risk of having a blood clot.

SIDE EFFECTS of apixaban (Eliquis®)

- This medicine may cause bleeding. Bleeding from cuts may take longer to stop. Bruising may happen more easily. This is normal.
- Other side effects may include: skin rash or an allergic reaction. Tell your doctor about any side effects that bother you.

CALL YOUR DOCTOR or get emergency medical help by dialing 911 if you have:

- Symptoms of an allergic reaction such as chest pain or tightness, swelling in your face or tongue, trouble breathing or wheezing, or feeling dizzy or faint
- Blood coming from your mouth, nose or gums
- Blood or blood clots in your sputum (spit) after coughing
- For females, bleeding from your vagina or menstrual flow heavier than normal
- Vomit that is bloody or looks like “coffee grounds”
- Red or black (tarry) stool
- Pink or dark brown urine
- Bruising that is worse than usual or happens for no reason at all
- Unusual headache or difficulty in thinking or speaking
- Any weakness or numbness on your face, arms or legs
- Unexpected pain and/or swelling (headache or joint pain for example)
- A bad fall or injury, especially if you hit your head

IMPORTANT THINGS to know when taking apixaban (Eliquis®)

- Tell all your doctors, dentists, and other health care providers that you take it.
- If you need surgery, a medical or dental procedure (especially spinal or epidural), talk to the doctor who ordered apixaban. You may need to stop this medicine for a short time.
- When filling a new prescription or taking over-the-counter medicines or herbal products ask your pharmacist to make sure that it is safe to take with apixaban -- some medicines may affect

the way this medicine works and some medicines taken with apixaban may increase your risk of bleeding.

- Keep a list of all your medicines, including prescription and over-the-counter medicines and herbal products, to share with your doctors and other health care providers.
- Severe falls or injuries can cause unseen bleeding. Be careful when using sharp tools or knives. Consider using an electric razor. Take special care brushing or flossing your teeth and report any injuries, bruising, or red spots on the skin to your doctor or health care provider.
- This medicine should not be used in pregnancy as it may cause bleeding in an unborn child. Women of childbearing age should use effective birth control while taking this medicine. This medicine is not recommended for use in patients who are breastfeeding.

Coumadin (Warfarin)

Coumadin (warfarin) helps keep your blood from clotting. But it also increases your risk for bleeding. Because of this, it must be taken exactly as directed. You also need to protect yourself from injury.

How to take medicine

- Take this medicine by mouth with a glass of water. Follow the directions on the prescription label. You can take this medicine with or without food.
- Take Coumadin at the same time each day.
- If you miss a dose, take it as soon as you remember — unless it's almost time for your next dose. If so, skip the missed dose. Do not take a double dose. It is important not to miss a dose. If you miss a dose, call your health care provider.
- Do not stop taking except on the advice of your doctor or health care professional.
- Go for your blood (PT/INR) tests as often as directed. Note that diet and medication can affect your PT/INR level.
- Don't take any other medications without checking with your health care provider first. This includes aspirin, vitamins, and herbal and other dietary supplements.
- Tell all health care providers that you take Coumadin. It's also a good idea to carry a medical ID card.
- Use a soft toothbrush when brushing your teeth, and an electric razor when shaving to help avoid abrasions or bleeding.
- Don't go barefoot and don't trim corns or calluses yourself.

Over dosage: If you think you have taken too much of this medicine contact a poison control center or go to the emergency room at once.

Keep your diet steady

Keep your diet pretty much the same each day to keep vitamin K levels relatively the same each day. Vitamin K helps your blood clot. So eating foods that contain vitamin K can affect the way Coumadin works. You don't need to avoid foods that have vitamin K, but you do need to keep the amount of them you eat steady from day to day.

If you change your diet for any reason, such as an illness or to lose weight, be sure to tell your doctor.

Examples of foods high in vitamin K are: asparagus, avocado, broccoli, cabbage, kale, spinach, and some other leafy green vegetables. Oils, such as soybean, canola, and olive oils, are also high in vitamin K.

