

# Hip Replacement Patient Guide



# Welcome

Thank you for choosing Penn Medicine for your hip replacement surgery. We encourage you to carefully read through this guidebook and the accompanying insert and reference them throughout your hip replacement journey. If you have any questions, please contact your surgeon’s office directly.

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# General Information

## Understanding Hip Replacement Surgery

Your hip is made up of two basic parts that work together to ensure smooth motion and function. When arthritis affects the joint and the cartilage that cushions the hip wears away or is destroyed, the joint requires replacement.

The materials used in your artificial joint are very strong and are designed to last a long time inside your body. Your orthopaedic surgeon will consider many factors, such as age, bone density, and the shape of your joints to determine the exact type of hip replacement you'll receive and how it will be inserted. Total joint replacement surgery requires your surgeon to remove the damaged ends of two bones and insert new, artificial joint surfaces. In hip replacement surgery, your orthopaedic surgeon will replace the upper part of your femur (the long bone in your thigh) with an artificial ball. The hip socket in your pelvis will be lined with metal and plastic. The new ball joint will glide normally in the newly lined hip socket.

You can expect a successful outcome from your hip replacement surgery. Generally, patients experience less pain, more mobility, and can resume most of the activities they enjoyed before the onset of arthritis. Long-term studies show that 85%-90% of artificial joints are intact and functional for 20–25 years. Your artificial joint will last longer if you maintain your ideal weight and if you avoid high-impact activities.

## Risks of Hip Replacement Surgery

Hip replacement surgery is a major surgery, and although advances in technology and medical care have made the procedure very safe and effective, risks can occur. We encourage you to discuss the potential risks with your orthopaedic surgeon, primary care provider, and your family. Every measure will be taken by our team of experts to minimize any risk and avoid complications. Please follow the steps outlined in this guidebook to reduce your risk of complications.

### Blood Clots

Blood clots can form in a leg vein and in your lungs after hip replacement surgery and can be dangerous. Factors that increase your risk of blood clots include advanced age, obesity, history of blood clots, smoking, and cancer. Medications and activities to prevent blood clots after surgery are required to reduce this risk.

### Infection

Infection is very rare in healthy patients having hip replacement surgery. Patients with chronic health conditions like diabetes or a compromised immune system are at higher risk of infection after any surgery. If an infection develops, it's usually treated with antibiotics. Deeper infections inside the joint are rare, but they may require additional surgery if they occur.

### Nerve, Blood Vessel, & Ligament Injuries

Damage to the surrounding structures in the hip, including nerves, blood vessels, and ligaments is possible but extremely rare. Some patients experience numbness in the area of the incision, which usually resolves over time.

## Dislocation of the Hip

A patient's hip may move out of place after surgery (less than 2% of patients). If this occurs, your surgeon will put the hip joint back in place. In very rare cases, surgery may be required to put the hip back in the socket. You will be taught techniques called "hip precautions" to prevent a dislocation from occurring.

## Delayed Wound Healing

Sometimes the surgical incision heals slowly, particularly if you take corticosteroids, have a disease that affects the immune system (such as rheumatoid arthritis or diabetes), or if you are a smoker.

## Limited Range of Motion

The day of surgery, you will begin exercises to help improve your range of motion. Even after your rehabilitation, you may continue to feel some stiffness after physical activity, particularly with excessive bending. Most patients find this stiffness minor compared to the limited function they experienced prior to surgery.

## Hematoma

Bleeding into the hip can occur either immediately after surgery or at a later time. Symptoms include acute pain and swelling. Your surgeon will evaluate and determine a course of action/treatment if this occurs.

## Changes in Leg Length

After hip replacement, slight changes in the length of your leg may occur. You may notice a leg discrepancy, but it will become less noticeable and decrease over time. Please discuss with your surgeon if you have concerns about leg length.

## Loosening of the Joint

Over time, loosening of the artificial ball and socket is possible due to erosion of the bone adjacent to the prosthesis.

### To reduce the risk of many complications:

- Reduce or eliminate the use of tobacco and alcohol.
- Manage your diabetes, if applicable.
- Maintain a healthy diet.
- Use good hand-washing techniques.
- Perform exercises as directed by your care team.
- Limit high impact activities as directed by your surgeon.



# Preparing for Hip Replacement Surgery

## Identifying a Hip Replacement Coach

Your “coach” is a person that you designate to support you as you prepare for and recover from your hip replacement surgery. Please identify a family member or close friend who will be there to encourage and assist you throughout your experience. Your coach may attend doctors' appointments, assist you after surgery, and provide any additional support needed to help you reach your goals. They should be prepared to assist with discharge and provide transportation home after surgery, and depending on your progress, you may need their assistance at home for several days or even a few weeks following surgery.

If you do not have a coach, we encourage you to talk to your care team before having your surgery to discuss discharge plans.

## Pre-Operative Education Class

We understand that hip replacement surgery—or any surgery—may feel overwhelming for you and your loved ones. To ease your concerns and help you feel confident, we’ve designed a special pre-operative education class to prepare you for your joint replacement surgery. The class will help you better understand your diagnosis, the hip replacement process, and what to expect throughout your journey. You’ll also be instructed on important exercises and tips that will help speed recovery and ensure lasting success. See your guidebook insert for more information about your class.

## Obtaining Medical Clearance

Managing your physical and mental health before and after surgery is extremely important and helps reduce the risk of complications after surgery. Your surgeon will want to be sure chronic conditions such as diabetes, high blood pressure, heart failure, depression, anxiety, kidney failure, and anemia are well managed prior to surgery.

### Pre-Admission Testing

Pre-admission testing is required around 3–4 weeks prior to your scheduled surgery in order to ensure you have medical clearance for the procedure. Your surgeon will confirm which tests are required for you depending on your health, when your testing needs to be completed, how your pre-operative appointment can be scheduled, and where it may be completed.

During the visit, you will meet with a healthcare provider to review your medical and surgical history, complete a physical, have blood drawn, and complete any other tests ordered by your surgeon, such as an x-ray, electrocardiogram (ECG), and/or a stress test.

We suggest you wear comfortable, easy-to-remove clothing. You may eat breakfast and take all your normal medications on the day of your pre-admission testing. Please be prepared to provide the following information during your appointment:

- Insurance cards and any necessary referrals
- Name and contact information for your primary care doctor and any specialists you see
- Dietary restrictions or allergies
- Allergies to medications
- Prior surgeries
- Any medical conditions
- Current medications, including dosages and frequencies

- Daily vitamins, herbal supplements, and patches
- Advance Directives (living wills or healthcare proxy)

If you are unable to make your appointment, please contact your surgeon's office immediately to reschedule. Failure to complete pre-admission testing could result in cancellation of your surgery.

### Addressing Healthcare Needs

Your surgeon may recommend you meet with additional healthcare providers before, during, or after your pre-admission testing session. This may include an in-person visit or pre-operative phone call with an anesthesia physician for surgical planning and/or someone from your transition planning team so you can start to discuss your plan for returning home after surgery.

The results from your pre-admission testing visit will be sent to your primary care physician to review. At your healthcare team’s discretion, you may need to schedule an appointment with your primary care physician and any specialists as needed, such as your dentist and/or cardiologist (if you have one), 2 to 10 days after your pre-admission testing visit.

## Medication Management

Your care team will advise you about which medications to take or stop prior to surgery. You will receive a list of your medications and their stop dates at pre-admission testing. Vitamins/supplements, anti-inflammatory medications (Advil, Aleve, Motrin, etc.), anticoagulants (Eliquis, Plavix, Coumadin, etc.), and medications that affect your blood sugar may be stopped prior to surgery.

## Alcohol, Smoking, & Narcotic Use

If you consume alcohol, it is critical to inform your surgeon. Understanding your alcohol use allows your care team to assess your risk for complications such as alcohol withdrawal, which can occur after surgery. Other potential post-operative complications related to alcohol use include pneumonia, infections, blood clots, and gastrointestinal bleeding.

To minimize these risks, avoid drinking alcoholic beverages for several days before surgery. Alcohol can interfere with your body’s ability to clot blood and may cause dehydration, both of which can lead to complications during and after surgery. Speak with your surgeon to get specific guidance on when to stop drinking before your procedure.

Smoking, vaping, and chewing tobacco are considered a co-morbidity, which means that they can increase the chance of complications during and after surgery. They put you at greater risk for medical complications such as infections, poor wound healing, blood clots, and breathing problems which will slow your recovery. If you smoke, vape, or chew tobacco, we urge you to quit immediately. If you require assistance in stopping, please ask your care team to direct you to a Penn Medicine program designed to help with cessation.

If you take narcotics to control your pain, be sure to talk about the frequency and dosages with your care team so we can better help to control your pain after surgery.



### Weight Management & Nutrition

Excess weight can add to your joint pain, as well as cause medical and surgical complications, including an increased risk of infection. If you are overweight, your care team may advise you to lose weight before surgery and can refer you to resources within Penn Medicine to help do so. Losing as little as 10 pounds can reduce the stress on your joints, help prepare you for surgery, and improve your overall health.

In general, eating healthy foods before and after your surgery will help your body heal. Following these tips will help with proper healing and decrease complications:

- Eat foods high in iron, such as lean red meat and dark green leafy vegetables.
- Eat foods high in calcium and vitamin D to keep bones strong and healthy, such as dark leafy greens, low fat cheese and milk, yogurt, almonds, fruit, and fortified cereals.

- Eat foods high in fiber, such as corn, beans, whole wheat pasta, avocados, and other fruits and vegetables to avoid constipation. The average person needs 25-35 grams per day but only gets 10 grams.
- Eat foods high in protein at every meal, such as fish, cheese, eggs, beans, nuts, milk, and lean meat.
- Stay hydrated before and after surgery (unless you are on a fluid restricted diet). Aim to drink eight to ten 8-ounce glasses of water each day.

If you have a medical condition that requires certain dietary restrictions, please discuss them with your care team.



### Pre-Operative Rehabilitation

Prehabilitation or “pre-hab” is an exercise program performed before surgery. Your motivation and commitment to performing pre-operative exercises regularly and properly is perhaps the most important factor in ensuring a speedy recovery and determining the long-term success of your new hip.

