

Hip and Knee Replacement Guide

Northwestern Medicine Lake Forest Hospital
Joint Replacement Center





Welcome to Northwestern Medicine

Welcome to Northwestern Medicine Lake Forest Hospital Joint Replacement Center. By now you have met with an orthopaedic surgeon* and may have set a date for your joint replacement surgery.

Our team at Lake Forest Hospital is committed to providing excellent care. Your safety and comfort are our primary concern. We want your stay to be a positive and healing experience.

From this point on, your orthopaedic care team† will be with you every step of the way. We look forward to giving you excellent care and service.

Before your surgery, please do 2 important things: Read this book and attend a Pre-operative Joint Replacement Class. The information in this book, plus much more, will be covered in detail during the class.

If you have questions about your surgery schedule, appointments, medication or information in this guide, please call your surgeon's office.

If you have any other questions, please call the joint replacement care coordinator at 847.53.JOINT (847.535.6468).

Knowing what to do before your surgery and what to expect afterwards can help you feel more comfortable. It may relieve any concerns you might have.

Again, welcome to Lake Forest Hospital. Your orthopaedic care team looks forward to helping make your joint replacement journey a pleasant one.

*The content in this hip and knee replacement guide is not intended to be a substitute for professional medical advice and direction. This guide is always secondary to the advice and direction of your care team. Never disregard the professional medical advice from your care team or delay in seeking professional medical advice because of something you have read in this guide.

†In the spirit of keeping you well-informed, some of the physician(s) and/or individual(s) identified in this guide are neither agents nor employees of Northwestern Medicine or any of its affiliates. They have selected our facilities as places where they want to treat and care for their private patients.

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Getting started

Congratulations. You have taken the 1st step to regaining your active lifestyle.

You need to take a few more steps to ensure that you, your caregiver and your home are fully prepared for your joint replacement surgery and post-operative recovery.

Enhanced Recovery Program

Your orthopaedic care team at Lake Forest Hospital created an Enhanced Recovery Program (ERP) especially for you. It is designed to help you recover after surgery.

This program helps you prepare your body for surgery, recover quickly and safely, and return home as soon as possible after surgery.

The ERP helps you:

- Prepare for your joint replacement journey through pre-op education
- Keep your hospital stay short
- Create a pain management plan which minimizes narcotics
- Promote healing and circulation
- Encourage daily walking starting the day of surgery
- Prevent complications

Preparation for surgery checklist

During the next few days and weeks, you will need to:

- Call and register for the required Pre-operative Joint Replacement Class.
 - Select a support person (coach) to attend the pre-operative class with you. They should also help you at home after surgery.
 - Schedule your pre-operative and post-operative orthopaedic surgeon appointments.
 - Schedule your pre-operative medical evaluation appointment within 30 days of surgery.
 - Schedule your pre-operative labs and tests, as directed by your physician and pre-operative nurse.
 - Stop smoking the required 30-90 days prior to surgery based on your surgeon's instructions. Call 847.535.7647 (TTY: 711) for a smoking cessation appointment.
 - Schedule your dental examination, if directed by your orthopaedic surgeon.
 - Schedule your post-operative outpatient physical therapy appointments as directed by your orthopaedic surgeon.
 - Buy Hibiclens® soap and prepare for your pre-operative skin cleansing, as discussed in class.
 - Get the equipment you need, as discussed in class.
 - Prepare your home for recovery after surgery, as discussed in class (see page 14).
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Pre-operative Joint Replacement Class

We created this class and this book to help you and your family members better understand what to expect throughout joint replacement surgery. **Please bring this book with you to class.**

Steps to prepare for the pre-operative class

1. Register for the required Pre-operative Joint Replacement Class. Call 847.53.JOINT (847.535.6468) or visit nm.org/lfhjointclass. You will need to register for the class 2 to 6 weeks before your surgery.
2. Bring this book with you to class and to the hospital the day of your surgery.
3. Choose a family member or friend to be your support person (coach). Your coach should plan to attend the pre-operative class with you. Once you arrive home after surgery, your coach will need to be with you for at least the 1st week. During this time, you will need help with daily activities and meal preparation. Your coach will encourage and remind you to do your home physical therapy exercises. Also, you will need someone who can drive you home from the hospital and to your follow-up appointments.

If you cannot find a coach, please call 847.53.JOINT (847.535.6468) and ask to speak with the joint replacement care coordinator.

Online education programs

Before your surgery, you and your coach should watch the web-based programs your orthopaedic surgeon or joint replacement care coordinator assigns.



Your orthopaedic care team

Your care team will give you support and guidance throughout your joint replacement journey.

Your **orthopaedic surgeon** performs your joint replacement surgery. They will oversee your care throughout the surgical and rehabilitative process.

A **primary care physician** or **advanced practice provider** will help you prepare for surgery. They evaluate your health and determine if you are medically optimized for surgery. You may also be referred to see other medical specialists to complete your pre-operative medical optimization.

An **anesthesia physician** manages your sedation and pain control during the operation. They may place a nerve block in your leg and/or back before the operation to help control your pain. You will meet your anesthesiologist on the day of your surgery.

A **hospitalist** may follow you during your hospital stay to manage your overall medical care. This physician will collaborate with your surgeon and other specialists needed during your hospital stay.

The **physician assistant (PA)** or **nurse practitioner (NP)** works with your surgeon or hospitalist, and manages your care throughout the surgical and rehabilitative process. They will often help during your surgery.

The **joint replacement care coordinator** works with your entire orthopaedic care team to help coordinate your care. They will be available as a guide throughout your experience.

A **registered nurse (RN)** monitors you throughout your hospital stay and works with the other members of the orthopaedic care team. They will give you personalized daily care, help you with pain management, encourage mobility, and prepare you and your coach for your discharge.

A **patient care technician (PCT)** helps you with activities of daily living such as walking, toileting, bathing and positioning in bed while you are in the hospital.

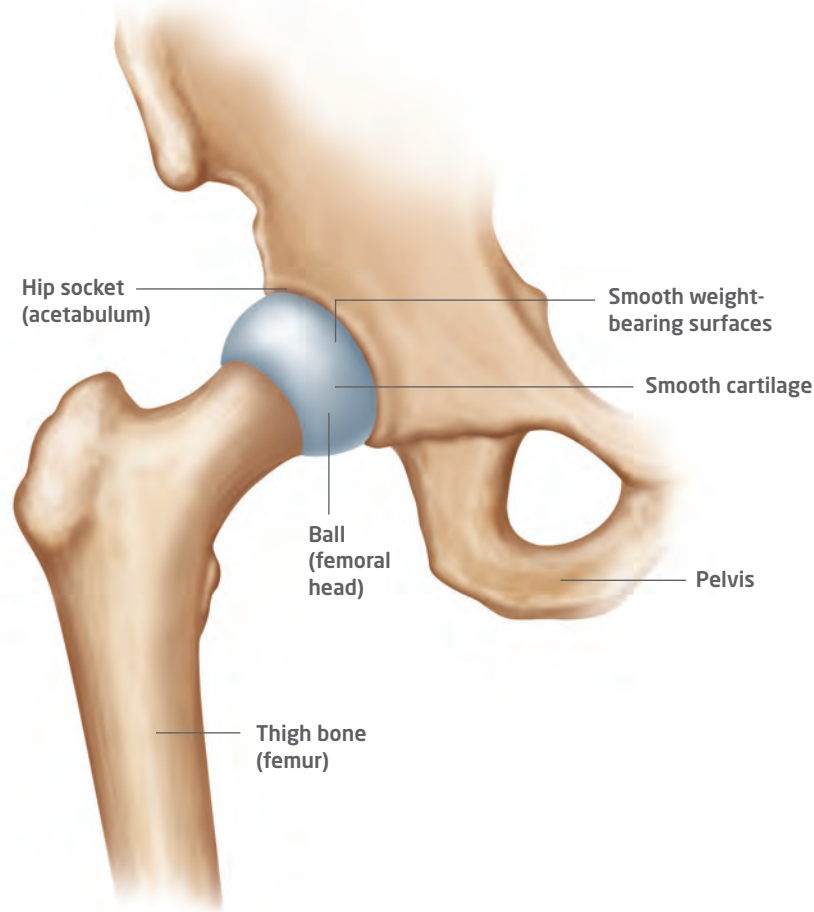
The **physical therapist (PT)/occupational therapist (OT)** works with your surgeon and develops a therapy plan that will guide your return to daily functional activities. They will train you and your coach in safe walking, exercises, transfer techniques, bathing, dressing and equipment use.