Other food products can affect the way Coumadin works in your body:

- Cranberries and cranberry juice, fish oil supplements, garlic, ginger, licorice, and turmeric may affect blood clotting.
- Herbs used in herbal teas or supplements can also affect blood clotting. Keep the amount of herbal teas and supplements you use steady.
- Alcohol can increase the effect of Coumadin in your body.

Talk with your health care provider if you have concerns about these or other food products and their effects on Coumadin.

Possible interactions

Do not take this medicine with any of the following medications:

- Agents that prevent or dissolve blood clots
- Aspirin or other salicylates
- St. John's Wart
- Red yeast rice

Give your health care provider a list of all the medicines, herbs, non-prescription drugs, or dietary supplements you use. Also tell them if you smoke, drink alcohol, or use illegal drugs, as some may interact with your medicine.

Special instructions

- Visit your doctor or health care professional for regular checks on your progress. You will need to have your blood checked regularly to make sure you are getting the right dose of this medicine. When you first start taking this medicine, these tests are done often. Once the correct dose is determined and you take your medicine properly, these tests can be done less often.
- While you are taking this medicine, carry an identification card with your name, the name and dose of medicine(s) being used, and the name and phone number of your doctor or health care professional or person to contact in an emergency.
- You should discuss your diet with your doctor or health care professional. Many foods contain high amounts of vitamin K, which can interfere with the effect of this medicine. Your doctor or health care professional may want you to limit your intake of foods that contain vitamin K.

- This medicine can cause birth defects or bleeding in an unborn child. Women of childbearing age should use effective birth control while taking this medicine. If a woman becomes pregnant while taking this medicine, she should discuss the potential risks and her options with her health care provider.
- Avoid sports and activities that might cause injury while you are using this medicine. Severe falls or injuries can cause unseen bleeding. Be careful when using sharp tools or knives. Consider using an electric razor. Take special care brushing or flossing your teeth and report any injuries, bruising, or red spots on the skin to your doctor or health care provider.
- If you have an illness that causes vomiting, diarrhea, or fever for more than a few days, contact your doctor. Also check with your doctor if you are unable to eat for several days. These problems can change the effect of this medicine.
- Even after you stop taking this medicine it takes several days before your body recovers its normal ability to clot blood. Ask your doctor or health care professional how long you need to be careful. If you are going to have surgery or dental work, tell your doctor or health care professional that you have been taking this medicine.

Potential side effects

Report to your doctor or healthcare professional these side effects as soon as possible if you experience:

- Back or stomach pain
- Chest pain or fast or irregular heartbeat
- Difficulty breathing or talking, wheezing
- Dizziness
- Fever or chills
- Headaches
- Heavy menstrual bleeding or vaginal bleeding
- Nausea, vomiting
- Painful, blue, or purple toes
- Prolonged bleeding from cuts
- Signs and symptoms of bleeding such as bloody or black, tarry stools, red or dark-brown urine, spitting up blood or brown material that looks like coffee grounds, red spots on the skin, unusual bruising or bleeding from the eye, gums, or nose
- Skin rash, itching or skin damage
- Unusual swelling or sudden weight gain
- Unusually weak or tired
- Yellowing of skin or eyes

This list may not describe all possible side effects. Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

Important notes

- Keep out of the reach of children.
- Store medication at room temperature between 15 and 30°C (59 and 86°F). Keep container tightly closed. Dispose of any unused medicine properly after the expiration date.
- This medicine is only for you. Do not share this medicine with others.

