

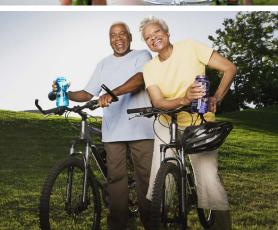


Good as New

A Patient Guide to Total Hip Replacement









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A Patient Guide to Total Hip Replacement

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Based on an earlier edition of Total Hip Replacement Program (2006) prepared by Janet Dorrwachter, NP in collaboration with the MGH Orthopaedic Clinical Performance Management (CPM) Team.

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Joint Replacement Attending Surgeons



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Your Care Team

Your care team will include Orthopaedic Surgeons, Nurse Practitioners, inpatient Nurses, Nurse Case Managers, Fellows, Residents, Therapists and Social Workers. Fellows are orthopaedic surgeons in training for advanced joint replacement techniques. Residents are physicians-in-training to become orthopaedic surgeons.

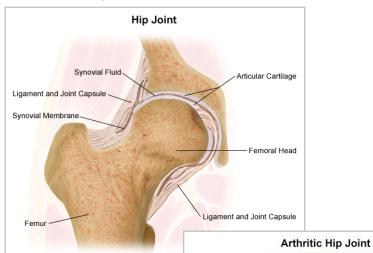
In our offices, you may be seen by a fellow and/or resident. All members of our team, including physicians-in-training and Nurse Practitioners, work with direct supervision from the Orthopaedic Surgeons and communicate the unique aspects of your care.

Our Hip Team About your Hip

Your Hip

The hip joint is where the femur (thigh bone) and pelvis meet and consists of a ball and socket joint. The socket, called the acetabulum, is a part of the pelvis and accepts the ball, called the head of the femur (femoral head).

The acetabulum and femoral head are both covered by a thick layer of articular cartilage that allows the head pivot inside the acetabulum in a nearly frictionless and pain free manner. The rim of the acetabulum is lined with a different and thicker type of cartilage called the labrum, which serves to make the socket deeper and reduces the stresses across the articular cartilage.



Hip Socket (Acetabulum)
Osteoarthritic Bone Changes
Pelvic Bone
(Thigh Bone)

Photos courtesy of the AAOS.org

Hip Arthritis

As in any other joint, the articular cartilage that allows for smooth and painfree motion of the hip joint can erode, leaving the exposed bone of the femoral head and the exposed bone of the acetabulum to rub against one another. This can result in pain and stiffness. Many patients with arthritis of the hip complain of pain in the front of the hip (groin area), back of the hip (buttock), or on the side. An additional complaint is stiffness of the hip joint making simple activities such as donning shoes and socks quite difficult.

Common Hip Problems

Arthritis is the most common cause of the breakdown of hip cartilage.

- **osteoarthritis**: also referred to as "wear and tear" arthritis; osteoarthritis affects the cartilage that cushions the bones of the hip. As this cartilage wears away, the ends of the bones rub together causing a grinding feeling, hip pain and resulting stiffness.
- **rheumatoid arthritis**: a systemic disease, which affects multiple joints in the body. The synovial membrane, which lines the entire joint cavity becomes irritated and produces too much fluid. The resulting healing response damages the cartilage, leading to pain and stiffness. Rheumatoid arthritis starts in much younger patients.

Avascular necrosis (or osteonecrosis) can also result in damage to the hip articular surfaces. It is caused by an interruption of the blood supply to the femoral head, resulting in death (or necrosis) of the bone tissue and collapse of the femoral head. Injuries, tumors or alcoholism may cause interruptions in the blood supply.

Appointments at Mass General

Making an Appointment

The quickest and easiest way to make an appointment with a Hip Replacement surgeon is through our online appointment request form, which you can access here (www.massgeneral.org/hipandknee). Enter information about yourself and why you are seeking an appointment. Filling in as much detail as possible helps our manager understand the severity of your disease and identify the right surgeon for you. One of our staff members will get back to you to schedule the appointment.

You also can call one of our surgeons' offices to schedule an appointment (see contact information on page 1).

What to Expect during your Appointment

When you first check-in for your appointment, you will be asked to take new x-rays in our radiology suites. You also will fill out computer-based questionnaires about your symptoms and daily activities.

During your appointment, your doctor will go over your x-ray with you. In addition to your doctor, during your appointment you may also interact with nurse practitioners, and fellows and residents who are physicians-in-training.