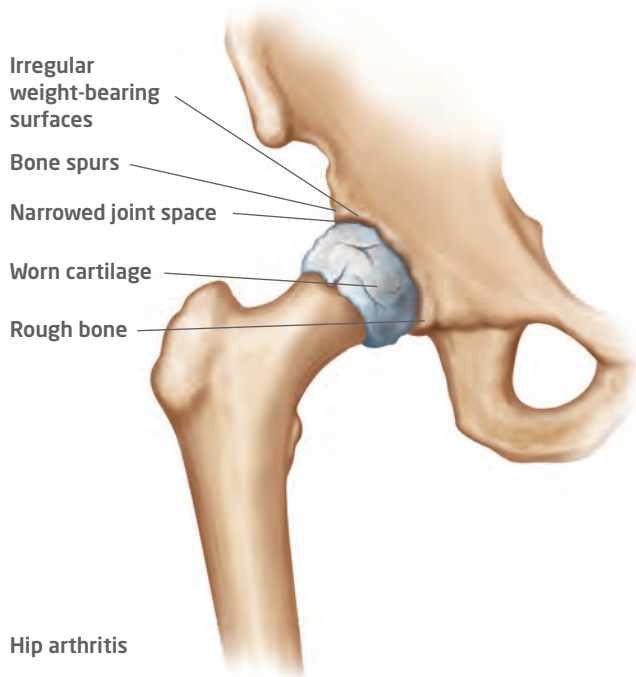
The **case manager (discharge planner)** works with your surgeon, therapist and you to determine the most appropriate discharge plan based on your recovery needs. They will help coordinate your discharge and answer your questions regarding your insurance coverage.

Hip anatomy

To better understand the process of hip replacement, it may be helpful to understand what a hip is and how it works.

Your hip is a ball-and-socket joint where the ball of your thigh bone (femur) fits into the hip socket (acetabulum). Cartilage lines the hip socket and cushions the bones, thereby allowing the joint to rotate smoothly with minimal friction.



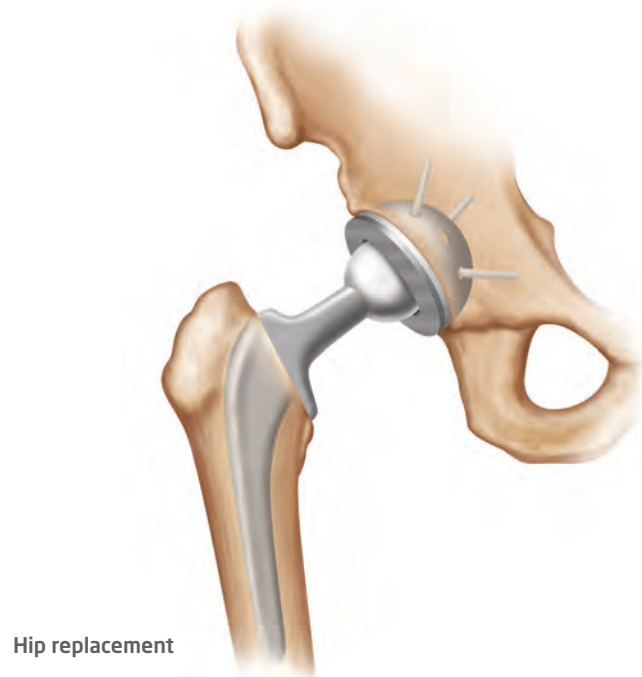


Hip arthritis

Arthritis of the hip is a disease that wears away the cartilage of the hip joint; it is the most common reason for a joint replacement. Without an adequate layer of cartilage, the ball and socket rub against each other, which is known as bone-on-bone arthritis. When this happens, the joint surface becomes pitted and rough. The result is pain and stiffness.

There are many different types of arthritis. Degenerative joint disease is 1 type of osteoarthritis. It is most common in people over age 50, but can occur at any age, especially if the joint was damaged earlier in life. Large weight-bearing joints such as the hip and knee are the most common joints affected.

Another type of arthritis is rheumatoid arthritis. This is a chronic disease that can attack many parts of the body, including the joints. In rheumatoid arthritis, the body's immune system attacks the joint surface and damages it.



Hip replacement

The purpose of hip replacement surgery is to remove the damaged and worn parts of the hip and replace them with artificial parts called a prosthesis (implant). This helps make the hip less painful. The prosthesis has the same basic parts as your own hip.

In most cases, the prosthesis will consist of 4 pieces:

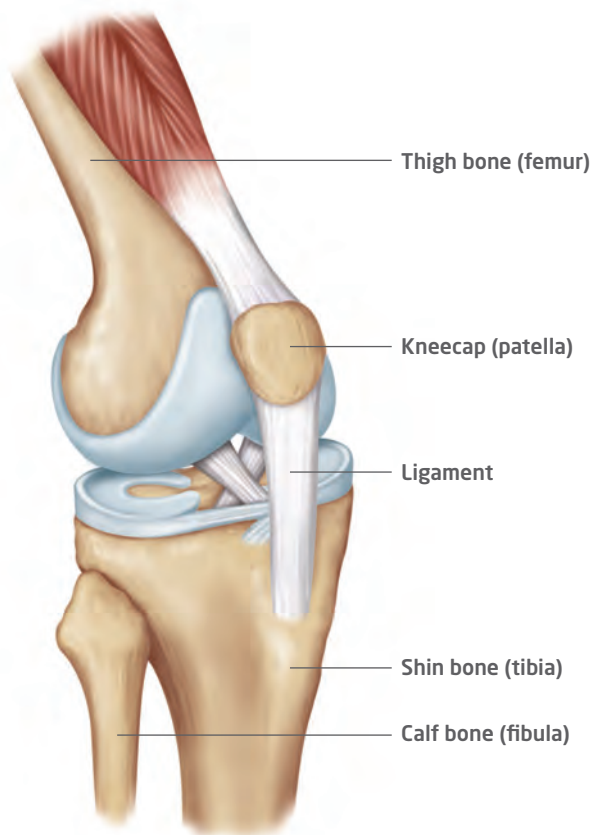
The **femoral stem** is a metal stem that your surgeon inserts into the thigh bone (femur). They will place a **ceramic or metal ball** on the stem. Together, these 2 pieces make up the **femoral component**.

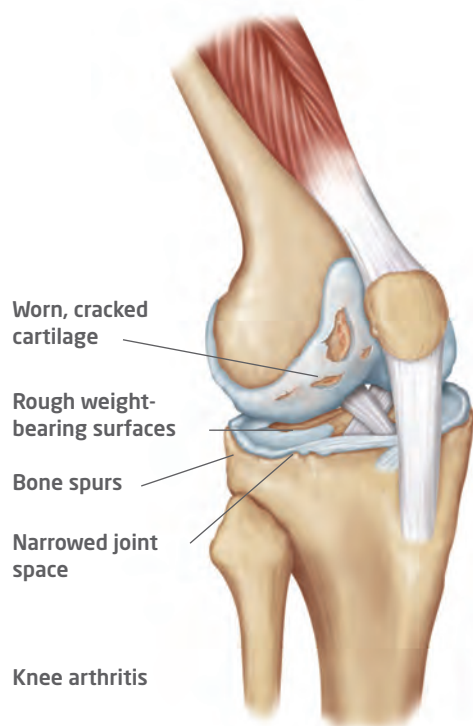
Your surgeon will insert a **metal cup** into the hip socket (acetabulum) in the pelvis. They will then place a **plastic liner** into the cup. Together, these 2 pieces make up the **acetabular component**.

Knee anatomy

To better understand the process of knee replacement, it may be helpful to read more about what a knee is and how it works.

The ability to walk depends on the specific way the thigh bone (femur) meets the shin bone (tibia). These bones are separated by cartilage that acts as a cushion and allows movement. In front of these bones, the kneecap (patella) glides in a groove and provides a round, protective shield. Much of the knee's stability and its main movements of bending and straightening depend on surrounding muscles and ligaments.



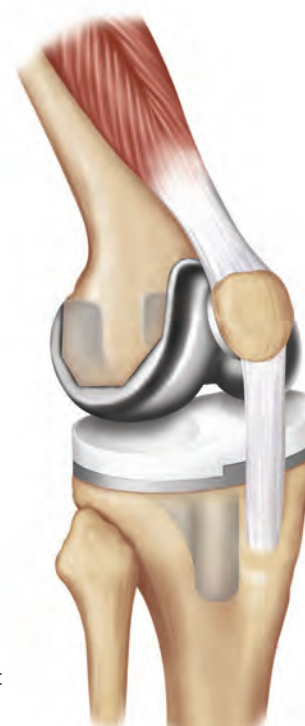


Knee arthritis

Arthritis of the knee is a disease that wears away the cartilage of the knee joint and is the most common reason for a joint replacement. Without an adequate layer of cartilage, the thigh bone (femur) and shin bone (tibia) rub against each other, which is known as bone-on-bone arthritis. When this happens, the joint surface becomes pitted and rough. The result is pain, stiffness and instability.

There are many different types of arthritis. One type is osteoarthritis, which is sometimes called degenerative joint disease. It is most common in people over age 50, but can occur at any age, especially if the joint was damaged earlier in life. Large weight-bearing joints such as the hip and knee are the most common joints affected by osteoarthritis.

Another type of arthritis is rheumatoid arthritis, which is a chronic disease that can attack many parts of the body, including the joints. In rheumatoid arthritis, the body's immune system attacks the joint surface and damages it.



Knee replacement

The purpose of knee replacement surgery is to remove the damaged and worn parts of the knee and replace them with artificial parts called a prosthesis (implant) that make the knee less painful. The prosthesis has the same basic parts as your own knee. In most cases, the prosthesis will consist of a:

Femoral component - metal that is placed on the end of the thigh bone (femur).

Tibial component - metal that is placed on the top of the shin bone (tibia).