Leaving the Hospital

On the day you are going to leave the hospital, members of your team will provide you with a discharge sheet with specific instructions. They will review your sheet as well as other important information much of which is in this patient kit. Some of the topics your team will cover include the following:

Activity

- Follow walking instructions as specified on your discharge form.
- Keep a pillow or rolled up towel under your heel as much as possible. **DO NOT PLACE A PILLOW OR ANYTHING ELSE UNDER YOUR KNEE.** The pillow should be under your ankle/heel.
- Do your exercises 4 times a day
- You may shower right after surgery as your dressing is waterproof. Keep your incision line clean and dry.
- Keep your dressing over on incision for 7-14 days. You will be instructed when to remove the dressing and leave it open to the air. Do not soak your leg in any water (bath, hot tub, lake, pool) until cleared by your doctor. This can cause an infection.
- Continue your total knee exercise program as instructed.
- Do not drive until cleared by your doctor.

Nutrition

- Eat a well-balanced diet based on the five basic food groups: grains; fat-free or low-fat dairy; lean meats/poultry/fish/beans/nuts/legumes; fruits and 100% fruit juices; and vegetables.
- Use of pain medication and prolonged rest may cause constipation. Drink 6–8 glasses of water daily and eat high fiber foods (whole grains, raw fruits and vegetables). Please refer to the sheet about Coumadin (in the *Medicine* section) and plan to adhere to the dietary restrictions noted for Coumadin users.

Long-term restrictions to preserve your new joint

- Consult your physician before running, jumping, or performing any other high-impact activities.
- Maintain your normal weight.
- Before any invasive procedures (e.g., dental work, minor surgery, or surgery) call your doctor to see if you need an antibiotic prescription.

Smoking cessation

Smoking is dangerous to your health and there is evidence it will increase the amount of time needed to recover from your surgery. If you smoke, please quit. Choose a date and make a plan.

When to call your surgeon immediately

- If your incision becomes red or swollen; has drainage; or your temperature spikes greater than 101.5°F.
- If you have sudden increase in pain, unrelieved by pain medication.

Medications

- If you are on Coumadin or Eliquis take it daily as ordered. See page 29 for more information about Coumadin.
- We recommend that you check with your doctor before taking a new prescription or over the counter medications unless already instructed.
- You should try non-narcotic medication, such as Tylenol, and reserve narcotic pain medication prescribed for more severe pain.
- Prescription pain medication will be given to you when you leave. As surgical pain decreases in the days after surgery, you should begin to wean off the prescription pain medication by decreasing the dose and the frequency of use. Typically this will occur over the first few days to weeks after surgery. See page 26 for further information on tapering pain medication.
- Conservative use of narcotic pain medication is advised.
- Pain medication should be taken with food to decrease nausea.
- Pain medication may also cause constipation. It may take several days to have a bowel movement. Anesthesia and pain medication often cause constipation. Drink plenty of fluids and eat whole grains, fruits, and vegetables. A stool softener or laxative can help bowel function return to normal.
- Questions regarding your home medications should be directed to your primary care physician.

Ice pack

You may need to put an ice pack on your knee for 20 minutes if you have tenderness or soreness or if the knee feels warmer to the touch after exercising.

Post-Surgery Mobility

It's perfectly normal to feel imbalance after your knee surgery. Depending upon your condition, we will recommend a walker, crutches, or cane — or even all three — at various stages of your recovery.

Walking

Continue to use your assistive device until you see your doctor. Stand tall and put as much weight on your leg as instructed when using crutches, a walker or cane.

Using a walker



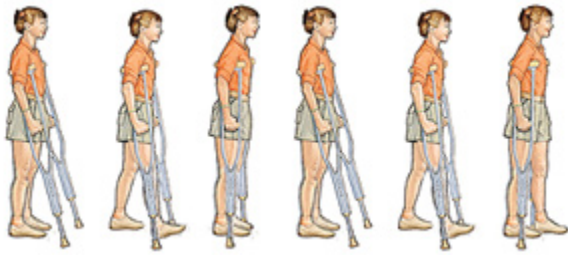
1. Roll the walker (lift it if you're using an un-wheeled walker). Move it forward about 12 inches.
2. If you have an injured leg, a new joint, or a weaker side, step forward with that foot first. Use the walker to help you keep your balance as you take the step.
3. Bring your other foot forward to the center of the walker.
4. If your walker has wheels, you may do a step-through gait.