#### Pre-Operative Exercises

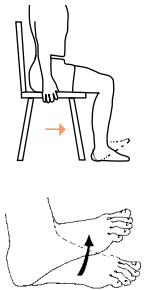
The following pre-operative exercises should be performed before surgery.

##### Ankle Pumps

This exercise will help tighten the calf muscles to promote blood circulation in the lower legs and prevent blood clots.

- Sit with your feet flat on the floor or lie on your back in bed.
- Bend your ankles up and down as if you are pumping a gas pedal.

Repeat 10-15 times on each leg, 2 times a day (increase to every hour while awake after surgery).

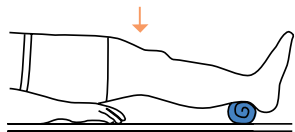


##### Quad Sets

This exercise will tighten the quadricep muscles to strengthen the front of your thigh.

- Sit or lie on your back in bed with both legs straight (you can roll a towel under your ankle).
- Straighten your leg as if you are pushing the back of your knee into the bed.
- Hold for 5–10 seconds, then release.

Repeat 10-15 times on each leg, 2-3 times a day (increase to every hour while awake after surgery).

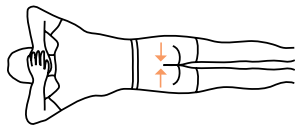


##### Gluteal Sets

This exercise will tighten the gluteal muscles to strengthen your buttocks.

- Lie on your back with your legs straight.
- Squeeze your buttocks together as tightly as possible.
- Hold for 5–10 seconds, then release.

Repeat 10-15 times, 2-3 times a day (increase to every hour while awake after surgery).

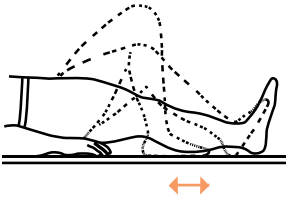


### Heel Slides

This exercise will tighten your hamstrings to improve knee strength and flexibility.

- Lie on your back with your legs straight and your toes pointed toward the ceiling.
- Slowly pull the heel of one leg toward your buttocks as far as you can (you can place a cookie sheet or plastic bag under your heel to slide it more easily if needed).

Repeat 10-15 times on each leg, 2-3 times a day.

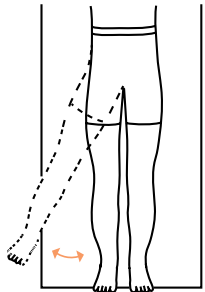


### Hip Abduction/Adduction

This exercise will strengthen the muscles that stabilize the thigh bone and hip.

- Lie on your back (you can place a pillow between your legs and a sliding board under your leg).
- Slide one leg out to the side while keeping your kneecap pointing toward the ceiling.
- Gently bring your leg back to the middle.
- Repeat with your other leg.

Repeat 10-15 times on each leg, 2-3 times a day.

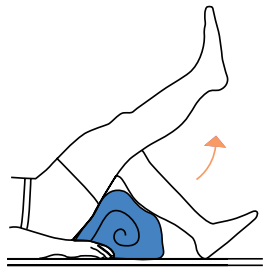


### Short Arc Quads

This exercise will strengthen the thigh muscles.

- Lie on your back in bed and bend one knee with your foot on the bed while putting a cushion (such as a rolled blanket or towel) under the other knee.
- Pull the foot and toes of your straight leg up by tightening your thigh muscles.
- Hold for 5 seconds, then relax.

Repeat 10-15 times on each leg, 2 times a day.

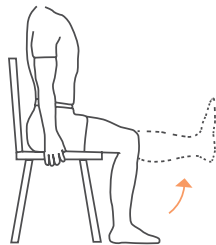


### Long Arc Quads (Seated Knee Extensions/Kicks)

This exercise will strengthen the muscles in the front of your thigh and shin.

- Sit in a chair with both knees bent.
- Keeping your thigh on the chair, straighten out your knee as you slowly kick up.
- Hold for 5 seconds, then slowly lower your foot to the floor.

Repeat 10-15 on each leg, 2-3 times a day.

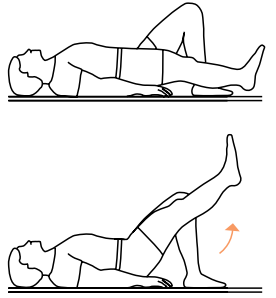


### Straight-Leg Raises

This exercise will strengthen and tighten the muscles on top of your thigh.

- Lie on your back and bend one knee while keeping the other leg straight.
- Exhale and tighten the thigh muscles of your straight leg to raise it about 6-8 inches. Do not lift your straight leg higher than the knee that is bent.
- Repeat with your other leg.

Repeat 10 times on each leg, 3 times a day.

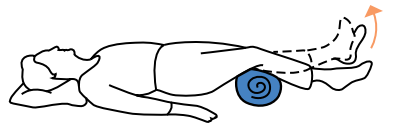


### Terminal Knee Extension (Bolster Kicks)

This exercise will improve knee strength and flexibility.

- Lie on your back with a rolled towel (about 6" wide) under the knee of your operated leg.
- Slowly straighten your knee to a fully extended position.
- Hold for five counts, then relax.
- Repeat with your other knee.

Repeat 10-15 times on each leg, 2-3 times a day.

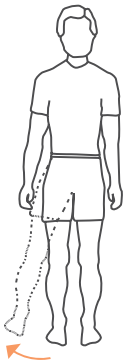


### Standing Hip Abduction (Side Kicks)

This exercise will strengthen your outer hip muscles. Make sure you are cleared to do this exercise.

- Stand tall on one leg (you can hold onto a stable support).
- Slowly raise your right leg out to the side, keeping your back straight, toes pointed, and kneecap pointed straight.
- Return to the starting position.

Repeat 10-20 times on each leg, 2 times a day. Complete one leg before switching to the other.

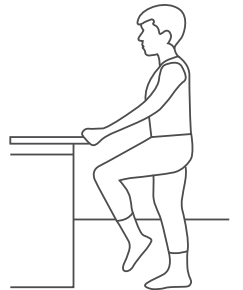


### Standing Hip Flexion

This exercise will improve hip and leg strength.

- Stand and hold onto a stable support.
- Bend your knee and hip upward, but do not lift your knee higher than your hip.
- Hold for 5 seconds, then relax.

Repeat 10-15 times on each leg, 2 times a day.





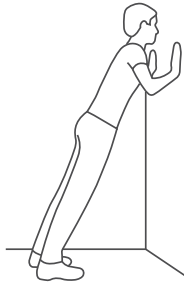
Upper body strengthening exercises will help you pull yourself up and use a walker or crutches following surgery.

Arm Push-Ups

This exercise will increase your upper body strength.

- Stand facing a wall with your arms straight and hands on the wall.
- Do push-ups against the wall, keeping your body in a straight line.

Repeat 10 times, 2 times a day.



Armchair Push-Ups

This exercise will strengthen the muscles in your arms.

- Sit in a chair and clasp the arms.
- Lift your bottom from the seat by straightening your arms and pushing the shoulders down. Do not let your chin protrude forward.

Repeat 6-10 times, 2 times a day.



Ask your care team if there are any other exercises that they would recommend to help you prepare for your hip replacement surgery.

Preventing Surgical Site Infections

At the time of surgery, it's important that you be free from infection. Any source of infection, such as your teeth or ingrown toenails, should be treated. There are several steps that you can take to help prevent surgical site infections.

Dental Care

You may continue routine cleanings as scheduled, but all other dental work must be completed at least six weeks prior to your surgery. Please call your surgeon's office if any dental problems arise prior to your scheduled surgery date. Plan to avoid dental work for 3 months after surgery unless it's an emergency.

Shaving

It is very important that you do not shave your legs or use hair removal products anywhere near the surgical area for 48 hours prior to surgery. Studies show an increased risk of surgical site infection associated with shaving due to the microscopic cuts in the skin that allow bacteria to enter.

Yard Work

Avoid yard work for 10 days prior to surgery. Also plan to have someone else help with outdoor work such as gardening or cutting the grass for at least two weeks after surgery.

Illness

If you become ill with a fever, cold, sore throat, flu, or any other illness, please contact your surgeon's office.

Skin Rash

Please report any broken skin, rashes, or sunburn to your surgeon.

Pre-Surgery Skin Preparation

Before surgery, your skin needs to be thoroughly cleansed with a special product. During your pre-admission testing visit, you may be given the product and detailed instructions regarding how to cleanse your skin prior to surgery.

Preparing Your Home

Your safety is our primary concern. We recommend that your coach, spouse, family member, or friend stay with you for at least 72 hours after your surgery until you are able to perform activities of daily living independently and safely.

You and your caregivers may want to consider these tips to help make your home safe and comfortable when you return from your surgery:

- Purchase a non-slip bathmat for inside your tub/shower.
- Check every room for tripping hazards. Remove throw rugs and secure electrical cords out of your way.
- Determine what items from dressers, cabinets, and shelves you'll need immediately after returning home. Any items you use often should be moved to counter height to avoid excessive bending or reaching.
- Make sure stairs have handrails that are securely fastened to the wall. If you must use stairs to enter or once within your home, please discuss this with the physical therapist during your visit.
- If you have pets, you may want to consider boarding them for a few days after your return home or gate off an area of your home to avoid tripping over them or other accidents.
- We recommend that you use a chair that has a firm back and armrests during your recovery. A chair with a higher seat will help you stand more easily. Chairs with wheels should not be used under any circumstances. Ensure that the chair where you will be spending most of your time during recovery allows you to keep your legs elevated.
- To increase nighttime visibility, install night lights in bathrooms, bedrooms, and hallways.



Equipment

You may need some assistive medical equipment to aid in your recovery. A member of your care team may discuss your home setup with you prior to surgery, either in person or over the phone, in order to confirm what equipment you need based on the setup of your bathroom, bedroom, stairs, etc.