During your appointment, you can expect

- A thorough evaluation and discussion with our specialists
- Review of your x-rays, MRIs and any additional medical records
- An in-depth conversation covering treatment options
- Customized treatment plan to get you back to an active lifestyle

Non-Operative Treatment

Your doctor will discuss non-operative treatment options with you. In most cases, non-surgical treatments are exhausted before operative measures are considered.

Non-surgical treatments for arthritis of the hip include:

- physical therapy
- using assistive devices, such as a cane

• weight-loss

- anti-inflammatory medicines
- modifying your activities

Talk to your doctor about a referral to physical therapy (PT). Exercise can help keep your joints flexible, strengthens the muscles around the joints, reduces pain and keeps your bone and cartilage tissue strong and healthy. If you start an exercise regimen, take a balanced approach and include aerobic activities such as walking, swimming and cycling in addition to stretching/flexibility exercises and strengthening exercises. You want to avoid exercises that place excessive stress on the joints like high-impact workouts or competitive sports activities.

Losing weight can have a surprising effect on reducing arthritic pain. With each step, you exert 4-7 times your body weight on your knee joints. So when you lose even a small amount of weight, your symptoms improve dramatically and you may be able to perform more activities and potentially put off surgery for six months or longer.

Activity modifications include reducing high-impact and repetitive activities that place increased stresses on the hip joint. Guided yoga or pilates can also help reduce pain and improve mobility.

The use of a cane, usually in the hand opposite the affected hip, can reduce the stress across the hip joint. Anti-inflammatory medicines, such as ibuprofen and naproxen, can reduce the inflammation around the knee joint that is caused by the arthritis and provide significant pain relief.

If all non-operative treatments have been attempted and fail to reduce pain, then surgery to replace the hip joint is the last option. Continue reading the next sections of this guide for more information on preparing for your surgery, your hospital stay and post-surgery recovery and rehabilitation.

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Operative Treatment

Total Hip Replacement

A total hip replacement (THR) is performed in patients with severe wear and loss of cartilage in the hip joint due to injury, trauma or for types of arthritis or other congenital or age-related changes to the hip joint.

In a THR, the damaged femoral and the damaged hip socket (acetabulum) are removed and replaced with metal, plastic, or ceramic components depending upon your unique needs and condition.



Photo courtesy of the AAOS.org

The pioneering work of this procedure began in the early 1960's with significant advancements made by our physicians and scientists here in our Orthopaedic Research Laboratories at Mass General Hospital.

Revision Total Hip Replacement

THR permits patients to participate in most activities of daily living in a pain-free manner for 10-20 years and sometimes longer. Over time, the implants themselves may wear out and loosen, resulting in pain, stiffness or instability in your hip. Your surgeon will compare a series of your x-rays taken over many years to observe changes in implant position or the condition of the surrounding bone. Based on these factors, your doctor will decide with you if a revision surgery is necessary.

For animations of common hip treatments, visit: www.massgeneral.org/orthopaedics/hip-knee/conditions-and-treatments

Operative Treatment

Hip Resurfacing

Unlike traditional total hip replacement, in hip resurfacing, the femoral head is not removed but instead is trimmed, shaped and capped with a smooth metal covering. The damaged bone and cartilage within the socket is removed and replaced with a metal shell, just as in a traditional THR.

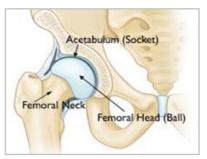


Photo courtesy of the AAOS.org

Hip resurfacing is only beneficial for a very small number of patients and is performed infrequently at MGH. An evaluation by your orthopaedic surgeon will determine if you are a candidate for hip resurfacing. In addition, all resurfacing implants are metal-on-metal devices, and these devices have unique risks and considerations to take into account as we learn more about wear and loosening in these devices.



Dr. Young-Min Kwon explains a hip implant to a patient

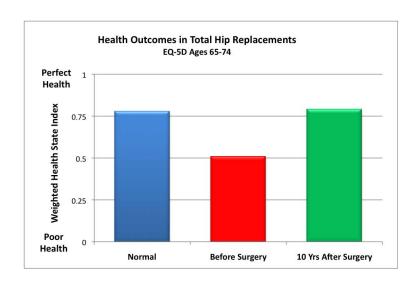
Quality After Joint Replacement

Overall Health Improves after Total Hip Replacement

The Department of Orthopaedic Surgery has a long history of surveying patients before and after their joint replacements as part of a patient registry. Results of these surveys allow our doctors and scientists to continue making improvements to implant design, surgical techniques and ultimately enhance the performance of your joint replacement.

Surveys of patients before and after their surgery demonstrate that joint replacements improve quality of life allowing patients to get back to their normal activities.