Walking with a cane



1. Hold your cane on the side of your unoperated leg.
2. Move the cane as you step with your operated leg.

Using crutches



1. Move crutches forward together, lean your weight forward as you push down on the handgrips. Your weight should be on your hands and your non-operative, stronger leg, not supported by your armpits.
2. Let your body swing through, landing on the non-operative (stronger) leg.
3. Advance the crutches forward again.

TIP: The crutch and the operative leg should move together, or move crutches forward, then the operative leg, and then step down with the non-operative leg.

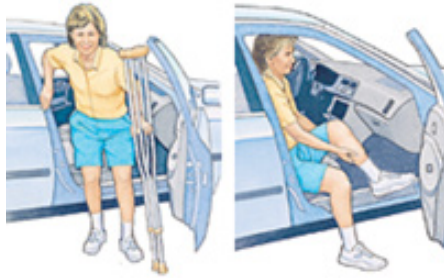
Standing up and sitting down



1. Back up until you feel the chair with the back of your leg. Hold both crutches in the hand on the affected side.
2. Grab the armrest or the side of the chair with your free hand.
3. Lower yourself onto the front of the chair, then slide back.
4. To get up, reverse the three steps.

TIP: Find sturdy, high-seated chairs with arms. If you must use a chair that swivels or has wheels, back it against something stable before you sit down.

Getting into cars



1. Follow the first step above for sitting in a chair. Use the doorjamb or the dashboard for support as you lower yourself. Watch your head. Don't hold on to the car door, or it may close on you.
2. With your hands, lift your affected leg into the car. Or, use your unaffected leg to hook your affected leg behind the ankle and lift it in.

TIP: If the car seat is too low for getting in and out of the car easily, place a comfortable cushion on the car seat.

Going up and down stairs

1. Going up: Step up with your non-operative leg and bring operative leg and crutches up next.
2. Going down: Put crutches on lower step and move operative leg down first, follow with the non-operative leg.
3. Use an elevator if one is available.
4. Have someone guard you as you learn to use stairs. A guard stands below you. He or she holds your belt to assist you if you lose your balance.

TIP: Use a backpack to carry items while on crutches or a walker.

What to Expect the Month After Surgery

You'll apply the same movement skills you learned in the hospital or physical rehabilitation center to your exercise program at home. You may also continue with your therapist. Sticking to your exercise program brings big rewards. With your knee in shape, you'll walk more easily and return to an active life sooner.

Maintaining your exercise program

Exercising is the only way to regain your strength and range of motion. With continued exercise, you may gain even more strength and range of motion than you had before surgery. That's because pre-surgical pain may have limited your movement.

Make exercise part of your daily routine. Continue meeting with your physical therapist as directed. Add exercises as your therapist advises; this may include using a stationary bike.

Walking in stride

Repeated walking helps build a more normal, comfortable stride. It also keeps you in shape and helps prevent blood clots. Begin by taking three or four short walks every day. Gradually increase how far, how long, and how many times a day you walk.

After your walk, lie down, elevate your knee, and ice it to reduce swelling. Your doctor or PT will instruct you when and where to use your walker, crutches, or cane. He or she will also let you know when you can stop using them.

Controlling swelling

Swelling is common after total knee replacement. It may worsen after exercise. To help control swelling, follow these steps.

Ice your knee



- Ice is absolutely essential for pain management in knee replacement surgery recovery. Ice can reduce pain in combination with medication, and with less severe pain, it can be used on its own.
- Continue using ice packs or some form of cold therapy to help reduce swelling

- You may use an ice machine if you have one or regular ice.
- Elevate your legs and rest while you are icing.
- Wrap an ice pack in a thin towel, and then place it on your knee.
- Don't place ice directly on the skin.
- Don't use ice for more than 20 minutes at a time.