Your care team will provide recommendations for any specialty equipment you may need to purchase, as well as order any items that may be billed to your insurance and provided to you before discharge or delivered to your home. Some of the equipment you may need during your recovery is as follows:

Assistive Devices and Personal Aids

- Walker, crutches, and/or cane
- Reacher/grabber/dressing stick
- Long-handled sponge
- Leg-lifter/raiser
- Sock aid
- Elastic laces for shoes



Bathroom Equipment

- Elevated commode (toilet) seat
- Toilet seat riser
- Shower bench and/or bathtub chair
- Transfer bench
- Grab bar for shower or tub



**Scheduling Transportation** Arrange transportation to and from your surgery in advance. You are not allowed to drive yourself home. If using a bus, train, cab, para-transit, or car service (e.g., Uber or Lyft), a responsible individual over the age of 16 must accompany you. This person should also be present to hear the discharge instructions to ensure a safe and smooth transition home.

**Arrival Time Confirmation** Depending on your surgical location, you will either receive a call from your care team or be asked to call them directly prior to the day of your surgery to confirm your expected arrival time. Please see your guidebook insert for more detailed instructions. The arrival time that you receive will be 1.5 to 2 hours before your scheduled surgery.

Your Hip Replacement Surgery

Day Before & Morning of Surgery Preparations

Eating

Eat light meals the day before surgery. The anesthesia and other medications at the time of surgery may slow down your bowel function causing constipation.

Do not eat anything after midnight the night before your surgery. Do not chew gum or eat hard candy, mints, cough drops, etc.

Drinking

You may drink clear liquids up to two hours before your scheduled arrival. To decrease nausea and vomiting after surgery, we encourage you to drink up to 8oz (1 cup) of clear liquid per hour from the time you wake up until 2 hours prior to your scheduled arrival time. Approved clear liquids you may drink, unless otherwise instructed by your surgeon (speak to them about this if you are diabetic), include:

- Plain tap or bottled water (no sparkling water)
- Electrolyte/sports drinks such as Gatorade® or Powerade® (no red flavors)
- Clear fruit juice such as 100% apple juice or white grape juice (no juices with pulp)
- Plain tea or black coffee (no dairy or creamer)

*Do not drink any other liquids, such as drinks with protein or other additives, or your surgery may be cancelled.*

You may brush your teeth and spit out any rinse water the morning of your surgery.

Medications

Stop all medications as your care team has instructed. If you are currently on any medication that has been allowed to be continued, please take it with a sip of water.

Smoking

Do not smoke the day of surgery.

Hygiene

To reduce the risk of potential complications and infections, please follow your surgeon’s instructions on how to clean your skin the night before surgery. You may be given Chlorhexidine Gluconate (CHG) wipes or cloths, which are antiseptic to help reduce the risk of getting a staphylococcus aureus surgical site infection. If you receive this product from your care team, it’s very important that you use it as instructed. If you were not given any special bathing instructions, or you are allergic to Chlorhexidine, be sure to bathe or shower with Dial® antibacterial soap the night before your surgery.

Please sleep on clean bed linens the night before your surgery. Wear clean, comfortable clothes the morning of your surgery.

Please avoid:

- Showering or bathing the morning of surgery
- Using lotion, deodorant, powders, aftershave, or perfume
- Shaving or clipping the surgical area prior to surgery
- Wearing makeup
- Wearing jewelry

Packing

Please bring the following items with you to surgery:

- Your hip replacement coach
- This guidebook
- Photo ID
- Insurance card
- Current list of medications
- Comfortable sneakers/tennis shoes or shoes with flat, non-skid, rubber bottoms that can easily be put on. Do not bring tight-fitting footwear, as your feet may swell a bit following surgery. Do not bring backless shoes or slippers because of the risk of falling.
- Clean, comfortable, and loose-fitting casual clothing like elastic-waist pants/shorts or jogging outfits, t-shirts, undergarments, and socks.
- Pajamas, a gown, and/or a knee-length robe that opens all the way down the front.
- Personal toiletries
- A copy of your advance directive, a living will, or durable power of attorney for healthcare. If you don't already have a copy of an advance directive, forms will be available at the hospital.
- A credit card if you need to purchase medications and/or equipment at a hospital pharmacy prior to discharge, as payment will be required at the time of purchase.
- If your care team requires you to use a walker upon discharge and it has been properly sized for you, be sure to bring it and leave it in the car. If you are not sure if your walker is at the proper height for you or if you need your walker sized for your height, bring it into the hospital with your name on it for your therapist to size.

If you use any of the following at home, please bring them as well:

- Custom-fitted prosthesis or braces
- Eyeglasses and/or contact lenses and cases with solution
- Dentures and denture storage
- Hearing aids with batteries
- Inhalers
- Respiratory machine, mask, and hose

Please leave the following items at home:

- Valuables of any kind, including jewelry
- Medications (These should be left at home in the care of a trusted loved one or locked in the safe in your room, unless otherwise directed by your care team.)

Transportation

Please have your coach drive you to your surgical location. See your guidebook insert for any driving/parking instructions and surgical site maps.

At Your Surgical Location

Arrival

Please arrive at your surgical location at the time you were given. Refer to your guidebook insert for specific instructions on where to check in upon arrival.

Preparation

Our highly skilled nursing staff will help prepare you for surgery. They will take you to a pre-operative area where you will be instructed to change into a hospital gown and put on non-slip socks to prevent falls. All of your belongings will be stored safely and returned to you during recovery. You may be asked to put on a compression device to prevent blood clots as well. They may also provide a warming blanket or warming gown to help you maintain a normal body temperature (98.6 degrees), which helps lower the risk of infection.

Your nurse will verify your name and date of birth, which is a safety check to be sure we are treating the right person at all times during your stay. They will also review your chart and verify information regarding your health, allergies, and list of medications. Your vital signs (temperature, pulse, breathing rate, and blood pressure) will be taken before you go into the operating room. Your nurse will also make sure the following preparations are completed:

- Clipping hair (if needed) around the surgical site to decrease the chance of infection.
- Washing and marking the operative site (left or right side).
- Applying skin and nasal antiseptic products to decrease the chance of infection.
- Starting an intravenous (IV) line in your arm to provide fluid you will need during surgery, as well as antibiotics post-surgery to help reduce infection.
- Provide any pain medications the surgeon has ordered to be given to you prior to the surgery.
- Ask you to confirm or sign a consent for your surgery.

An anesthesiologist will meet with you before surgery. At that time, they will examine you, discuss your medical history, and determine the best plan for your anesthesia care. It's important that you tell your anesthesiologist about any prior problems or difficulties you have had with anesthesia. They will discuss the risks and benefits associated with the various anesthesia options, as well as the potential side effects that can occur with each. Any time you have surgery with anesthesia there is a chance that you may experience some nausea and vomiting; however, medications are available to treat both and are routinely given ahead of time to help prevent these symptoms.

Your surgeon will greet you and make any final preparations as needed. You will then be taken to the operating room once it's time for your surgery.

Surgery

Operating Room

Inside the operating room (OR), you will be greeted by your surgical care team. You will again be asked to identify yourself and your birth date, which is required to ensure your safety. The operating room is kept cold, but your care team will ensure that you are kept warm. Your vital signs will be monitored.

You will then be given any anesthesia, nerve blocks, pain medication, and/or fluids as needed. If you are receiving spinal anesthesia, medication will be injected in the spinal canal to numb your legs. You will receive sedation before the spinal anesthetic, so you will be comfortable and relaxed while it's being performed. Once the medication is administered by your anesthesiologist, you will be given additional sedation to relax into a twilight sleep. You will not be able to feel or move your legs until the spinal anesthesia has worn off, which can last several hours. During your surgery, you will be given medications to help decrease post-operative pain and decrease bleeding.

The total time required for surgery differs from patient to patient, depending on the type of replacement and complexity of the procedure. Some procedures can last less than 1 hour, while others may be more than 3 hours. Start to finish (getting you ready for surgery, surgery time, and recovery) is usually about 3 to 4.5 hours.

Family Waiting

When you are taken to the operating room, your coach and any other visitors will be asked to go to a waiting area and provide a cell phone number so that they can be contacted with updates on your progress after surgery. Each waiting area is equipped with comfortable seating and WiFi.

Once your hip replacement is complete, a member of the surgical team will contact your coach so they can discuss your procedure with the surgeon.



Recovery

After surgery, you will be taken to the Post Anesthesia Care Unit (PACU), or recovery room, where the following will occur:

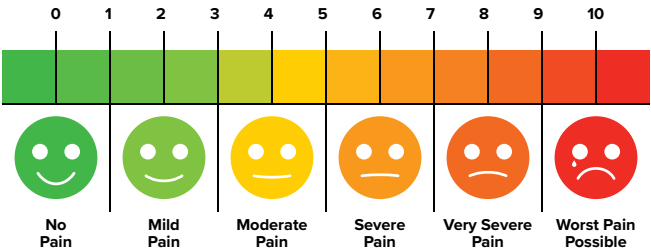
- You will be given oxygen through your nose.
- Your vital signs will be closely monitored, including your blood pressure, respiratory rate, heart rate, and temperature.
- Your pain level will be closely monitored, and pain medicine will be administered so we can keep you comfortable.
- You may be connected to several machines, including pain pumps, drains, and urinary catheters. When present, catheters drain your bladder, and surgical drains remove blood from your incision to help lessen bruising.
- You may receive an incentive spirometer after surgery to reduce lung complications, such as pneumonia. Nurses will encourage you to sit up in bed, take deep breaths, and cough.
- A calf or foot compression device will squeeze your leg at regular intervals to circulate blood and prevent blood clots.
- Cold packs will continuously be applied to your surgical site to reduce pain and swelling.
- Warming blankets or gowns will be used to maintain normal body temperature.
- IV fluids will continue, and you may begin to drink if your vital signs are stable and you are not feeling nauseous.
- An x-ray of the new joint may be obtained.

Everyone responds differently to surgery and anesthesia. You may spend approximately 1 to 3 hours in the PACU while you recover from the effects of anesthesia. Depending on your status, bed availability, and your discharge plan, you may work with a therapist or nurse to get up and walk in the recovery room and/or you may be moved to a hospital room or discharged.