Plastic disc liner - medical-grade plastic that is placed between the femoral and tibial components in order to provide cushioning.

Plastic kneecap button - in some cases, medical-grade plastic is placed on the back of your kneecap to prevent it from touching the metal. The front of your kneecap will remain in place as your natural bone.



Preparing for surgery

Joint replacement is an elective surgery so it is important that you have a full health evaluation before your surgery.

Pre-operative medical optimization evaluation and lab tests

Once you have confirmed your surgery date, you will schedule a pre-operative medical evaluation appointment. This appointment will occur either at the Lake Forest Hospital Pre-operative Clinic or your primary care physician's office. Your surgeon will give you directions regarding which location to go to. This appointment must occur within 30 days before your surgery.

During this visit you will:

Receive a physical exam and an anesthesia evaluation

Get lab tests

Get an electrocardiogram (EKG), if indicated

Receive referrals to specialists, if indicated

Review medications you need to temporarily stop, such as aspirin or other blood thinning medications and anti-inflammatory medications. These medications

tend to make your blood thinner and could cause more bleeding during surgery.

Discuss if you have a pre-existing medical condition that requires time-dependent medication that may impact your recovery

Dental care before surgery

Your surgeon may tell you to see a dentist before your joint replacement surgery. Any invasive dental work, including routine cleanings, cavity fillings, extractions, root canals or implant work, can introduce bacteria into the bloodstream. If your dentist tells you that you need to have any invasive dental work, contact your surgeon's office. Your surgeon may have instructions or guidelines for you to follow.

Infection prevention before surgery

Infection is a rare complication of joint replacement surgery. If you have any signs of infection prior to surgery, such as a temperature more than 100.4 degrees F, sore throat, flu symptoms, cuts, open sore, infected teeth, bladder infection or ear infection, tell your physician right away. We may need to delay surgery until you receive treatment.

If you have any symptoms of infection, flu or COVID-19 before surgery, tell your surgeon immediately.

Pre-operative skin cleansing

Before your surgery, you will do pre-operative skin cleansing with chlorhexidine gluconate 4% (Hibiclens) at home. This will reduce the chance of infection.

You will get instructions on how to complete the skin cleansing during the Pre-operative Joint Replacement Class and by the pre-operative nurse.

If you have any questions, please call the joint replacement care coordinator at 847.53.JOINT (847.535.6468) or pre-operative nursing at 847.535.6591 (TTY: 711).

Preparing your home

To reduce the risk of falls or injury after surgery, you can make some minor changes to your living spaces. It is important that you prepare now so that your home will be ready when you leave the hospital.

How to prepare your home for recovery

Think about the rooms where you will be after surgery; identify where you will walk, sit and lay.

Place frequently used kitchen, bedroom and bathroom items in easily accessible places such as on the countertop or tables; put items between waist level and shoulder height.

Get help to move furniture so that you have wide areas to walk safely with a walker.

Get help to remove furniture that may cause a fall, such as a rocking chair, glider, coffee table or ottoman. Do not use furniture that has casters or wheels.

Check hallways, stairs, rooms and traffic areas for potential tripping hazards such as loose carpeting. Remove all throw rugs.

Remove any obstructions, electrical cords or phone cords that may be in your traffic areas.



Remove any clutter on the stairs and verify that the stair railings are not loose.

Verify that there is appropriate lighting in the rooms and that lamp switches are within reach.

Place nightlights in hallways, bathrooms and bedrooms.

Put portable phones in rooms where you will spend most of your time such as your bedroom.

Choose a place to sit that has armrests and the ability to elevate your legs.

Add non-slip strips or a non-slip mat on the bottom of the tub or shower.

Clean the house.

Do your laundry and put it away.

Put clean linens on the bed the night before surgery.

Prepare meals and freeze them in individual portions.

Finish needed yardwork and arrange for someone to do yardwork after surgery.

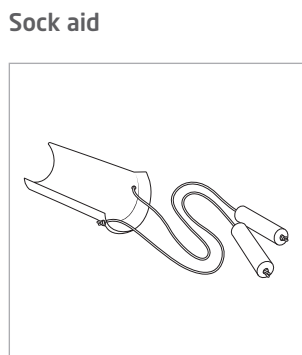
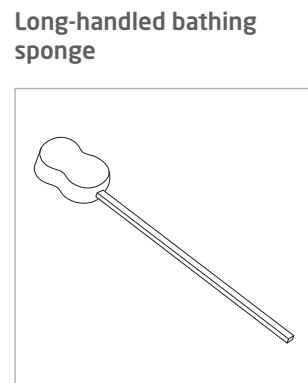
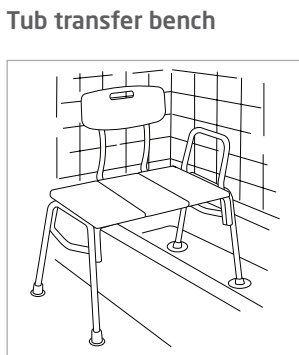
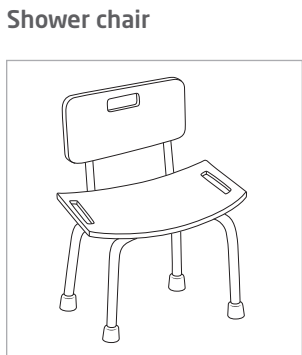
Complete pet care arrangements.

Arrange for someone to pick up your mail.

Adaptive equipment and assistive devices

You will learn about the various equipment options in the Pre-operative Joint Replacement Class. Your therapist may also make recommendations for you after surgery.

For your safety, you will need to get a front-wheeled rolling walker and a cane before surgery.



Your surgery time

A pre-operative nurse from surgery will call you in the afternoon on the business day before your surgery.

During this call, you will discuss:

Your surgery time

What time you need to arrive at the hospital

What time to stop eating and drinking

Questions you have regarding medication(s) you should take, if any, the morning of surgery (including insulin) and any medication(s) you should bring with you to the hospital

If you will not be at home and have given prior permission, the pre-operative nurse will leave a message with your instructions.



If you miss our call or you have questions, please call 847.535.6591 (TTY: 711) between 2 pm and 4 pm, Monday through Friday.

What to bring to the hospital

As you prepare for your short hospital stay, we recommend that you pack as lightly as possible. Keep your packed items in the car. Have your family or friends bring the items to you once you are in your room after recovery.

Suggested items to bring to the hospital:

Photo ID, insurance and Medicare cards

List of medications, including over-the-counter medications, vitamins and herbal supplements

A list of your allergies (medication, food and environmental) and a description of your allergic reactions to each

Toiletries: toothbrush, toothpaste, comb, brush, deodorant, lotion, denture case

CPAP mask, tubing and settings (if you use one at night when you sleep)

Eyeglasses and case

Hearing aids

Underwear, socks, loose comfortable pants or shorts, easy on/off shirt and shoes to wear during therapy (can be the same clothes you wear to the hospital the day of surgery)

This book and any materials your surgeon gives you

The "do not" list:

Do not wear makeup.

Do not wear contacts.

Do not bring cash or personal items such as jewelry or items of great value.

Do not bring any medications from home unless specifically directed by the pre-operative nurse.

Insurance coverage

Health insurance is ever-changing. We suggest you call your insurance provider to discuss your coverage. It is much easier to plan for services and care when you know in advance what your insurance does and does not cover.

Your surgical team will discuss with you whether your procedure will be a same-day surgery or require an overnight stay (typically for 1 night) during your pre-op appointment.

Home health care

If you are discharged to your home, you may need visits from a home health nurse and therapist. While you are in the hospital your hospital case manager will coordinate this with the home health care agency** your surgeon recommends or an agency of your choice. If your surgeon recommends additional outpatient physical therapy, your home health services will continue until you make the transition to outpatient physical therapy.

If you do not have Medicare, we recommend you check with your insurance provider to see which agencies are in your network of providers.

A Northwestern Medicine case manager (discharge planner) will help make discharge arrangements with the home healthcare agency your surgeon recommends or an agency of your choice.

After you go home, your home healthcare agency may provide any of the following services as ordered by your physician:

Check your overall health, review your medications and comfort level, and evaluate your surgical incision.

Create a home program to meet your needs, which may include physical therapy and occupational therapy.

Do a home safety evaluation where you will receive recommendations for making your environment safer for recovery.

Perform lab work to monitor your blood-thinning medications. The results will be reported to your ordering physician.

Help in determining your needs and preferences when it is time for you to start outpatient therapy.

Communicate regularly with your physician.

**In the spirit of keeping you well-informed, none of the home health agencies that you may choose are affiliated with Northwestern Memorial HealthCare, and none of the individual home healthcare agents or employees of Northwestern Memorial HealthCare or any of its affiliates.

Northwestern Medicine Therapy

Northwestern Medicine Lake Forest Hospital

1200 North Westmoreland Road, Suite 200
Lake Forest, Illinois 60045

Northwestern Medicine Grayslake Outpatient Center

1475 East Belvidere Road, Suite 185
Grayslake, Illinois 60030

Northwestern Medicine Glenview Outpatient Center

2301 Willow Road, Unit L
Glenview, Illinois 60025

630.933.1500

TTY: 711

Northwestern Medicine outpatient therapy

Outpatient physical therapy is often part of your recovery. By going to an outpatient facility, you can work more vigorously towards strengthening and rehabilitation. You will need to arrange for someone to drive you to the outpatient therapy location until your surgeon has approved you to drive.