The figure below summarizes the overall health status of patients before and after total hip replacements. The first bar (blue) represents the overall health status of normal adults aged 65-75. The second bar (red) shows that mobility and activity levels are significantly lower in patients with end-stage arthritis. The last bar (green) demonstrates that a total hip replacement dramatically improves patients' quality of life.



Your Doctor Recommends Surgery



Patient Guide to Total Hip Replacement
Read this Guide prior to your Pre-Admission Testing and Discharge Planning
Interview, to help you prepare and plan for your surgery and aftercare



have blood drawn for testing



Pre-Admission Testing On Phone

- Speak with members of the Perioperative Nursing Team
- Review your medications
- Discuss additional consultations required prior to surgery



Schedule Discharge Planning Phone Interview

617.726.3666

Speak with Pre-admission Orthopaedic Nurse Case Manager and arrange post-surgery services



Pre-Surgery Arrangements

- Take care of required dental work (pg. 13)
- Prepare your home and bathroom (pg. 15)



Your Total Hip Replacement Surgery at MGH



Your Recovery at MGH

- Work with multidisciplinary team towards recovery
- Expect to stay at MGH for 2-3 days
- Discharge to home or rehabilitation facility

Your joint replacement surgery typically will be scheduled several weeks to months after it is determined to be your best treatment option. Since this is an elective procedure, the timing can vary on your unique personal or family needs.

PATA Evaluation

Prior to all procedures, all patients go through a pre-procedural evaluation (also called a PATA evaluation). This will involve a pre-arranged telephone call with a member of our perioperative nursing team.

Your PATA evaluation is important because it ensures that you are ready to undergo a surgical procedure minimizing any potential complications. Before your evaluation, you will have blood tests done at Mass General or through your Primary Care Physician (PCP). During your PATA evaluation, a member of our perioperative team will review your blood tests and discuss your anesthetic plan.

EXCEL*erated* Recovery Program

Approximately half of our patients qualify for the EXCELerated Recovery Program. This program is geared for patients who are planning to be discharged to home and focuses on early mobilization, allowing you to recover from your surgery more quickly than a traditional total joint replacement recovery program. Your surgeon and case manager will determine if you qualify and will provide you with further details on this innovative program at MGH.

Planning your Discharge

Schedule Phone Interview with Pre-Admission Nurse Case Manager

Contact MGH Case Management at 617-726-3666 approximately one month prior to your surgery (or sooner if your surgery date is less than one month away) to schedule a 15-20 minute telephone interview with a Preadmission Orthopaedic Nurse Case Manager. During this interview, the Nurse Case Manager will complete an assessment of your discharge needs and assist you in making custom arrangements for your continued recovery following your hospital stay.

Read through this Guide prior to your Preadmission Testing & Discharge Planning Interview with the Nurse Case Manager. This educational tool will provide valuable information for preparing & planning your surgery and aftercare.

The Preadmission Orthopaedic Nurse Case Manager will review your discharge options. Many patients are discharged home with either home care services including visiting nursing, physical therapy and occupational therapy, or are discharged directly to outpatient physical therapy. Some patients may require a short term inpatient stay in a Skilled Nursing Facility (SNF) for rehabilitation.

The Preadmission Orthopaedic Nurse Case Manager will assist you in making tentative discharge arrangements based on your anticipated needs and your insurance coverage.

See <u>page 31</u> for more information on discharge options.

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Dental Work

If you have dental work done after your joint replacement surgery, you will need to take antibiotics prior to the dental procedure to prevent infections in your joint replacement. Therefore, many patients find it easier to have their dental work done prior to their joint replacement.

We recommend patients have any needed dental work completed at least two weeks before elective joint replacement. If you need to have dental work done after your hip replacement, you can find more information on page 46.

Taking Medications Prior to your Surgery

10 days before your surgery, stop taking anti-inflammatory medication. If you take aspirin because of its potential benefits, please stop that as well. HOWEVER, if you take aspirin to prevent clotting of any stent or cardiac or vascular graft or because you have known heart disease, DO NOT STOP your aspirin.

In most cases for patients on Coumadin, you will be asked to stop taking it five days before surgery and have a blood test the morning of surgery to make sure your blood is not too thin. For patients on Plavix, you should only stop if you have direct instructions from your cardiologist that it is safe to do so.

Check with your physician or nurse practitioner about the medicines you take now and any medicines you feel you will need on the day of your surgery.

Diet on the Day of Surgery

Do not eat or drink anything after 10:00 pm the night before surgery, unless otherwise instructed. You cannot have water, mints, candy or chewing gum.