Elevate your leg

Elevate your leg above your heart. Ask your health care provider about safe positions to do this.

Do ankle pumps

Continue doing ankle pumps as described above. They help reduce swelling, improve circulation, and prevent blood clots.

Home care

Take pain medication as directed by your doctor. Do your exercises at least 4 times a day.

Sitting and sleeping

- Sit in chairs with arms. The arms make it easier for you to stand up or sit down.
- Don't sit for more than 30–45 minutes at one time while awake
- Nap if you are tired, but don't stay in bed all day.

Moving safely

The key to successful recovery is movement — walking and exercising your knee as directed by your doctor.

- Until your balance, flexibility, and strength improve, use a cane, crutches, a walker, or handrails — or ask someone to help you during daily activities.
- Walk up and down stairs with support. Try one step at a time — lead with the non-operative leg and follow with the operative leg. Use the railing if possible.
- Don't drive before your first post-op visit with your surgeon. Don't drive while you are taking narcotic pain medication.

Other precautions

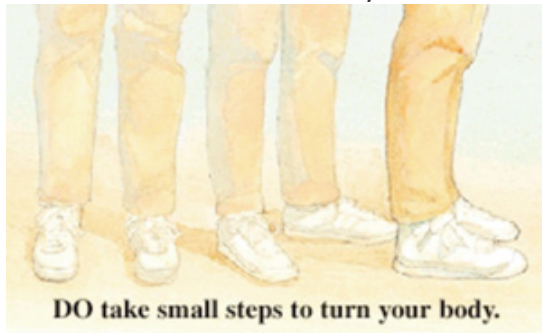
- Keep your hands free by using a backpack, fanny pack, apron, or pockets to carry things.
- Tell your dentist that you have an artificial joint and take antibiotics as prescribed before any dental work.
- Tell all your health care providers about your artificial joint before any medical procedure.
- Maintain a healthy weight. Get help to lose any extra pounds. Added body weight puts stress on the knee.
- Take any medication you may have been given after surgery. This may include blood-thinning medications to prevent blood clots or antibiotics to prevent infection.

When to return to normal activities

- Most regular daily activities may be resumed 4–6 weeks after surgery. These activities might include: walking, riding a bike, hiking, and driving.
- It is always best to consult with your physician before starting any aggressive activities — or if you are not sure whether your activity is considered “normal” or “aggressive” for your condition.
- There are no sex restrictions after a knee replacement. You can have sex as soon as your pain allows. Comfort and range of motion may be your biggest issues.
- It is normal for the outside of your knee to feel numb for the first couple of months after surgery.

Keeping your knee healthy

You can keep your knee healthy by knowing the right moves and avoiding the wrong ones. Some activities could harm your artificial knee and keep motion permanently restricted.



1. Position your knee comfortably as you go about daily activities.
2. Continue to exercise and walk every day.
3. Use an ice pack if your knee begins to swell or feels tender.
4. Avoid twisting your knee. Turn your entire body instead.
5. Avoid jumping. It could loosen your new knee joint.
6. Avoid forced movements, such as bending your knee too far.

Follow-up care

Your orthopedic surgeon will schedule follow-up appointments to make sure that your knee is healing correctly. Use this time to ask any questions you have about your recovery or activities.

When to seek medical attention

Call 911 right away if you have:

- Chest pain.
- Shortness of breath.
- Any pain or tenderness in your calf.
- Otherwise, call your doctor immediately if you have:
 - Fever of 101.5°F or higher; or shaking chills.
 - Stiffness or inability to move the knee.
 - Increased swelling in your leg.
 - Increased redness, tenderness, or swelling in or around the knee incision.
 - Drainage from the knee incision.

Exercises Before and After Surgery

Please note: Stop any exercise that causes sharp or increased knee pain, dizziness, shortness of breath, or chest pain.