Your surgeon will determine if and when outpatient therapy is recommended for you; usually this plan should be made before surgery.

Before your surgery, you will need to call the outpatient physical therapy location of your choice and schedule your appointments based on your surgeon's instructions.

If home health care is recommended and arranged after you are discharged from the hospital, schedule your first outpatient physical therapy appointment starting 2 weeks after your surgery.

When deciding where you will go for outpatient therapy, consider the following:

Is this facility in your insurance network?

Will you be working 1-on-1 with a licensed therapist during your entire therapy session?

Do you have any needs for specific appointment times such as evenings and weekends?

Through Lake Forest Hospital, you have access to multiple outpatient locations for your therapy. Our licensed therapists will communicate with your surgeon during your rehabilitation process. They also will develop a program to meet your needs and goals. Our team will work together to address all aspects of your outpatient care. This helps to ensure continuity, and the ability to measure and accurately report your progress to your surgeon. Additionally, your medical records are accessible 24/7 to both your surgeon and therapist.

Skilled nursing facilities

If you cannot be safely discharged home with home health services, a skilled nursing facility for extended rehabilitation services may be necessary. If a skilled nursing facility is necessary, your case manager will help you with pre-admission requirements and insurance coverage information after surgery.

Food and nutrition

Good nutrition is an important part of a healthy lifestyle. It is important to your recovery. Complications such as infection and delayed wound healing can be directly related to poor nutrition. Therefore, healthy nutrition before and after surgery should be part of your plan to give your body the building blocks it needs to heal.

Before surgery

It is important to eat a balanced diet with healthy food choices and adequate calories and protein before surgery to meet your energy needs and maintain your goal weight.

Healthy food choices can assist with optimal recovery after surgery as well. Following a Mediterranean-style of eating may help provide a variety of nutrients that are important in preparing your body for surgery. See below for tips on how to follow this lifestyle of eating.

Protein. Your body needs protein to heal and rebuild itself after surgery (especially if you have been losing weight without trying). Make sure your diet includes the proper amount of protein before and after surgery. Start focusing on protein intake 1 to 2 weeks before surgery. Aim for 2 or 3 servings a day of lean, protein-rich foods, such as beef, fish, poultry, eggs, cheese, milk, yogurt, cottage cheese, dried beans, nuts, seeds, peanut butter and protein drinks.

Fruits and vegetables. Try to include fruits and vegetables with most meals and snacks. Focus on eating a variety of colors. You could include berries or a banana with breakfast, spinach salad loaded with other veggies (and chicken breast for protein)

for lunch, and grilled broccoli or asparagus as a side with dinner. Snacks and desserts can include apple slices (with peanut butter for protein) or carrots with hummus. Fruits and vegetables have many important vitamins and minerals that will help the body heal.

Whole grains. These include wheat bread, oats, brown rice, brown pasta, quinoa and whole grain crackers. Whole grains are a good source of fiber as well as B vitamins, which help your body fight stress.

Hydration. Patients who are well-hydrated report less pain and nausea after surgery. There are many forms of liquids, including water, tea and soups. However, not all liquids hydrate the same; water is the best option for most people. To make water more appealing, flavor it with slices of fruit.

Limit foods with added sugars (such as ice cream, candy and soda), caffeine and alcohol. These types of foods and drinks often have little or no nutritional value and can add more stress to your body.

The Mediterranean diet

This diet can help you feel better as your body recovers from surgery.

Try to eat more:

- Fruits and vegetables
- Lean, skinless poultry or fish
- Whole grain breads, pastas and cereals
- Beans and lentils
- Root vegetables
- Nuts

Try to limit:

- Beef, pork, lamb, hot dogs, bacon
- Whole-fat dairy, butter, cheese
- Highly-processed and refined foods with added sugars



After surgery

Sometimes surgery and/or pain medications can reduce your appetite. However, your body needs additional calories and protein to heal. If you are not eating enough, you might delay your healing. Continue to focus on eating well-balanced meals.

Blood sugar control after surgery

The body's stress response to surgery can cause your blood sugar levels to rise, even if you do not have diabetes. Your surgeon may recommend a temporary carb-controlled diet that includes nutritious, low-carbohydrate options to help your body recover. Keeping your blood sugar within a normal level after surgery is important to prevent infection and improve healing.

Other points to remember:

Eat smaller meals more often if your appetite is low.

Having small amounts of food throughout the day will help you get enough calories. Consuming oral nutrition supplement drinks such as high calorie/protein drinks can help meet calorie, protein and nutrient needs when appetite may be low. Consume between meals for a snack or in addition to a meal.

Protein-rich foods are important both before and after surgery.

Protein gives your body what it needs to heal wounds, rebuild muscle and bone, and repair damage. Protein is a nutrient needed for normal growth, wound healing and fighting infections. If you are not eating enough protein and calories, it may be harder for body to heal.

Fiber-rich foods and good hydration can help you avoid constipation. Many pain medications can cause constipation. Eat plenty of fresh fruits and vegetables, especially prunes and prune juice. Aim for 6 to 8 cups of fluids a day.

Calcium and vitamin D work with protein to rebuild bones. High amounts of calcium are in dairy foods such as milk, yogurt and cheese, and dark leafy vegetables like spinach and broccoli. Foods with the most vitamin D are fatty fish (salmon and tuna), beef liver, cheese and egg yolks. Fortified foods provide most of the vitamin D in our diets. Many milks, cereals, orange juices, yogurts, cheeses and soy beverages contain added vitamin D.

Vitamin C is important for wound healing. Vitamin C is in citrus fruits, strawberries, broccoli, bell peppers, spinach and tomatoes.

For more tips and information about eating healthy, visit myplate.gov.

Day of surgery

We have a few recommendations to help ensure the day of surgery goes smoothly for you and your family.



Arrival and parking at Lake Forest Hospital

Use the Main Entrance at 1000 North Westmoreland Road. Wheelchairs are available if needed. Valet services may be available and are complimentary. Visit nm.org or ask your care team about valet availability.

Check-in and registration at Lake Forest Hospital

Surgical check-in and registration is located at the Pavilion E registration desk on the main level of the hospital. Enter through the hospital's Main Entrance, proceed to Pavilion E and stop at the registration desk. If you have any questions, see the concierge located just inside the Main Entrance.

You will wait in the registration area until you go to your pre-operative room. A companion may be able to accompany you to this area depending on current visitor policies. Visit nm.org for current visitor policies.



Arrival and parking at the Ambulatory Surgical Center in Grayslake

The Ambulatory Surgical Center is located at 1475 East Belvidere Road. Wheelchairs are available if needed. Valet services may be available and are complimentary. Visit nm.org or ask your care team about current valet services.

Check-in and registration at the Ambulatory Surgical Center in Grayslake

Surgical check-in and registration is inside the main entrance of the surgical center. You will wait in the registration area until you are taken to your pre-operative room. A companion may be able to accompany you to this area depending on current visitor policies.



During surgery

At Lake Forest Hospital, we take your privacy seriously. During your pre-operative registration, you can choose an individual to receive your surgical updates, if desired. A phone number and privacy code will be provided which your identified family or friend will use to get updates. Once surgery is complete, your surgeon will give updates to your identified family or friend either in person or by phone.

While you are in surgery, your family or friend may also grab a meal, run errands or return home to rest. A café is conveniently located at each healthcare facility. Check with concierge services for current locations and times that food service is available. Options may include deli, grill and on-the-go items.

Recovery room

The first stop after surgery is the recovery area (post-anesthesia care unit, or PACU), where your anesthesia team will monitor your recovery. You will stay in the recovery area until you are awake, alert and stable.

Your orthopaedic care team will help you manage your post-operative pain. The medications used in anesthesia may cause you to have blurry vision, a dry mouth, chills, nausea or a sore throat. As you wake up, we will encourage you to breathe deeply and cough.

Visitors

On the day of surgery, it is important to rest and concentrate on your recovery. We recommend you limit the number and length of any visits. Review current visitor policies at nm.org/visitors.

Privacy

After surgery your orthopaedic care team will communicate directly with you. To protect your privacy, please communicate directly with your family and friends regarding your condition. In the event that you cannot update your family and friends yourself, we ask that you identify one spokesperson to receive your updates. Your spokesperson will use the privacy code provided during registration in order to talk to your nurse and receive updates on your condition. This spokesperson can then provide your updates to your family and friends.

Same-day surgery

Your surgical team and you may have discussed same-day joint replacement surgery during your pre-operative appointment. If you and your surgeon have made this decision, then you will be able to go home the same day as your surgery. You are an important part of this plan. This section gives you and your family an overview of what will happen after your surgery.

After same-day surgery, you will recover in a patient room in the same-day surgery recovery unit. Tell your coach (person helping you at home after surgery) to join you in the same-day surgery unit so they can watch your physical therapy session and listen to your discharge instructions.