If you are moved to a hospital room, your care team will assess you and continue to monitor you frequently. Your surgeon will check in and be able to answer any questions you have. You will notice a dressing on your hip. You will also have compression devices on both legs. If you do not feel the compression devices squeezing your legs at regular intervals, be sure to let someone know. The goal during your hospital stay is to maximize your comfort and expedite your ability to move and regain your independence.

Pain Management

Patient comfort is our primary concern. Your care team will do everything possible to help control your pain. Pain is easier to control when treatment is started as soon as it begins, so communication is an important part of helping us manage your pain. We encourage you to tell us about any pain you experience, specifying where it is, how often you feel it, and what it feels like (sharp, dull, aching, or spreading out). Your care team will often ask you to rate your pain on a scale from 0-10, with 0 meaning no pain and 10 meaning the worst possible pain:



It is normal to feel a certain amount of pain after surgery. Pain can be caused by multiple factors and varies from person to person. Your care team will continue your advanced pain protocol to get your pain level low enough that you are able to rest comfortably and actively participate in your therapy sessions. There are a number of ways we can help control your pain, including:

- **Positioning:** Your nurse will help you find a comfortable and safe position. This may involve elevating the leg that was operated on. In general, it is okay to move about while in bed.
- **Cold Therapy:** Ice and other forms of cold therapy may be used to help control pain.
- **Movement:** It is particularly important to start your post-operative exercises (ankle pumps, quad sets, and gluteal sets) as soon as possible.
- **Medication:** Medication and liquids will be given intravenously or by mouth after surgery. You may receive antibiotics, pain medication, anti-inflammatory medication to control soreness, anticoagulants to prevent blood clots, nausea medication, stool softeners, sleeping aids, and/or blood thinners as needed. It's important that you talk with your care team if you don't feel well, if your pain worsens or changes, or if medication isn't alleviating your pain. They will adjust your pain management plan as needed based on your pain score, breathing, level of sleepiness, and ability to participate in therapy. Be sure to review all over the counter medications with your care team before taking after surgery as well.
- **Nerve Block:** This method of controlling pain uses an anti-inflammatory injection to "turn off" a pain signal coming from a specific area of the body.
- **Deep Breathing:** You may be given an incentive spirometer device to help keep your lungs clear and prevent pneumonia. You should slowly inhale through your nose and slowly exhale through your mouth, ideally 10 times each hour (at least 3 to 4 times per day).

This enhanced recovery after surgery program helps ensure you recover safely and lowers your risk of complications after surgery. Our goal is to reduce pain and nausea, keep you hydrated, improve movement, and ultimately make your discharge and recovery faster and easier while minimizing any risk of opioid dependence.

Food & Drink

Following surgery, you may resume a normal diet as tolerated. You may be asked to chew gum to help improve recovery of bowel function, if needed.

Movement

It is our goal to get you moving with your new joint as soon as possible, many times within hours of your surgery. Once your vital signs are stable and you have regained movement and sensation in your lower extremities, your care team will work with you to get you moving. You will be instructed to perform ankle pumps every hour while you are awake to keep blood from pooling in your lower legs, reducing your risk of a blood clot. You will also be encouraged to get out of bed as soon as possible on the day of surgery to help in your recovery and prevent complications. However, please do not get out of bed without help from your care team.

Your care team will review hip precautions with you before you are discharged, which are restrictions and instructions on how to move your hip after surgery in order to prevent dislocation.

A physical therapist may also perform an evaluation and build a therapy plan with exercises designed to help increase strength and flexibility in your hip. Physical activity will begin with simple tasks, including some exercises that you can perform throughout the day from your bed or chair. These may include:

- Sitting on the side of the bed
- Putting weight on the joint
- Moving to a chair
- Sitting out of bed for meals
- Walking in your room and/or the hallways
- Using assistive devices
- Exercises such as ankle pumps, straight leg raises, and heel slides



If you remain in the hospital one or two days after your surgery, you will continue to increase your physical activity and add more exercises and activities to your rehabilitation plan. These exercises may be performed in an individual or group setting, and family and friends are encouraged to attend these sessions with you. Some goals may include:

- Increased tolerance for sitting in a chair
- Increased sitting exercises
- Increased walking with appropriate assistive equipment like a walker, crutches, or cane
- Stairs, as appropriate and tolerated

A physical and/or occupational therapist may also work with you on activities of daily living and teach you how to use assistive devices, as needed, to help with daily tasks when you go home. This may include a walker, crutches, handheld grabbers, and long-handled shoehorns. Your outcomes will be better if you participate in your sessions as directed, both before and after discharge. Alert someone if pain is causing you to not want to participate in the therapy program so that we can better manage your pain.

### Discharge

The length of your hospital stay will depend on several factors that your care team will discuss with you ahead of time. Some patients stay overnight and are discharged one or two days after surgery. If your pain is well controlled, you're doing very well medically and with rehabilitation, and you have strong support at home, you may be eligible to go home the same day as your hip replacement surgery. Your care team will determine when it is safe for you to go home based on the following factors:

- Are you medically stable?
- Is your pain well controlled?
- Can you urinate?
- Are you able to tolerate food?
- Can you get in and out of bed?

- Can you get up and down from a chair and toilet?
- Can you perform your personal hygiene independently?
- Can you walk a certain distance (as determined by your care team)?
- Can you walk up and down the stairs?
- Can you get dressed?
- Can you get in and out of a car?
- Can you perform your hip exercises?

Before you are discharged, your care team may arrange the following based on your individual needs:

- Medication for pain and inflammation
- Medication to prevent blood clots
- Extra bandages
- Assistive devices, such as a walker and other equipment
- Physical and/or occupational therapy

Our goal is for you to regain independence and get home or transferred to another care facility safely after surgery. You and your coach will receive specific discharge instructions and should have a firm understanding of them, including:

- Activity restrictions (such as bathing, driving, and working)
- Medications
- Incision and wound care
- Signs and symptoms of infection
- Prevention of blood clots
- Your exercise program
- Required check-up visits

Once you are cleared by your care team and your discharge plan has been finalized, you will be discharged. You are unable to drive yourself home, so please arrange to have your coach or another family member or friend take you home. The vehicle should be easy to get into and comfortable to ride in. To make your ride more comfortable, please ask your driver to slide your seat back and recline it slightly. You can bring a pillow to sit on to increase comfort.

## Life After Hip Replacement Surgery

### Transitioning Home

Remember that following hip replacement surgery, your incision, muscles, and ligaments need time to heal. After you are discharged, you will continue to experience gradual improvements. It is expected that you will begin to have less pain and swelling, increase your activity level, and achieve a more independent lifestyle by following the instructions provided by your care team. Recovery from surgery normally happens within 3 months, although it may take 6 months to a year to fully recover. You may continue to experience increases in strength and endurance for up to a year. It is possible that you experience some challenges along the way, but these tips will help you navigate any you may encounter. If you have specific concerns or fail to progress, you should talk to your surgeon.

### Medication

Continue taking medications as instructed. Medications you may be instructed to take include:

- Blood thinner (such as Aspirin, Eliquis, Xarelto, Coumadin, Lovenox, or Arixtra)
- Acetaminophen (such as Tylenol)
- Anti-inflammatory medicine (such as Celecoxib, Meloxicam, or Ibuprofen)
- Short-acting narcotic (such as Oxycodone or Tramadol)

Pain medication should only be taken to manage pain, and you should gradually lessen your dependence on it. Most patients are able to wean themselves off of narcotic pain medication within a week or two and only take Acetaminophen and anti-inflammatories if indicated. Pain medication may cause nausea, constipation, or light-headedness. Remember to take it with food and plenty of water. Avoid drinking alcohol or driving while taking prescribed pain medication. You should

continue to take a stool softener until you are no longer taking pain medication. You should also resume the medications you were taking prior to surgery as prescribed.

### Pain

It is normal to experience some pain after hip replacement surgery. Following your care team's regimen of rest, cold therapy, elevation, and taking your pain medications as prescribed should gradually decrease your pain, but if it does not relieve your pain to a satisfactory level, please contact your surgeon's office. If pain is limiting your exercise tolerance, then we recommend taking pain medication 30 to 45 minutes before a physical therapy session in order to prevent severe pain.

### Constipation

Some people experience constipation because of anesthesia, decreased mobility, and/or taking pain medication. You should not let more than 3 days pass without a bowel movement. Consider drinking more water, drinking warm prune juice or warm ginger ale with a teabag daily, adding dietary fiber to your diet (such as bran cereal with chopped prunes and apple juice, and other fruits, vegetables, beans, and nuts), or taking an over-the-counter stool softener or a laxative to prevent constipation. If you have not had a bowel movement 24 hours after taking a laxative, please call your surgeon's office. Exercise and walking also help prevent constipation.

### Swelling

Swelling, bruising, and redness around your incision are normal parts of the body's healing process. Swelling can occur in your entire leg (including your foot) and bruising can travel from your groin to your toes. Swelling varies by person but usually peaks around 7–14 days

after surgery and may last from a few weeks to a year. Swelling and bruising can be decreased by using the RICE technique:

- **Rest:** Continue to perform ankle pumps at least 10 times an hour, but balance your exercise regimen with rest periods throughout the day, elevating your legs when at rest.
- **Ice:** Continue to use cold therapy as instructed by your care team to help reduce pain and swelling for the first few weeks following surgery. Never place the cold packs directly on your skin; be sure to place them into a protective sleeve before placing them onto the hip or wherever you are having pain or discomfort.
- **Compression:** If your care team recommends using compression devices at home, continue to wear them as directed to reduce swelling and improve circulation. They may be removed while you sleep at night.
- **Elevation:** Continue to elevate (prop up) your leg for 45 minutes to 1 hour, 2 to 3 times a day to alleviate swelling.

Fever

Your body temperature may be higher than normal for several days after surgery. If your fever continues over 101°F and you have chills, sweating, increased pain, redness, or leaking at your incision, call your surgeon’s office immediately.

Infection

After hip surgery, you are at risk of developing an infection. It’s important to monitor for the following signs and symptoms:

- Increased drainage from the incision (covering half or more of the dressing)
- Swelling, redness, or warmth around the incision
- Fever above 101°F, chills
- Pain that doesn’t improve with rest or pain medications
- Wound edges that begin to separate

If you notice any of these symptoms, call your surgeon’s office immediately.