Exercise routine before surgery

Doing these exercises **before** your knee replacement can help speed your recovery after surgery. Unless you're told otherwise, start by doing each exercise 5–10 times (reps) twice a day (2 sets) with both legs. As you get stronger, slowly increase the number of reps and sets.

Ankle pumps



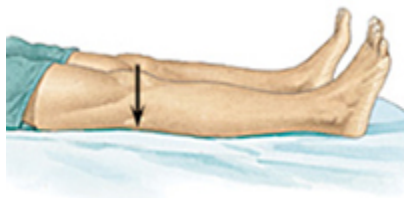
1. Ankle pumps can help prevent circulation problems, such as blood clots.
2. Lie on your back on a firm surface with your legs out straight.
3. Point and flex your feet.

Straight leg raises



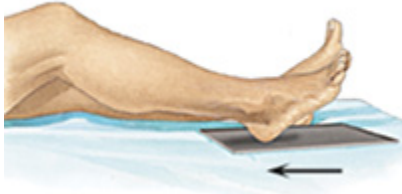
1. Lie in bed. Bend one leg. Keep the other leg straight on the bed.
2. Lift your straight leg as high as you comfortably can, but not higher than 12 inches.
3. Hold for a few seconds. Slowly lower the leg.

Quadriceps sets



1. Lie on your back on a firm surface with your legs out straight.
2. Tighten the muscle at the front of the thigh as you press the back of your knee down toward the bed.
3. Hold for a few seconds. Relax the leg.

Heel slides



1. Lie down or sit with your legs stretched out in front of you. Put a plastic bag or cookie sheet under one foot to help it slide.
2. Slide the heel toward your buttocks while keeping it on the bed. Move it as far as you comfortably can.
3. Hold for a few seconds, and then slide your heel back.

Short-arc knee extensions



1. Roll up several towels into a roll 6–8 inches thick.
2. Lie in bed. Put the rolled-up towels under one knee. Bend the other knee.
3. Keeping your knee on the roll of towels, lift your foot to straighten the knee.
4. Hold for a few seconds. Slowly lower the foot.

Hip abduction



1. Start by lying down on a firm surface, with the legs out straight, keeping the toes pointed to the ceiling.
2. Slide the operative leg out to the side and back to the starting position.
3. Hold for 5 seconds and then relax.

In addition to performing the ankle pumps, straight leg raises, quadriceps sets, heel slides, and short-arc knee extensions described above, add:

Sitting knee flexion



1. While sitting in a chair with your foot on the floor, bend your operative knee as much as possible.
2. You may use a rocking chair or a rolling pin or ball under your foot to help with this exercise.

Exercise routine to prepare for walker or crutch use

These exercises build upper body strength. This can help you when you're using a walker or crutches to get around after surgery. Your physical therapist (PT) or surgeon may advise you to use weights to make the exercises more effective. Follow your health care provider's instructions.

Start by doing each exercise 5–10 times (reps) twice a day (2 sets). As you get stronger, slowly increase the number of reps and sets.

Seated press-ups



1. Sit in a sturdy, non-tip chair with armrests.
2. With palms flat on the armrests, press hands down to lift buttocks from the chair. Hold for 3–5 seconds.
3. Bend your elbows to slowly ease back down.

4.

Bicep curls



1. Sit up straight. Keep your elbow close to your body and your wrist straight.
2. Bend your arm, moving your hand up to your shoulder, then lower slowly. Start by using your fist as weight.
3. Do a set with each arm. Depending upon your strength, you can use dumbbells.

Tri-cep curls



1. Sit, leaning forward from the waist.
2. Bend your elbow so that your forearm is parallel to the floor. Then straighten your elbow as you extend your arm behind you.
3. Start with a very light dumbbell and increase weight as you get stronger. Do a set with each arm.

Important Reminders

- Exercise slowly on a firm surface.
- Repeat each exercise ten times.
- Do each exercise twice a day.
- Do not hold your breath with any exercises.