To go home on the same day after surgery, you will need to meet these discharge requirements:

Your physical therapist has cleared you to be safe for discharge home

Your diet has advanced from ice chips to solid foods

Your oral medications can manage your pain at home

You have urinated

Your case manager has confirmed your home healthcare or outpatient therapy

If you do not meet the safety goals to be safely discharged home or have a medical issue that needs to be monitored for an extended time, you may need to be admitted overnight until your surgeon or physical therapy has cleared you as safe to discharge home.



2518



Your hospital stay

You are the center of your orthopaedic care team. We encourage you to be an active participant in your health care.

Being an active participant in your health care means:

Providing information to your team

Educating yourself about your diagnosis and plan of care

Knowing the medications you are taking

Expressing your questions and concerns

Telling your caregivers how you are feeling

Actively participating in your therapy

Post-surgery

Your orthopaedic care team will closely monitor you after your surgery. They will:

Create a personalized plan of care

Orient you to your new environment

Assist you with activities of daily living, such as turning in bed, walking, bathing and toileting

Check the color, movement and sensation in your legs

Inpatient therapy

Therapy is one of the most important parts of your recovery. You will likely begin therapy the day of your surgery. You will receive daily therapy tailored to your needs. Your surgeon and the rehabilitation services staff work together to create a therapy plan for you. Your surgeon and nurse will help you set a comfort-function goal to help manage your pain and allow you to perform your required therapy.

Your therapy sessions will help prepare you for a safe discharge. You will learn exercises to help restore your joint motion and strengthen the surrounding muscles. As you become stronger and progress in your mobility goals, you will learn and practice how to:

- Move and turn in bed
- Get in and out of bed and chairs
- Shower and dress
- Walk safely with a walker
- Climb stairs

Your surgeon and therapist will make recommendations for therapy after discharge based on many factors, such as your mobility level in the hospital, home support, and health status. Your focus should be to work toward your optimal functional level with your therapists in the hospital.

Incision care

A dressing will cover your incision. You must keep it clean, dry and covered. Your nurse will monitor your incision and dressing. Before discharge, you will learn how to care for your incision and dressing.

You should not shower until directed by your surgeon.

Respiratory care

Secretions tend to pool in the lungs. This can lead to pneumonia. To prevent this, we will teach you to breathe deeply and cough. You will use an incentive spirometer, which will help you improve how deeply you are breathing. We will also encourage you to brush your teeth.

Circulation

Lack of activity causes the blood to circulate more slowly and pool in the legs. This can increase your risk for blood clots. To reduce this risk, your surgeon will order intermittent compression sleeves for you to wear on your legs. They will also prescribe blood-thinning medication. They may also prescribe compression leg stockings.

Your activity, including walking and ankle pumps (see page 41), is important to enhance circulation and help prevent a blood clot.

Food and fluids

After surgery, you will receive IV fluids. At first, your care team will help you start taking ice chips and water. You will progress to solid foods when you are ready. Your care team will teach you how to order food service. You will have multiple nutritious food choices available.

Bladder and bowel care

Some people may find it difficult to urinate after surgery. This is due to the anesthesia, pain medications and decreased mobility. If necessary, your surgeon may request to insert a catheter to drain your

urine. In almost all cases, a member of your care team will remove the catheter by the morning after surgery to prevent infection.

Constipation can occur several days after surgery. Drink fluids and eat foods that are high in fiber. You may receive a stool softener and laxatives.



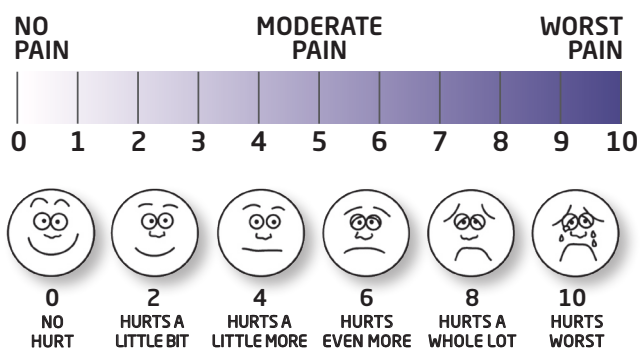
Activity after surgery helps improve function and reduce complications. An orthopaedic care team member must always help you with any activity, including therapy.

Managing your pain

Pain is normal after surgery. Painful feelings can vary from dull aches to severe sensations. Your orthopaedic care team will help you manage your post-operative pain and optimize your comfort-function goal.

Pain rating scale

We will regularly ask you to rate your level of pain using a numeric scale. The scale is from 0 to 10, with 0 being no pain and 10 being the worst pain possible.



Comfort-function goal

To perform your daily activities, you will need to set a goal for managing your pain. This is known as a comfort-function goal. Your nurse will help you set your comfort-function goal. They will answer questions you may have about your pain management options.

Your comfort-function goal should be a pain rating that allows you to continue your important activities.

To help set your comfort-function goal, consider:

The required therapy sessions you will need to participate in and complete

The daily activities you need to do, such as walking, toileting and caring for yourself

The pain rating that will let you do those activities comfortably

Pain management options

Multimodal analgesia

Your surgeon may prescribe 2 or more types of pain medication for you. This option combines the different actions of each medication to maximize your pain management.

Nerve blocks

Local anesthetic infused into a specific area of the body for targeted pain management.

Activity, exercise and repositioning

Each of these will address muscle strength, stiffness and swelling. Each can help with pain management.

Cold therapy

A cold compression wrap decreases surgical and post-therapy discomfort and swelling. Your care team will teach you how to correctly apply the cold therapy.

Relaxation strategies

Specific activities may reduce stress, decrease muscle tension and provide distraction. Music therapy is one example. You can access music therapy through *C.A.R.E. Connect: Creating Environments That Heal* on your Lake Forest Hospital room television. Please see the hospital room TV guide for the correct channel.

Discharge instructions

Preparation for your discharge actually starts the day your surgery is scheduled. Your orthopaedic care team works with your surgeon to ensure a timely discharge.

Before you are discharged, the following information will be discussed with you and your family or coach:

Hip and knee discharge instructions

Part of the discharge process includes the Pre-operative Joint Replacement Class. Your family and/or your coach should attend the class with you. It is important that everyone involved in your recovery fully understands your discharge expectations. Your family member or coach should also be available when your healthcare team shares discharge instructions. This will allow both of you to ask questions and learn together.

Assistive device and equipment (if applicable):

- Walker with 2 front wheels
- Crutches
- Cane
- Sock aid
- Shower chair/tub transfer bench
- Long-handled shoehorn
- Elevated toilet seat

- Long-handled grabber
- Long-handled bathing sponge
- Other _____

Follow weight-bearing instructions as directed by your surgeon and care team

Keep your appointments

Resume driving when your surgeon approves

Return to work when your surgeon approves

Return to travel when your surgeon approves

Resume sexual activity when your surgeon approves

Incision care at home after joint replacement

Follow your surgeon's care instructions for your specific incision and dressing care. Your nurse will teach you how to take care of your incision and dressing before you are discharged from the hospital.

Follow these instructions to help promote healing and avoid infection:

Keep your incision clean and dry with the dressing your surgeon instructs you to use after surgery.

Follow your surgeon's instructions for showering. It is OK to shower daily once approved, make sure your waterproof dressing remains intact (no water seeping through the edges).

Wash your hands before and after dressing care.

Perform your dressing care in a clean environment.

Do not apply lotion, cream, powder or ointments to the operative leg until directed by your surgeon.

Do not resume smoking as it remains a high risk factor for infection.

Do not shave below the neck until directed by your surgeon.

Follow these instructions for 4 weeks following surgery to avoid infection:

Pets should not be allowed on your bed.

Use freshly washed/laundered bed sheets weekly or more often if they become soiled.

Put on freshly washed/laundered clothes and pajamas daily.

Notify your surgeon if you have any of the following:

Separation of incision line at any point

Temperature more than 100.4 degrees F or chills

Increased redness, swelling or warmth of the skin around the incision

More pain at the incision site

Red streaks on the skin near the incision site

Tender bumps or nodules in your armpits or groin

Foul smell from the incision

Excessive blood, drainage or discharge at the incision site



Please call your surgeon or home health nurse with any questions or concerns.

Life-long infection prevention

Infection is a possible complication of joint replacement surgery. Some tests, diagnostic procedures and illnesses can place you at greater risk for developing an infection in your new joint. This is because your new joint is artificial and does not have your body's natural protection against infection. You can accidentally introduce bacteria into your bloodstream in any number of ways. Once in the bloodstream, the bacteria can travel to your new joint and cause an infection, even years later.

This is why it is important to take good care of yourself. An infection could start from a sore throat, urinary tract infection, deep cut or even an ear infection. If you ever have signs or symptoms of an infection such as temperature more than 100.4 degrees F, chills, pain, redness or drainage from any incision or puncture area, call your surgeon or primary care physician.

Tell every physician and advanced care providers that you have an artificial joint, particularly if you are having an invasive procedure.

Dental care

Ask your surgeon about how long to wait after surgery before scheduling any future dental appointments. Dental care after surgery can introduce bacteria into your bloodstream through cuts and trauma to the gums and gum lines. To reduce this risk, some surgeons recommend taking antibiotics before any dental work.