Tips to Prevent Infection:

- If you are prescribed antibiotics, continue to take as prescribed to reduce the risk of infection in your new joint.
- Wash your hands thoroughly with soap and water for at least 20 seconds before touching your incision or dressing.
- Keep the incision covered with the surgical dressing, and do not remove it unless instructed by your surgeon.
- Reinforce the edges of your dressing with surgical tape if they become loose.
- Avoid touching, picking at, or applying any lotions, creams, or ointments to your incision for the first week after surgery or until cleared by your surgeon.
- Ensure your bed linens and clothes are clean.
- Keep pets off your bed and away from your incision.
- Most patients can shower after discharge, but check with your surgeon before doing so.
- Keep your incision dry and do not soak it in water (e.g., bathtubs, swimming pools, or hot tubs) until cleared by your surgeon (typically until 6 weeks after surgery). If your dressing becomes heavily soaked (covering half or more of the dressing), contact your surgeon’s office immediately.

Blood Clots

After hip surgery, you are at risk of developing a blood clot, also known as a deep vein thrombosis (DVT). Blood clots can form in either the arms or legs, but most commonly occur in the lower leg. It’s important to monitor for the following signs and symptoms of blood clots and call your surgeon’s office immediately if you notice any of them:

- Pain in your thigh, calf, or ankle
- Tenderness, redness, and warmth in the arm or leg
- Increased swelling

When you have a blood clot, it blocks the flow of blood and there is a risk that when the clot breaks off it travels through the bloodstream to your lungs causing a pulmonary embolism (PE). If you experience a sudden onset of shortness of breath, chest pain, and/or lightheadedness, call 911 immediately as this is considered a medical emergency.

Tips to Prevent Blood Clots:

- To reduce the risk of blood clots while recovering at home, it’s important to follow your surgeon’s recommendations for anti-coagulation (AC) medication, also known as blood thinners. These medications are typically prescribed for about 1 month, but the exact duration may vary based on your medical history and your surgeon’s preferences. Blood-thinning medications can come in the form of a pill (such as Aspirin, Coumadin, Eliquis, and Xarelto) or injection (such as Lovenox and Arixtra).
- Avoid sitting for more than 45 minutes to an hour at a time. Stay active by taking frequent, short walks and try to increase the distance each day as you feel comfortable.

- Stick to your exercise program, completing it at least twice daily.
- Perform ankle pump exercises every 1–2 hours while awake to promote blood flow.
- Elevate your leg using 3-4 pillows or an elevated wedge so that your toes are higher than your nose. This helps reduce swelling and pain.

By combining medication with movement and these practical tips, you can significantly lower your risk of blood clots and support a safer recovery.

If you experience sudden shortness of breath, chest pain, palpitations, difficulty breathing, or confusion, call 911 immediately.



Post-Operative Care

When to Call Your Surgeon

A moderate amount of bruising, swelling, and redness can be expected after hip replacement surgery. If you experience any of the following, you should contact your surgeon:

- A fall
- Inability to walk
- Pain, tenderness, or swelling isolated to your calf and/or ankle on either side (this may indicate a possible blood clot)
- Increased redness around your incision
- Bruising that gets bigger
- Thick yellow drainage from the incision site or any other wound and/or a bad odor
- Your hip dressing is 50% soaked with drainage
- A persistent temperature over 101° F (38.3° C)
- If you experience persistent nausea and/or vomiting
- Bleeding from the surgical site
- Bleeding from your mouth or coughing up blood
- Blood in your urine or bowel movements
- You have a nosebleed or cut that won't stop after applying pressure
- Inability to do your exercises for any reason
- Toes that are very cold and do not get warm when you cover them
- Any unexpected problems, concerns, or questions

If the following symptoms are not relieved or worsen after cold therapy, rest, and elevation, please call your surgeon's office:

- Swelling
- Numbness, tingling, or burning
- Pain not controlled by medication or pain that is getting worse

Notify your surgeon's office if you have any other questions after your surgery.

Follow-up Appointments

After surgery, you will need to periodically be evaluated to make sure that your new joint is functioning correctly, your wound is healing properly, and your surgical staples or sutures are removed if needed. Post-operative appointments and wound care are based on your care team's protocol, but may include a surgical follow-up appointment a few weeks after surgery, along with physical and/or occupational therapy and a primary care visit as needed. You will likely visit your surgeon's office several times during the first year, and then have your hip replacement monitored annually for life.

Future Medical & Dental Care

Before any future medical or dental procedures, it is important to inform your provider that you have a hip implant. Antibiotics may be required before the procedure as it is possible that an infection elsewhere could spread to your hip.

Plan to avoid dental work for 3 months after surgery unless it's an emergency.

If you need an MRI in the future, make sure it is known that you have an artificial hip. The metals used in current hip implants are usually compatible with MRI machines as they are non-ferrous (non-iron based materials).

Hip Precautions

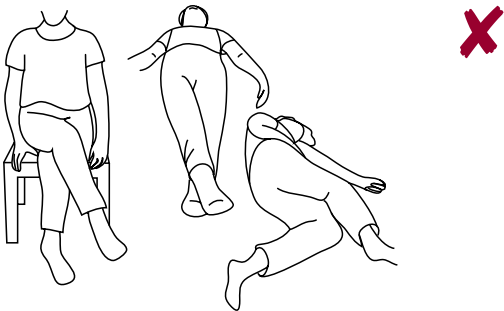
After hip replacement surgery, there are certain rules or "precautions" you must follow to protect your new hip. It is unlikely that your new hip will dislocate, but it can occur, so following these rules will help reduce the risk of dislocation. There may be different positions your surgeon wants you to avoid, depending on the type of surgery you had. They may also identify the amount of weight you can put on your affected leg. This is to ensure the best healing and the most successful outcome. All hip precautions should be followed for as long as your care team has instructed. Ask your therapist or surgeon if you have any questions, as not all people will have the same precautions.

Posterior

The following precautions apply if your incision is on the back or side of your hip (posterior approach).

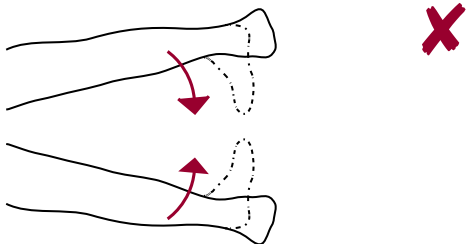
No Crossing Your Legs (Adduction)

Do not allow your operated leg to cross the mid-line of your body. Do not cross your legs at the knee or ankle while standing, sitting, or lying down. This includes not supporting your operated leg with your non-operated leg. You may put a pillow between your knees as a reminder.



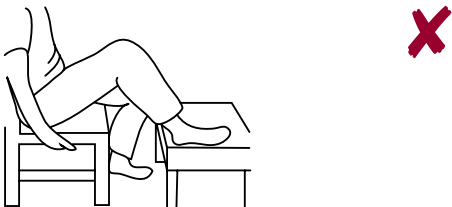
No Rotating or Twisting Your Operative Leg (Turning In or Out)

Your toes should always be pointing forward. Do not allow your toes to point inward ("pigeon-toe") or outward when in bed, sitting, standing, or walking. Your toes, knees, and shoulders should always face the same direction.

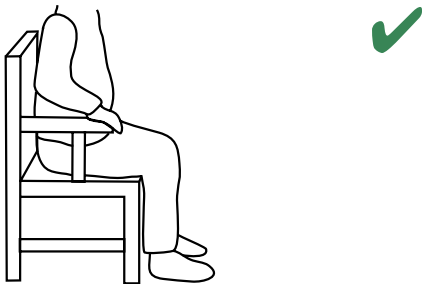


Limit Bending (Hip Flexion)

Do not bend your hips more than 90 degrees while standing, sitting, or lying down. When seated, do not lean forward and do not bring your knees up toward your chest. When standing, do not bend down to pick something up from the floor.



Be very careful not to combine restricted motions. For example, never cross the mid-line of your body and rotate your toes inward or kick backwards and rotate toes outward.



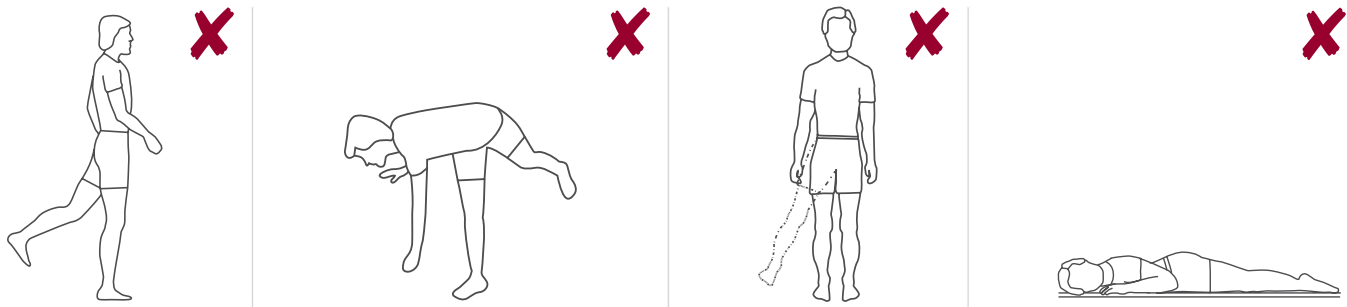


Anterior

The following precautions apply if your surgical incision is located on the front of your hip (anterior approach).

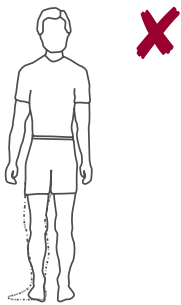
No Hip Extension

Do not extend your operative leg behind you. If backing up, lead with your non-surgical leg. For example, no “golfer’s bend” is allowed (bending forward allowing the leg closest to the first point of contact to rise in the air behind you). Do not bring your leg far out to the side or lie on your stomach.