Frequently Asked Questions

Every patient is different. Please be sure to ask any questions you may have about your surgery and recovery. There are no silly questions. We want you to feel that you have all the information you need to be ready for your surgery — and taking care of yourself afterward.

Q: Will I be able to go directly home after surgery?

A: The vast majority of patients can go directly HOME after surgery. You will need a family member or friend to help with daily tasks around your home for the first 1 to 2 weeks after surgery. In the past, some patients would go to rehab facilities to recover from surgery. However, today most patients are doing well enough that most insurance companies will not pay for rehab facility stays.

Q: Will I have to take blood thinners after surgery?

A: To prevent blood clots, you will be placed on blood thinners after surgery. For most patients this normally involves Aspirin 325mg 1 tablet, twice a day for 4 weeks after surgery. If you are currently on a blood thinner or have a history of blood clots or cannot take aspirin you will be given another medication, Coumadin/Warfarin or Eliquis.

Q: What equipment will I need at home after my surgery?

- Walker -You will be given prescriptions for these items at your Pre-op Appointment
- Cane
- Optional: 3 in one commode
- Optional: Shower/tub chair (so you can sit while you shower/bathe)
- Optional: Long-handled grabber (to help reach things on the floor or in high places)

Q: When should I call the doctor's office?

A: If you notice any redness, increased drainage, elevated temperature, calf pain, or shortness of breath, call NEOS at 413-785-4666.

Q: Do I need antibiotics for dental work?

A: You may need to take an antibiotic before any dental work for the rest of your life. We ask that no dental work be done for the first 12 weeks after surgery.

Q: What may I do for activity following surgery?

A: You may walk as much as tolerated, using pain and swelling as your guide. You should limit the number of times you climb stairs, as this may increase your pain and swelling. Swimming and stationary biking are good forms of exercise. When using a stationary bike, you will initially need to make the seat high and the resistance low. Use crutches or a walker for support when walking, and advance to a cane when your therapist advises that it is safe to do so.

Q: When may I swim?

A: Swimming may resume at six weeks after surgery after clearance is received by your surgeon. This will be discussed when you come to the office for your follow-up appointment.

Q: Will I have permanent restrictions following my knee replacement?

A:.

You should not do high-impact activities such as jumping or running. These types of activities can cause your new knee to wear out sooner or become loose. Many people find kneeling uncomfortable

Q: Where do I go for physical therapy?

A: We will work with you for basic activities (such as getting in and out of the car or walking up and down stairs) before you are discharged. At that time you will also be given a referral for physical therapy, either at New England Orthopedics Physical Therapy, Baystate Rehabilitation Care or another physical therapy practice you choose.

Q: When can I drive?

A: You may not drive any vehicle while you are taking narcotic pain medications. You be moving well prior to considering driving (typically 3-4 weeks after surgery).

Q: When can I shower?

A: Any time after surgery is fine as your dressing is waterproof and once it comes off you can get your incision wet.

Q: What is the average time out of work?

A: You may usually return to work approximately 6-8 weeks after surgery. If you have a sedentary job, you may be able to return sooner. Limitations and precautions in the workplace will be discussed prior to your return to work.

Q: When may I fly in a plane?

A: You may fly two months following surgery. You must sit in an aisle seat and make arrangements for luggage and connections. Blood clots are a concern so you MUST do ankle pumps every 15 minutes and walk about the plane every 30 minutes. Make sure you have your precautions card with you to let security know you have a joint replacement. An implant card will be given to you at your pre-op appointment.

Q: If I have questions, who do I call?

A: For any questions or concerns here is a list of numbers for your convenience:

- Call your surgeon 413-785-4666.
- Call Baystate Medical Center's Orthopedic Unit 413-794-3460.
- For questions about prescriptions, call NEOS at 413-785-4666.
- To confirm or change an appointment, please call 413-785-4666

NEOS Total Joint Navigator at **413-233-1158**