If you are taking any heart or blood pressure medicine, those medications may be taken with a sip of water early on the morning of your surgery.

Some patients are given instructions that allow them to drink clear liquids up until four hours before their scheduled surgery. If you were given these instructions, the anesthesiologist will give you a list of appropriate liquids.

Showering with Antimicrobial Soap Before Surgery

Preventing a surgical wound infection is important to your recovery. One way you can help prevent infection is by bathing with an antimicrobial soap before your surgery.

Patients should shower with Chlorhexidine (also called Hibiclens) two days before their surgery and the morning of their surgery (meaning once a day for three days). Showering with Chlorhexidine before surgery may lower your risk for infection by reducing the germs on your skin. Chlorhexidine can be purchased over the counter at a pharmacy or grocery store, or it may be provided to you by your surgeon at your PATA evaluation.



Use Chlorhexidine soap instead of your regular soap - do not use both, as this dilutes the effect of Chlorhexidine. Using a sponge can help with lathering because Chlorhexidine soap does not lather as well as regular soap.

DO NOT USE Chlorhexidine:

- if you have an allergy to chlorhexidine-containing products
- on your head or face (If you get this soap into your eyes flush with water)
- on the vaginal area

Showering Instructions:

These instructions differ from what is on the Chlorhexidine package. Package instructions are meant for surgeons using this product prior to performing a surgical procedure. Please use the following instructions for showering:

- Rinse your body thoroughly with water first.
- Turn the water off to prevent rinsing the Chlorhexidine soap off too soon.
- Wash from the neck downwards. Be especially careful to wash the part of your body (back, legs, chest, etc.) where your operation will be performed.
- Wash your body gently for five minutes. Do not scrub your skin too hard. You can use a sponge to help with lathering.
- Turn water back on, rinse well and pat dry with a clean towel.
- Do not apply powder, lotion, deodorant or hair products after third shower.
- Do not shave the area of your body where your surgery will be performed. Shaving increases your risk of infection.

Preparing your Home

Prior to your surgery, there are several things you can do to make your home and bathroom safer and more comfortable when you return after joint replacement:

Your Home

- For convenience, consider keeping a cordless phone near you or carrying your cell phone.
- Move furniture to make clear paths to your kitchen, bathroom and bedroom. You may be using a walker for a few weeks after your surgery, so you will need more room to move around.
- Consider setting up a bed on the first floor of your home, if your bedroom is not already there. It is easier to manage until you are comfortable using stairs.
- Move items in your home to waist level or higher. This will prevent you from having to bend to reach items.
- Remove throw rugs that may cause you to slip or trip. Tape down any loose edges of large area rugs and extension cords.
- If possible, prepare and freeze meals before your surgery.
- Some patients arrange for a relative or friend to stay with them for 2-4 weeks after surgery.
- Stock up on necessary items like groceries, toiletries and any medications you might need.
- Make a plan to have your bills paid while you are recovering whether that is signing-up for online bill pay or arranging with a friend or relative who can help you.
- After surgery, if you have limited knee range of motion and stretch, use a firm, sturdy armchair, and do not sit in a low/soft chair or sofa. Sit in an armchair that keeps your hips higher than your knees. Your physical therapist will discuss this.

Preparing your Bathroom

Your Bathroom

- Place a rubber mat or non-skid surface in the tub to prevent slipping.
- After surgery you should only take showers, not baths for the first month. Installing a grab bar on your tub or shower wall will help you keep your balance. Do not hold onto a soap dish on the wall. Soap dishes are not meant to hold your weight.
- If you have difficulty with movement or balance following your surgery, you may want to purchase a tub bench or shower chair to decrease your risk of falling when showering. A hand-held shower head can also decrease the amount of movement required when showering.
- If needed, an elevated toilet seat (pictured below) will be provided for you at MGH, which you can bring home.



Hand-held shower head



Tub bench



Flevated toilet seat

What to Bring to the Hospital

- \square Insurance and prescription cards
- ☐ List of medications and allergies
- ☐ Specific medications your surgeon's office told you to bring
- ☐ If you use an inhaler, please bring it with you
- ☐ Flat, comfortable athletic or walking shoes (slip-on shoes can be helpful and easier to wear after surgery)
- ☐ Short, wrap-around bath robe (long bathrobes can lead to tripping)
- ☐ Elastic waist-band pants and pajamas
- Personal toiletries (MGH will provide basic toiletries, but if want specific products, bring them from home).
- ☐ Books, magazines or other hobbies (such as knitting)
- ☐ Eyeglasses and a case for storing them NOT CONTACT LENSES
- ☐ Dentures or hearings aides and cases for storing them

DO NOT BRING any personal valuables such as jewelry, credit cards or large amounts of cash. There are two ATMs located in the White Building (Bank of America & Citizens Bank).