No Rotating or Twisting Your Operative Leg (Turning In or Out)

Do not rotate or twist your operative leg or feet inward or outward. When turning away from your affected leg, make sure to take small steps since you will be “indirectly” externally rotating your affected leg with this motion.



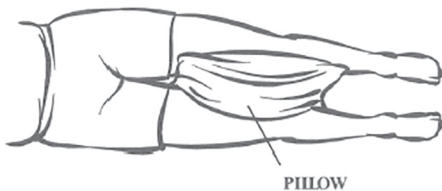
Activities of Daily Living

Activities of daily living are tasks that you perform throughout the day. Follow your hip precautions and these tips for a successful transition back to daily living. Your therapist may teach you additional ways to get these tasks done safely that may be different from what you’re used to doing and could involve assistive equipment. We recommend you form a daily self-care routine and try to do as much yourself as possible, asking your coach to help you with tasks that you feel you can’t do safely by yourself.

Rest

It’s common to have difficulty sleeping after surgery and for your energy levels to decrease. Be sure to take rest breaks as needed during the day to support the healing process. Your energy levels will gradually improve.

Sleeping on your back is preferred; however, you may sleep on your non-operated side with a pillow between your legs to keep your legs from crossing. If you use a machine for sleep apnea, it’s especially important that you use it at home following surgery, both overnight and during naps.



Transfers

A transfer is any time you change positions from one seated surface to another or from a seated surface to standing. Here are some tips for successful transfers:

- Always choose a sturdy chair with a firm seat and armrests. Avoid seats that are too low and do not sit in chairs with wheels. Be sure to sit in seats that are at least as high as the back of your knees, adding a firm cushion if it is not high enough. For periods of rest, use a seat that allows for elevation of the legs, such as a recliner or ottoman.
- You may want to keep your operative leg slightly out in front of the other leg so it does not bend too much when you are sitting or standing.
- If you have trouble getting up and down, lean forward slightly to shift your weight onto your feet.
- When you stand, use both hands to push up from a firm surface. Do not reach for your walker or crutches until you have your balance. Never pull up on your walker for help to stand because it can cause the walker to tip and result in you losing your balance and falling.
- Always wait a few seconds after standing before starting to walk to be sure you are not feeling dizzy so that you are steady on your feet.

Getting In and Out of Bed

To get in bed, sit down on the edge of the bed (closer to the head of the bed than the foot of the bed). Extend your arms behind you for support and scoot back so that your knees are touching the side of the bed and your operative leg is extended out further in front of you. Start turning your body toward the middle of the bed, lifting one leg up onto the bed and then the other without crossing them. Use a leg lifter to lift your operative leg onto the bed. Then gently lower your trunk and shoulders down on the pillows.

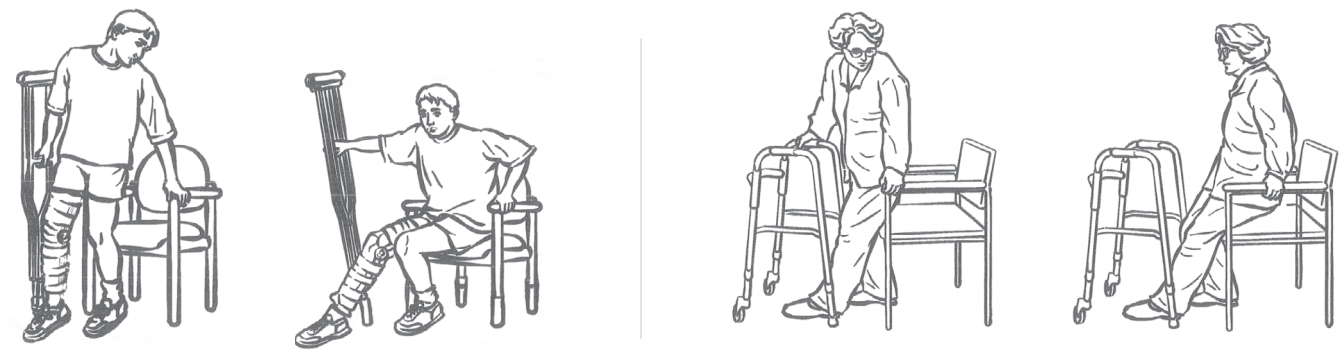


You will want to get out of bed on your operated side. Sit up onto your elbows and then up onto your hands with your legs straight out in front of you. Using your arms, scoot to the edge of your bed. Move around, keeping your body and legs straight. Do not roll. Sit on the edge of the bed using your arms for support. Using a leg lifter, lower your legs to the floor one at a time and slide your operated leg out in front of you. Use both hands to push off the bed, balancing yourself before reaching for your walker.

Do not cross your non-operated leg under your operated leg when getting in or out of bed as this breaks a hip precaution.

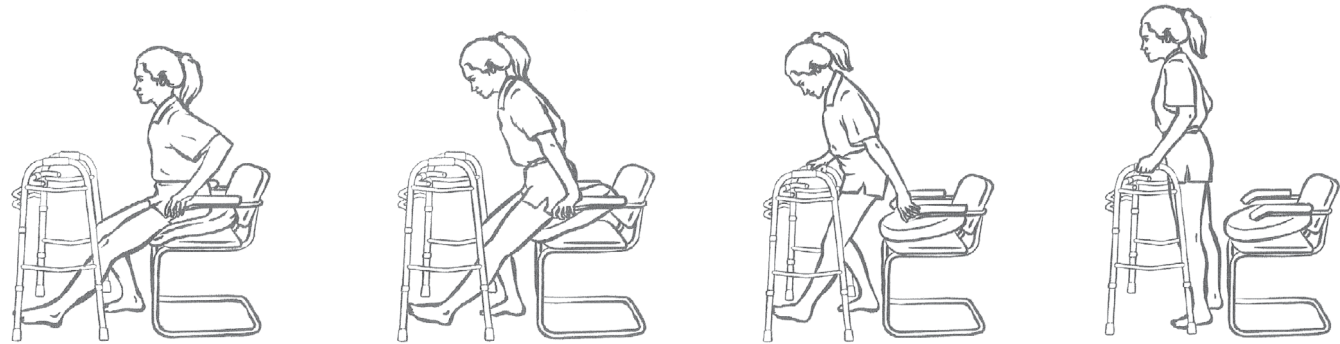
**Sitting Down**

- Back up, leading with the unaffected leg, until you feel the seat on both legs.
- Scoot the affected leg out in front of you.
- Reach back for armrests or grab bar near the seat or surface you’ll be sitting on, one hand at a time. Do not start to sit with your hands on your assistive device.
- Slowly lower yourself down to the edge of the seat, keeping your affected leg in front of you in order to take pressure off and not increase pain.
- Scoot back into the seat.



**Standing Up**

- Scoot to the edge of the seat.
- Keep your affected leg out in front and your unaffected leg underneath you.
- Use both hands to push up from the armrests of the chair or surface on which you are sitting.
- Stand.
- Reach for your assistive device.



**Using the Toilet**

To use the toilet, back up with your non-operative leg until you feel the back of your legs against the toilet, keeping your operative leg out in front. If using an elevated commode or raised toilet seat with arms, use the armrests to lower yourself onto toilet seat and scoot back while bending your knee and hip on the non-operated side. When you are ready to stand up, scoot forward and use the armrests to help you stand. Do not reach for your assistive device until you have your balance.

**Bathing**

Do not take a shower, bath, or swim until cleared by your care team. Once given permission, do not soak your incision in water. If your surgeon used a waterproof bandage, you can bathe with it in place. If you do not have a waterproof bandage, you should place a waterproof plastic wrap over the bandage.

Always remember to use your hip precautions. When washing your back, do not twist your upper body around. Instead, use a long-handled sponge to assist you with washing your back, legs, and feet. Your therapist can instruct and demonstrate this for you. If possible, have someone available to help you the first few times you bathe after surgery.

**Getting Into a Shower or Bathtub**

Exercise caution while getting in and out of the shower or bathtub. Your care team will determine what shower set up will work best in your home and show you how to enter your particular shower. A stall shower is preferred when available. Your therapist may recommend a shower seat for safety and/or to allow you to sit down periodically if you get tired standing. Follow these steps for a successful transfer:

- Stand next to the shower/tub facing the showerhead.
- Step sideways into the shower/tub using the leg closest to the tub first.
- Do not turn around while in the shower/tub.
- If needed, sit on a shower/tub seat until you feel steady enough to stand when showering.
- Reverse the steps when getting out of the shower/tub.





Dressing

Your therapist may recommend a reacher, sock aid, and/or shoehorn to assist you with getting dressed and undressed safely. These items are all included in a “Deluxe Hip Kit” that’s available for purchase at a surgical supply store, local pharmacy, or online.

Putting on Socks

- Sit on a chair or on your bedside.
- Pull the sock onto the sock aid as demonstrated by your therapist.
- Hold the sock in front of the foot on your affected side. Slip your foot into the sock. Pull the sock aid out of the sock.
- Put the other sock on with the sock aid or bring your foot toward your knee and slip it on with your hands.



Putting on Pants

- Sit in a chair or your bedside.
- Using a reacher, catch the waistband of underwear or pants with the grabber.
- Slip the pants onto the affected leg first. Then slip your other leg into the leg hole.
- Use the reacher to pull pants over your feet and above your knee.
- Pull them to where you can reach with your hands.
- Hold the pants with one hand. Push up from the chair or bed and steady yourself with your walker.
- Then, once you are steady on your feet, pull the pants the rest of the way up.



Putting on Shoes

- Wear slip-on shoes with a back or use elastic shoelaces.
- Sit in a chair. Put your foot into the shoe.
- Use a reacher or long-handled metal shoehorn to pull on the shoe.