Follow your orthopaedic surgeon's instructions about taking antibiotics before any dental work. Also, make sure to tell your dentist and dental hygienist that you have a new joint.

Deep vein thrombosis

Deep vein thrombosis (DVT) is the formation of a blood clot within a deep vein, commonly in the calf or thigh. The blood clot can either partially or completely block the blood flow in the vein.

DVT after joint replacement surgery can occur because of surgical disruption of the soft tissue and/or limited mobility.

Walking and ankle pump exercises increase your blood circulation and improve the ability of veins to move blood through your leg to help you avoid DVT. Your care team will encourage you to walk both during and outside of therapy. Your therapist will show you how to perform ankle pump exercises (see page 41). These exercises involve moving your ankles up and down, and tightening your leg muscles.

DVT signs and symptoms

Because DVT can produce life-threatening complications, it is important for you to know and be able to recognize DVT symptoms.

The following can be symptoms of DVT. Notify your surgeon or primary care physician if you have any of these changes in either leg:

Significant swelling in the calf or thigh area

New pain in the calf area or behind the knee

Increased pain with standing or walking

New warmth, redness or tenderness in the calf or thigh

Pulmonary embolism

The most serious complication of DVT is a pulmonary embolism (PE). A PE happens when a blood clot breaks free from a vein wall and travels to the lung where it blocks an artery. A PE is life-threatening and needs immediate medical attention.

Signs and symptoms of a PE:

Rapid heart rate

Sudden onset of chest pain

Sudden unexplained cough or coughing up blood

Shortness of breath

Lightheadedness, dizziness or cold sweats

Feelings of restlessness or anxiety

Sense of impending doom

Anticoagulation medication

Your surgeon may prescribe an anticoagulant (blood thinner) medication to help prevent blood clots. Your nurse will teach you how to take this medication.

While you are taking blood thinner medication:

Do not drink alcohol.

Do not take any additional over-the-counter medications, vitamins, herbal supplements or dietary supplements unless directed by your surgeon.

Blood thinner medication can cause bleeding. Watch for signs of abnormal bleeding or bruising.

Call your surgeon right away if you notice:

Red or pink-tinged or dark-brown urine

Blood clots in your urine

Bloody or black, sticky bowel movements

Spitting up blood or brown material that looks like coffee grounds

Red spots on your skin

Bleeding gums

Bleeding of the small vessels in your eyes or face

Prolonged nose bleeds

Compression stockings

Your surgeon may tell you to wear compression stockings when you go home. Wear these stockings until your surgeon tells you to stop.

Your orthopaedic care team will teach you how to take off and put on the stockings. Make sure to smooth out folds in the material to prevent skin irritation.

Pain management and comfort

It is important that you manage your pain. This way, you can participate in physical therapy and progress with your exercises and daily activity.

Advice for managing pain:

Take your pain medications as directed by your surgeon. With time, you should be able to decrease the amount of pain medication needed.

If possible, schedule to take your pain medication approximately 30 to 60 minutes before your therapy sessions.

Use the cold compression wrap to decrease swelling and increase comfort. Apply the wrap to the affected joint, especially before and after therapy or exercise. Place a barrier between the wrap and your skin for protection. Follow your therapy recommendations on how often to use it.

Change your position frequently.

Notify your surgeon if your pain is not controlled.

Bowel management

Constipation is possible because of decreased mobility and pain medications.

To help avoid constipation:

Take stool softeners and/or laxatives as directed by your surgeon.

Stay active per your physical therapy guidelines.

Drink fluids and eat foods that are high in fiber.

Contact your surgeon if you do not have a bowel movement for 3 or 4 days or if you have loose stools.

Discharged

Once your surgeon and your orthopaedic care team determine you are ready to be discharged from the hospital, you will start your next level of rehabilitation. You and your orthopaedic care team will discuss your discharge plan. They will design your post-discharge plan to meet your needs.

Arrange for someone to stay with you for at least 1 week after your discharge home to help ensure a safer recovery.

Safety precautions

Your orthopaedic care team will teach you safety precautions and positioning. Your incision site and body need time to heal and adjust to your new joint. Your surgeon will tell you when you can resume normal activities.

Before leaving the hospital, you will practice walking, transferring from your bed and a chair, and dressing yourself. If your home has stairs, you will also practice climbing stairs.

These basic tasks require you to use safety precautions to prevent injury to yourself and your new joint.

Transfers in and out of bed (Illustration A)

Back up to the bed until you feel the back of your knees touching it.

Place your operated leg out in front of you.

Reach for the bed with 1 arm and keep the other arm on the walker.

Slowly lower yourself onto the bed.

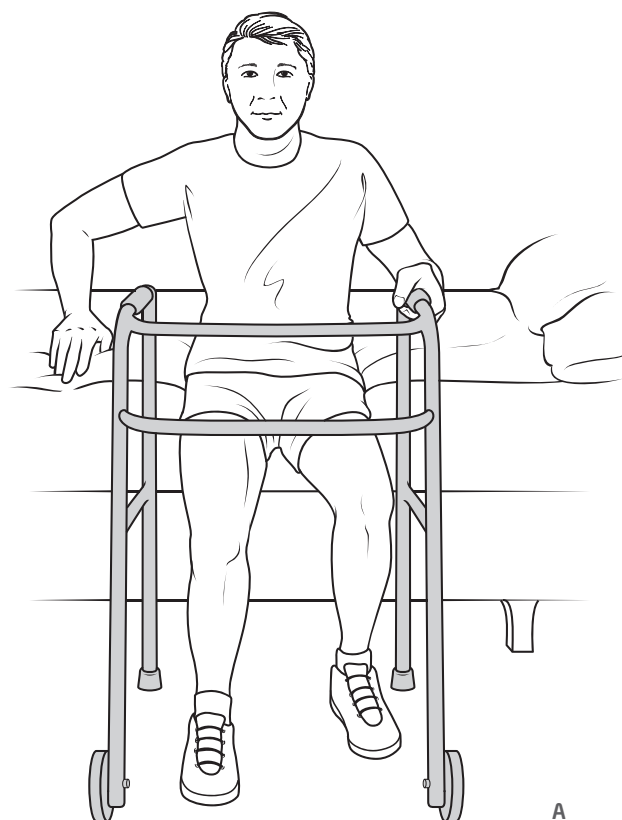
Scoot back onto the bed as much as possible.

Lift 1 leg at a time onto the bed until both legs are supported.

Continue to move legs to the center of the bed.

Recline back.

To get out of bed, reverse the steps.



Transfers into and out of a chair

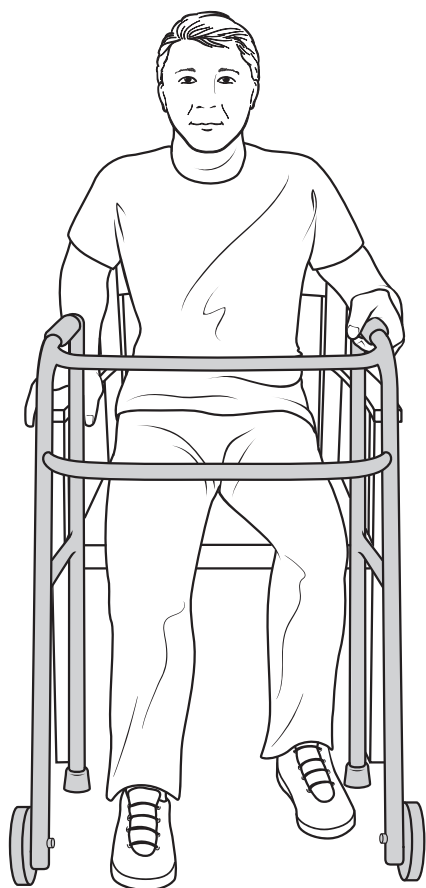
Into a chair (Illustration B)

Back up to the chair until you feel the back of your knees touching it.

Place your operated leg out in front of you. If using crutches, move both crutches to 1 arm.

Reach for the armrests and slowly lower yourself onto the chair. Continue to keep the operated leg in front.

Scoot to the back of the chair.



B

Out of a chair

Scoot forward to the edge of the chair so both feet are on the floor.

Place your operated leg out in front of you and keep it there.

Bend your knee and hip on the non-operated leg and try to keep most of your weight on this leg.

Using your hands on the armrests, push yourself with your arms and non-operated leg to stand.

Do not use a walker to pull yourself up; that may cause the walker to tip and could result in a fall.

If using crutches, move crutches to 1 arm and push to stand with 1 arm on crutches and the other arm on the armrest.

Transfers in and out of a car

Car transfers (Illustrations C and D)

Have the driver open the passenger-side front door and make sure the front seat is as far back as possible. You also can have the backrest reclined to maximize your space.

Back up to the car using your walker until the backs of your knees touch the edge of the car.

Place your operated leg out in front of you.

Place 1 hand on the walker and the other hand on the frame of the vehicle.

Slowly lower yourself onto the edge of the seat.

Scoot as far back as possible on the seat.

Turn towards the dashboard (making sure not to bend torso/head forward) as you bring 1 leg into the car at a time. You may need help for your operated leg.

Reposition the seat so that you can wear the seatbelt correctly.