Diet

You may experience decreased appetite after surgery. This is normal and should gradually resolve. It is important to eat a healthy, well-balanced diet, both before and after surgery, and to drink plenty of fluids to promote healing. You should aim to eat foods that are rich in:

- **Iron:** to build red blood cells and minimize post-operative anemia
- **Calcium:** to strengthen your bones as they heal
- **Fiber:** to prevent constipation that can occur as a side effect
- **Protein:** for healing your skin, bones, and muscles
- **Hydration:** to prevent constipation, weakness, and blood clot formation

Physical Activity

Exercise and maintaining an active lifestyle are important parts of health. Most patients with artificial joints are able to enjoy many activities, though some should be avoided. Your care team will advise you as to when you may begin or resume certain physical activities. You should slowly increase your walking distance and activity level. You may put as much weight as tolerated on your affected leg, unless otherwise directed. Do not use exercise equipment or participate in any sports until you have your surgeon’s approval. In general, high-impact exercises like running, jumping, heavy lifting, or contact sports are not recommended. Participating in these activities, or activities like them, may damage your joint or cause it to wear down much more quickly. Low-impact activities like walking, biking, gardening, and golf are encouraged when cleared by your care team. Be mindful of weather conditions if performing activities outside. You may resume swimming when your surgeon verifies that your incision is fully healed.

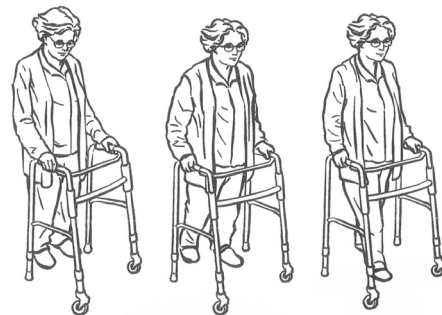
Walking

Walking is a great exercise because it strengthens your muscles, increases your flexibility, and improves your endurance. Initially, you will be walking with the help of an assistive device. This will first be a walker or crutches, which will give you the most support. If you have a weight-bearing restriction, your assistive device will help you maintain it. A progression to a cane may be made with the assistance of your therapist.

Using a Walker

Many hip replacement patients use a walker for 1 to 4 weeks. Your therapist will teach you the correct way to use your walker. Please follow this sequence for stability when using a standing or rolling walker:

- Push the walker a few inches in front of you.
- Lean onto the assistive device so it supports your weight.
- Step forward with the operative leg so that the foot lands between your hands and in the middle of the walker frame.
- Step with the non-operative leg so that it lands even with or in front of the operative leg.
- Repeat, finishing each movement before you begin the next one.



Patients who are weight-bearing as tolerated and using a rolling walker may quickly progress to a normal gait pattern with one foot in front of the other while maintaining a smooth glide.



Using Crutches

Some patients may be eligible to use crutches rather than a walker. If that's the case for you, your therapist will teach you the correct way use them. Improper use can be uncomfortable and hazardous. Always remember:

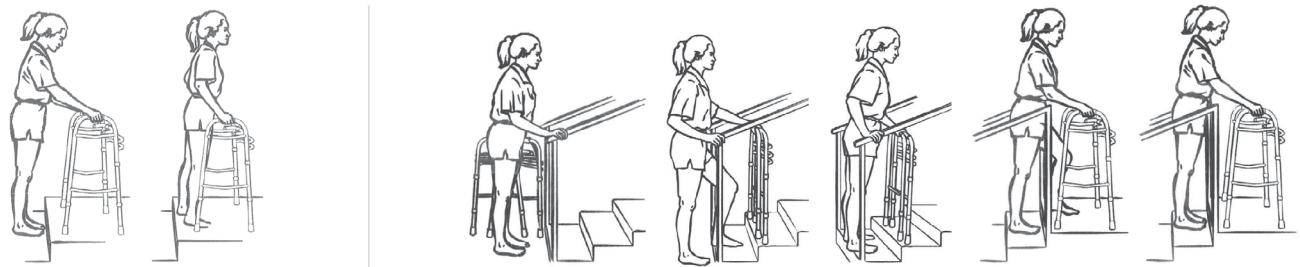
- Crutches should be placed 3 inches below your armpit when standing at full height.
- The bottom of the crutch should be 2 inches to the side and 6 inches in front of your foot.
- The handle should not allow your elbow to flex past 30°.
- The top of the crutch should not be used as the primary support. Body weight should be supported by the handle.

Going Up and Down Stairs

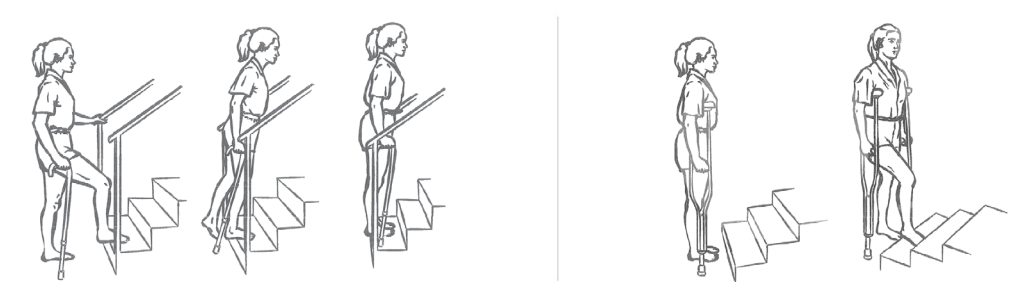
In the absence of two railings, some patients use a cane or crutch in addition to one handrail to assist with stair climbing. Others may use a walker if the steps are large enough to accommodate one. Your therapist will recommend the safest way to do your stairs after discussing your home setup. Be sure to maintain control during stair-climbing and go slow. Always wear proper footwear (rubber-soled shoes rather than socks or “slip on” shoes) and make sure your stairs are well lit and free of clutter.

Going Up (“Up with the Good”)

- Walk to the edge of the step.
- Your next movement will depend on the set up of the stairs and the assistive device you’re using:
  - ▶ **Walker:** If you are using a walker and the steps are large enough to accommodate it, place it up on the next level, making sure all four legs are firmly on the surface. An alternative approach is to back up to the steps, putting weight on the assistive device and stepping up with the non-operative leg first, then the operative leg. Once balanced, lift all four legs of the walker up the steps. If the surface isn’t large enough to accommodate a walker but there is a railing available, fold your walker completely, holding the center of it in one hand and placing it up on the next level while grasping onto the railing with the other.



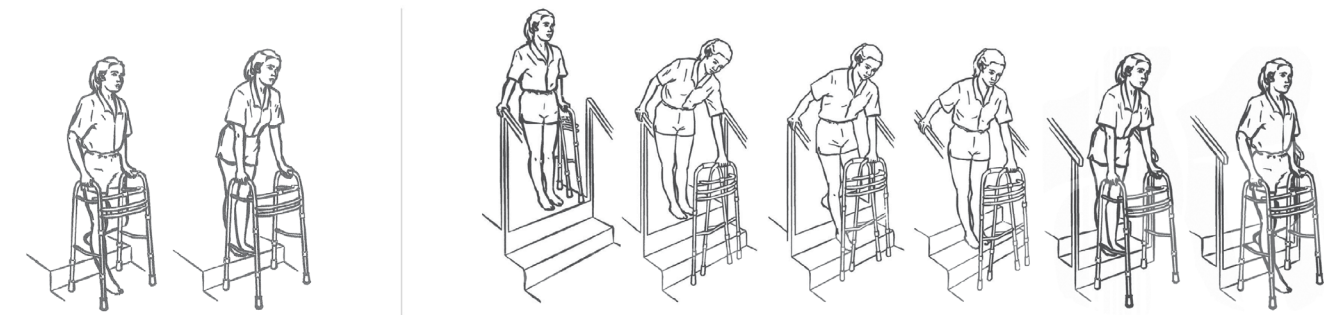
- ▶ **Cane or Crutch(es):** If you are using a cane or crutch and a railing is available, grasp the railing with the one hand and the assistive device with the other (if you have two crutches, put both under one arm or give one to your coach to hold). If you are using crutches and no railing is available, put one crutch under each arm.



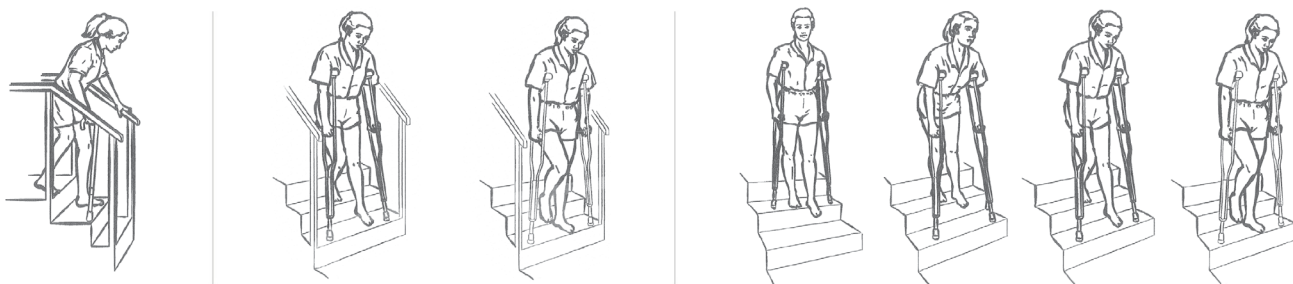
- ▶ **Alternative:** If there are consecutive steps with 2 railings available, you may move your assistive device out of the way (have someone carry it for you) and grasp firmly onto both rails.
- Raise your stronger (non-operative) leg up onto the step.
- Once you have your balance, press through your stronger (non-operative) leg to raise the weaker (operated) leg up onto the same step.
- If you are using a cane or crutch(es), have it follow.
- Repeat.

Going Down (“Down with the Bad”)

- Walk to the edge of the step.
- Your next movement will depend on the set up of the stairs and the assistive device you’re using:
  - ▶ **Walker:** If you are using a walker and the steps are large enough to accommodate it, place it down on the level below, making sure all four legs are firmly on the surface. If the surface isn’t large enough to accommodate your walker but there is a railing available, fold your walker completely, holding the center of it in one hand and placing it down onto the lower step while grasping onto the railing with the other hand.



- **Cane or Crutch(es):** If you are using a cane or crutch and a railing is available, put it in one hand (if you have two crutches, put both under one arm or give one to your coach to hold) and place it down on the lower step while grasping onto the railing with the other hand. If you are using crutches and no railing is available, put one crutch under each arm and place both crutches down on the lower step.



- **Alternative:** If there are consecutive steps with 2 railings available, you may move your assistive device out of the way (have someone carry it for you) and grasp firmly onto both rails.
- Slowly lower the weaker (operated) leg down onto the step, making sure to keep it straight.
- Step down with the stronger (non-operated) leg onto the same step.
- Repeat.

### Driving

You should not drive a car or other motor vehicle until your surgeon says it is safe to do so. You will not be cleared to drive until you are finished your pain medications. In most cases, patients are able to resume driving about 2–6 weeks after surgery, depending on which hip you had replaced.

### Traveling

Because your new artificial joint contains metal components, you will likely set off the security systems at airports or shopping malls. This is normal and should not cause concern. When traveling long distances, you should attempt to change position or stand about every hour. Some exercises, like ankle pumps, can also be performed should you need to sit for long periods of time.

### Work

Ask your surgeon when it is appropriate for you to return to work. Your timeline depends on the nature of your job, work conditions, and overall recovery progression. If your job requires a work release form, ask your surgeon to sign one.

### Sex

Ask your surgeon when you can return to sexual activity. Typically, this is between 4 and 6 weeks after surgery. You should be mindful of hip precautions during sex. Your surgeon can tell you which positions are safe and how to protect your new hip until it is fully healed.

## Post-Operative Rehabilitation

After discharge, your surgeon will require continued rehabilitation to emphasize stretching and strengthening of the hip after replacement so that you can meet your recovery goals. Your care team will determine whether your rehabilitation can be completed by following a post-operative exercise program at home, or if you are required to complete outpatient physical therapy, home health physical therapy, or inpatient rehabilitation at a skilled nursing facility:

- **Home Exercise Program:** Complete your post-operative exercises at home 2 times per day following discharge from your surgical location. Your care team may provide revised exercises for you upon discharge if needed.
- **Outpatient Physical Therapy:** Your surgeon may want you to receive outpatient physical therapy. If so, your care team can assist in making appropriate arrangements at a location close to your home. Your therapist will determine how often and for how long you will need to continue therapy following surgery based on your progress.
- **Home Health Physical Therapy:** Your surgeon may want you to receive physical therapy at your home, either in addition to or instead of outpatient physical therapy. If so, your care team can assist in making appropriate arrangements. Your therapist will determine how often and for how long you will need to continue therapy following surgery based on your progress.
- **Skilled Nursing Facility Rehabilitation:** Some patients may require additional recovery time at a skilled nursing facility. If this applies to you, your care team can assist in making appropriate arrangements.

## Post-Operative Exercises

There are simple exercises that you will need to do to help strengthen your leg muscles and increase flexibility and function following surgery. To get the best results from your surgery, it is important that you do these exercises consistently and correctly. You may not be cleared to do all the exercises right away. Our goal is to assist you in achieving the safest level of functional mobility. Your therapist will instruct you in which exercises to do and how often. A general guideline is to perform 5-10 reps, 3-5 times a day. If you have any questions or concerns regarding your exercises, do not hesitate to contact your therapist.

The following pre-operative exercises starting on page 7 of this guidebook should also be performed after surgery:

- Ankle pumps
- Quad sets
- Gluteal sets
- Heel slides
- Hip abduction/adduction
- Short arc quads
- Long arc quads (seated knee extensions/kicks)
- Standing hip abduction (side kicks)
- Standing hip flexion



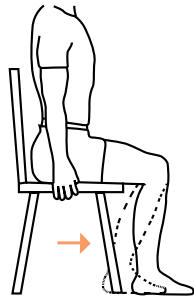
Please perform these exercises after surgery as well.

**Seated Knee Flexion (Bends)**

This exercise will increase thigh muscle flexibility.

- Sit in a chair with both knees bent and both feet on the floor.
- Keeping your thigh on the chair, slide your foot as far under the chair as possible.
- Hold for 5 seconds, then slowly return to starting position.

Repeat 10-15 times on each leg, 2-3 times per day.

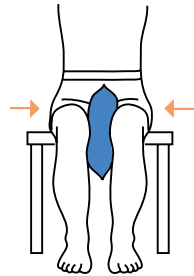


**Seated Hip Squeezes**

This exercise will increase the strength of your inner hip/thigh muscles.

- Begin with both knees bent.
- Place a pillow or towel roll between your thighs.
- Gently squeeze the pillow or towel roll with both legs.
- Hold this position for 5 seconds.
- Relax and return to the starting position.

Repeat 10 times.



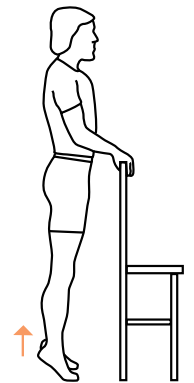
The following standing exercises are more challenging and should only be performed when instructed by your therapist. Be sure to hold onto a stable surface, such as a kitchen counter, when performing these exercises.

**Heel Raises**

This exercise will improve the strength of your calf muscles and your standing balance.

- Make sure you are holding onto a table or counter.
- Keep your weight evenly distributed between both legs.
- Gently rise up onto your toes by lifting your heels off the ground.
- Keep your buttock muscles tight.
- Keep your knees straight throughout.
- Slowly lower your heels back down to the floor.

Repeat 10 times, 3 times per day.

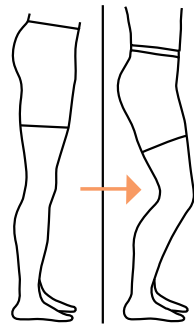


**Standing Knee Bends (Mini Squats)**

This exercise will improve strength and flexibility of your hip and knee muscles.

- “Unlock your knees” and gently bend your hips and knees.
- Pretend like you are sitting 1/4 of the way down into an imaginary chair. Make sure to follow your hip precautions and not bend too far.
- Return to standing position.

Repeat 10 times.



**Standing March**

This exercise will promote joint motion and strength.

- Hold onto a table or counter and lift your knee up to the level of your hip, keeping your body erect, and lower slowly.
- Alternate legs with each repetition.

Repeat 10 times, 3 times a day.



**Walk**

Walking is an excellent way to keep your new hip flexible, strengthen your muscles, and improve your endurance. Remember these hints:

- Always use the assistive device recommended by your therapist.
- Stand and walk tall.
- Use a heel-toe pattern.

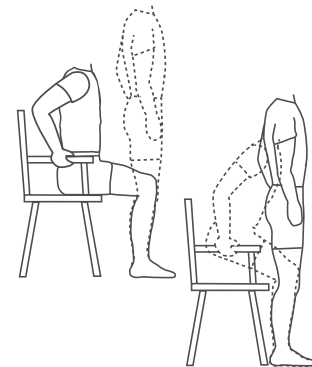


**Sit to Stands**

This exercise will improve the strength of your hip and knee muscles.

- Sit in a firm chair with arm rests.
- Shift forward until your buttocks are near the front of the seat and place your feet firmly on the floor with your toes under your knees.
- Push down through your feet, stand up using your arms on the armrests if needed.
- To sit, stand with the back of your legs close to the edge of the chair. Bend your knees as you reach your buttocks toward the back of the chair.
- Lower yourself into the seat with control using your hands as little as possible.

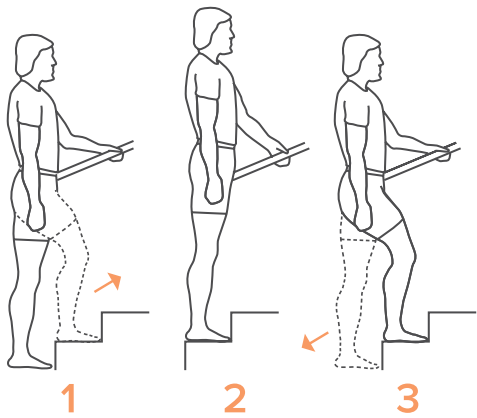
Repeat 10-20 times, 3 times a day.



Step Ups

This exercise will improve the strength of your hip and knee muscles. Make sure you are cleared by your therapist to do this exercise.

- Holding onto your railing, place your right foot on the first step.
- Slowly raise your left foot up to the level of the step, pressing through your right heel and tightening your buttocks.
- Keeping your right foot on the step, slowly lower your left foot back to the floor.



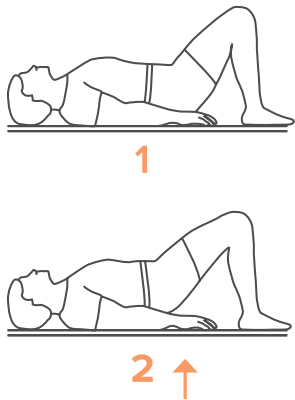
Repeat 10 times, then switch legs.

These following lying-down exercises should be performed lying on your bed. Do not attempt to get onto the floor to perform these exercises, unless cleared by your doctor. It is very important to have correct form with these exercises.

Bridging

This exercise will strengthen your buttock and hip muscles. Make sure you are cleared by your therapist to do this exercise as it is not intended for patients who had anterior hip surgery.

- Begin with both knees bent to a comfortable position or using a towel roll under your knees to support your legs.
- Squeeze your buttock muscles and slowly lift your hips up 1-3 inches off of the bed.
- Slowly lower your hips to the starting position.

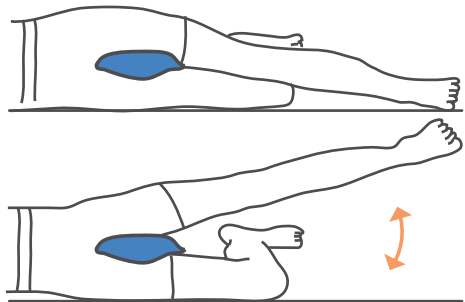


Repeat 10 times.

Side Lying Hip Abduction

This exercise will increase the strength of your hip abductor muscles. Make sure you are cleared by your therapist to do this exercise.

- Begin by lying on the non-operative side with your lower knee bent for stability and a pillow between your knees.
- Keeping the knee straight on the operative leg, slowly lift the leg upward toward the ceiling.
- Slowly return to the starting position.



Repeat 10 times.