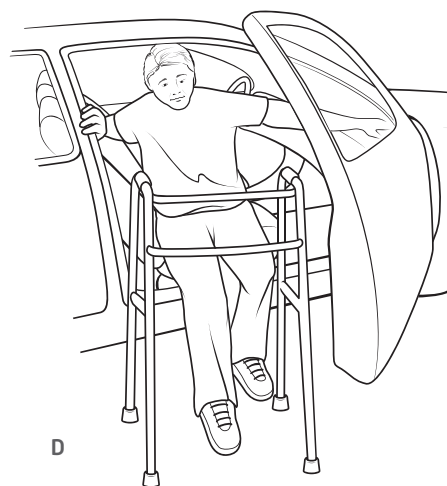
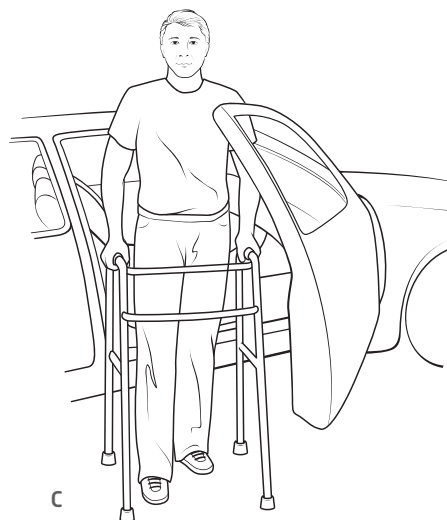
Have the driver close the door for you.

To get out of the car, reverse the steps.

Make sure that your walker is in front of you before you stand.

Use a plastic trash bag on car seats for easier scooting and sliding.

Do not drive until your surgeon gives you permission.



Stairs

Going up stairs (Illustration E)

Use crutches or cane in 1 hand and hold onto the railing with the other hand. Support your weight evenly and lift your non-operated leg onto the step.

Bring your operated leg up onto the step and then bring up your cane or crutches.

If there is no railing, use crutches in both arms.

Going down stairs (Illustration F)

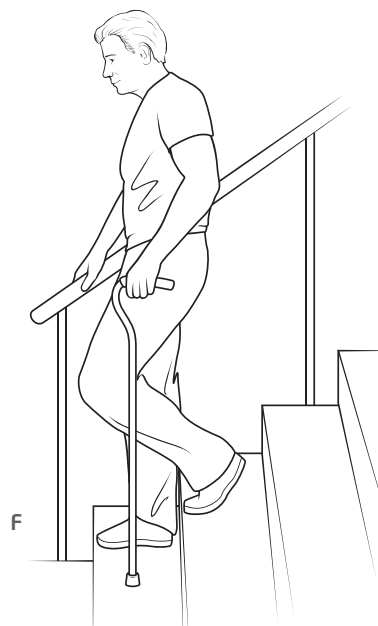
Use crutches or cane in 1 hand and hold onto the railing with the other hand.

Lower crutches or cane onto the step below.

Support your weight evenly and bring down your operated leg.

Lower your non-operated leg.

If there is no railing, use crutches in both arms.



Bathing and showering

Tub transfer

If your tub is not wide enough for a shower chair, your healthcare team may recommend a tub transfer bench.

Back up to the tub until you feel the back of your knees touching the tub or transfer bench.

Reach back for the shower chair/transfer bench and slowly lower yourself onto the chair or bench, keeping your operated leg out in front.

Sit down on the edge of the chair or bench, continuing to keep your operated leg out in front.

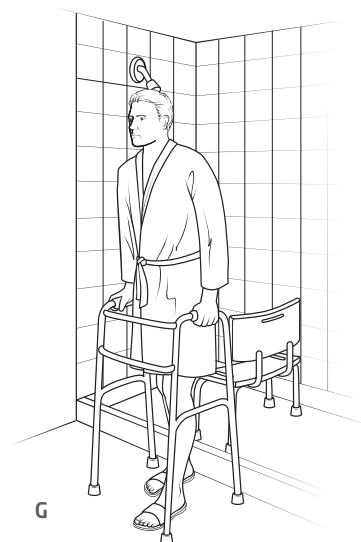
Scoot straight back as far as possible on the chair or bench.

Lift your legs over the lip of the tub 1 leg at a time. Turn to face the faucet.

Turn the water on once you are safely seated. When your shower is complete, turn the water off and dry yourself before you begin the transfer out of the tub.

To transfer out of the tub, reverse the steps. Lift your legs out of the tub 1 at a time, scoot forward and then, using 1 hand on the chair or bench and the other hand on the walker, push yourself to stand.

Shower only after your surgeon gives you permission.



Walk-in shower transfer

Back up to the shower using your assistive device (Illustration G).

Bend your knee and hip on the non-operated side as you lower yourself onto the shower chair seat or bench, putting most of your weight on the unaffected (non-operated) side (Illustration H).

Lift your legs over the lip of the shower stall and turn to face the shower head (Illustration I).

Turn the water on once you are safely seated. When the shower is complete, turn the water off and dry yourself before you begin the transfer out of the walk-in shower.

To transfer out of the shower, lift your legs over the shower stall 1 at a time and turn toward your walker. With at least 1 hand, push from the chair/bench and raise yourself until standing. Once standing, grab the walker.

Shower only after your surgeon gives you permission.

Recommendations for bathing and showering

Always have a family member present for safety.

Use a hand-held shower hose.

Use a long-handled bathing sponge.

Use non-slip strips or a non-slip mat at the bottom of the tub or shower.

Toileting

Toilet transfer (Illustrations J and K)

Use a raised toilet seat, bedside commode or other equipment recommended by your therapist.

Back up to the toilet until you feel the back of your knees touching it. Place your operated leg out in front, reach for the armrests and slowly lower yourself onto the toilet.

Bend your knee and hip on the non-operated side as you lower yourself onto the seat, putting most of your weight on the non-operated side. Remember to keep your operated leg straight out, if needed.

Reverse the steps for getting up, using 1 hand on the armrest or sink to push up and the other hand on the walker. Make sure you have your balance before grabbing the walker.



J



K

Dressing and undressing

Underwear and pants

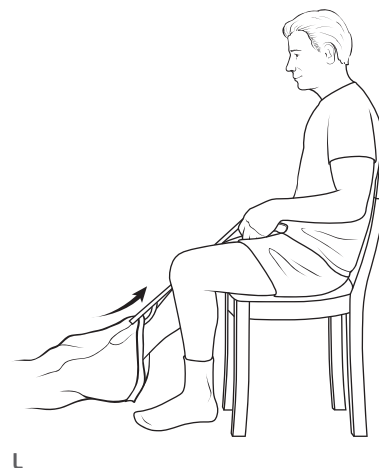
Sit on the side of the bed or in an armchair. Your therapist will determine if you need adaptive or assistive devices to dress and undress.

Use the long-handled grabber and secure the waist of the underwear or pants with the hook. Lower clothing to the floor with the long-handled grabber and slip the pant leg over your operated leg first (Illustration L). Then do the same for your non-operated leg. (Do this process first with underwear and then repeat with pants before standing.)

Do not lean or bend forward to reach your pants or underwear. Follow your therapist's instructions about how to begin pulling up your underwear and pants.

Pull both the underwear and pants up over your knees. Stand with the walker in front of you, and pull up both the pants and underwear.

When undressing, take the pants and underwear off your non-operated leg first, reverse the steps above and use long-handled grabber to push off pants and underwear.



L

Socks

If your therapist recommends a sock aid, place your sock over the end of the aid, opposite from the pulls. While holding the pulls, lower the sock and aid to the floor. Place your foot into the sock and pull it toward you until the sock is on your foot and the aid is free (Illustrations M and N).

To take socks or stockings off, use the end of the long-handled shoehorn or the post on the long-handled grabber and push the sock down the calf, over the heel by hooking the back of the heel and then off the foot.



M

Shoes

If you are unable to bend over to put on your shoes, consider wearing slip-on shoes with backs or use elastic shoelaces.

It may be easier to put your shoe on the operated leg when standing, using your walker for hand support and balance.

Use the long-handled shoehorn or grabber to put on or take off your shoes. Do not use your opposite foot to take off a shoe.

Position your shoe for your operated leg in front of the foot or to the outside of the foot only.



N

Physical therapy

Physical therapy is an important part of your joint replacement recovery. It is your job to do the therapy exercises to ensure your joint reaches the best functioning level. We recommend you work with a physical therapist specially trained in orthopaedics and joint replacement.

The physical therapist will teach you the correct exercises. They will also teach you how and when to increase your exercise time and repetitions. This will help move your recovery along at a safe and beneficial pace.

Pain management during therapy

It is important to have adequate pain management to fully participate in therapy. With time, you should be able to decrease the amount of pain medication that you take.

If your pain level does not decrease after several weeks, talk with your therapist about your pain level and your surgeon* about your pain level and pain medication.

Northwestern Medicine Therapy Locations

Northwestern Medicine Lake Forest Hospital

1200 North Westmoreland Road, Suite 200
Lake Forest, Illinois 60045

Northwestern Medicine Grayslake Outpatient Center

1475 East Belvidere Road, Suite 185
Grayslake, Illinois 60030

Northwestern Medicine Glenview Outpatient Center

2301 Willow Road, Unit L
Glenview, Illinois 60025

630.933.1500

TTY: 711



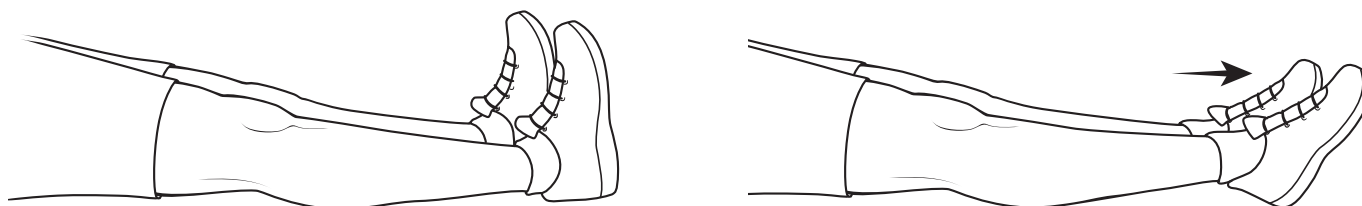
Armed

Exercises

Exercise is very important after your hip or knee replacement surgery. We recommend the following exercises before and after surgery. Your physical therapist may also give you additional exercises not listed in this book. Only do exercises your physical therapist approved.

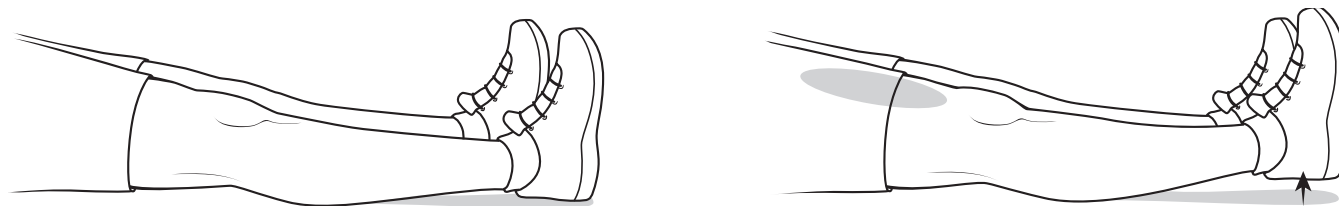
Begin with 10 repetitions of each exercise at least 3 times a day. Remember, do the exercises on a firm surface. Do not hold your breath while doing these exercises.

ANKLE PUMPS



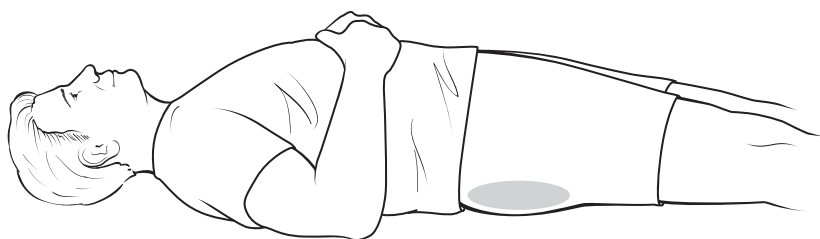
With your legs straight, gently flex and extend your ankles, moving through full range of motion. Repeat 10 times for each leg.

QUAD SET



With your legs straight, tighten the TOP of your thigh to make the knee as straight as possible. Hold the contraction and count to 5. Relax. Do not forget to breathe. Repeat 10 times for each leg.

GLUTEAL SET



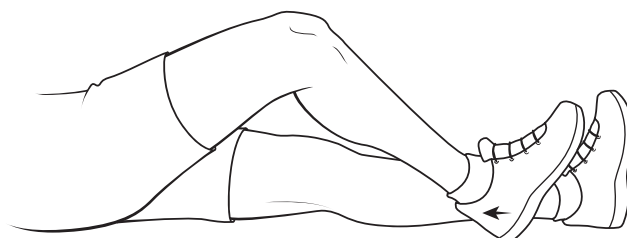
With your legs straight, squeeze your buttocks together and count to 5. Relax. Repeat 10 times.

SHORT ARC QUAD



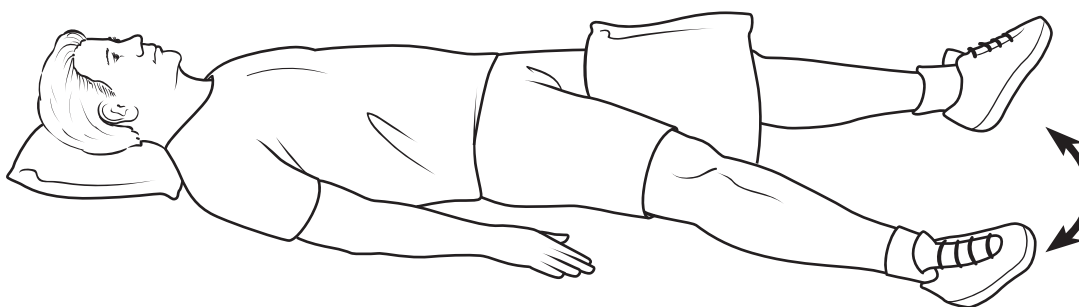
With a rolled-up towel or pillow under your knee, tighten your thigh to lift your heel off the bed and straighten your knee. Hold for a count of 5. Do not forget to breathe. Slowly lower your leg. Repeat 10 times for each leg.

HEEL SLIDES



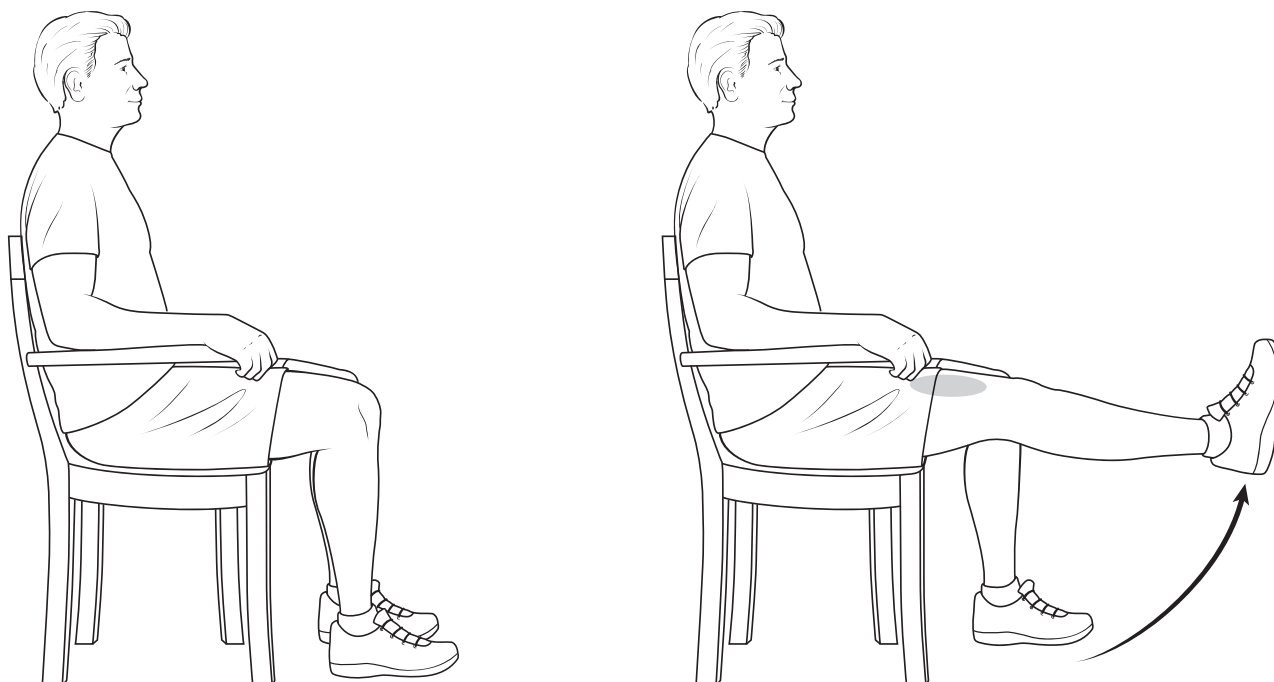
Lie on your back with your legs straight. Bend your knee by sliding your heel toward your buttocks as far as possible. Your heel should stay on the bed. Hold and count to 5. Slide your heel and leg back to a straight position. Relax. Repeat 10 times for each leg.

HIP ABDUCTION



Lie on your back with your legs straight. Slowly slide your leg out to the side and then back in, as your therapist directs. Your leg should stay on the bed. Do not slide your leg too far inward.

SITTING KNEE EXTENSIONS



Sit in a chair with your feet on the floor. Slowly, extend 1 knee as straight as possible tightening the top of your thigh. Hold for a count of 5 and then slowly lower your leg. Repeat 10 times for each leg.

For Knee Replacements Only

STRAIGHT LEG RAISE



For **knee replacement patients** only, lie on your back. Tighten muscles on the front of your thigh. Then slowly lift your leg 6 to 8 inches while keeping your knee straight. Then slowly lower your leg. Repeat 10 times each leg.



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TTY: 711

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