Day of your Surgery



Parking at Mass General

If the person who drops you off for surgery is planning to stay during your procedure, they should park in the Fruit Street or Parkman Street garage. MGH patients and visitors who park in these garages are eligible for discounted parking rates.

Validated parking rates:

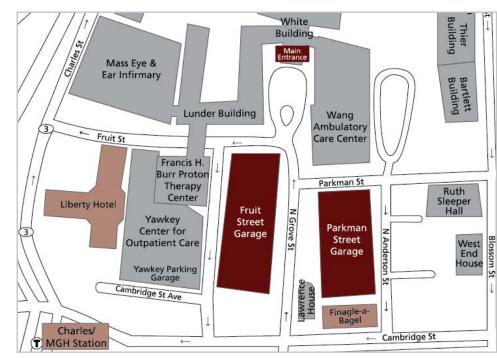
0-1 hour: \$10

1-2 hours: \$11 2-24 hours: \$12

Valet parking: \$15

Parking tickets will be validated at the Cashier in the central payment office on the ground floor of each garage. Valet parking is available after 6am at the Wang Building. Cost for valet ranges from \$13-\$18.





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Checking-in at Mass General

When you arrive at MGH on the day of your surgery, first report to the Center for Perioperative Care (CPC).

How to get there:

- Go to the Wang Building (either through entrance next to the valet parking
 - entrance or through the main lobby of the White Building).

MASSACHUSETTS GENERAL HOSPITAL

Center for Perioperative Care

- Use the Wang elevators and proceed to the 3rd floor.
- Follow the signs for the CPC and check-in at the reception desk



A staff member will check you into the CPC the morning of your surgery



Assistance & Information

Ambassadors wearing coral jackets, are omnipresent in MGH's main lobby and also in the Wang building lobby. Ambassadors welcome and direct patients arriving at the hospital and help patients and visitors with special assistance requests such as getting out of the car or into a wheelchair.



Ambassador Rene Thomson greets patients in the main lobby of MGH

Admission to the Hospital

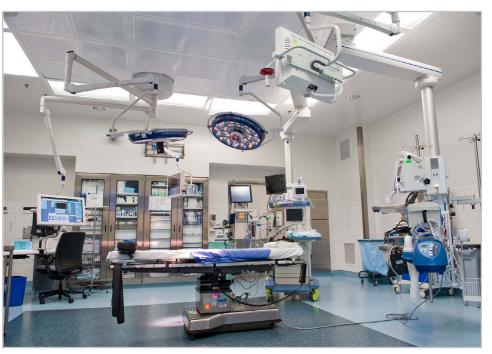
At the Center for Perioperative Care

You will meet with a nurse at the CPC. Please have a list of your medications and allergies ready. If you are on an inhaler, please bring it with you to the hospital. You will change into a hospital gown and be asked to use the bathroom before leaving the CPC. Your family can stay with you until you are escorted to the operating room.

As you are escorted to the operating room, family members will be directed to the Gray Family Waiting Area. It is located on the first floor of the Gray Building (Room 145). Let your nurse know if you have family members and/or friends waiting for you in this area. If somebody should be called, give your nurse the phone number to reach your contact person.



After surgery, you will be taken to the Recovery Room (Post-Anesthesia Care Unit (PACU)) where you will remain for two to four hours. You then will be transported to your assigned room. The receptionist in the Gray Family Waiting Area will update any visitors of your progress.



An operating room in the Lunder Building

Outside the Operating Room

Before you are taken into the operating room, you will:

- Check into the CPC and meet with a nurse
- Change into a hospital gown and use the bathroom
- Let the nurse know if your family members or friends will be staying during your surgery

In the Operating Room

Once you are in the operating room:

- The area around your hip will be shaved
- You will have an IV started in your vein
- You might be given medication to make you sleepy
- A urinary catheter will be inserted after you receive an anesthetic



A hip and knee replacement surgeon during surgery

Information for Visitors

There are many amenities in and around MGH for any visitors you may have. The Gray Family Waiting Area where your visitors can wait is located near Coffee Central and the Eat Street Cafe. See the corresponding map on the next page to find out where the following amenities are located. Feel free to ask any of our jacketed ambassadors in the lobby.

Food: MGH Campus

- 1. Eat Street Cafe: Ellison Bldg, lower level
- 2. Coffee Central: Gray Bldg, main lobby
- 3. Tea Leaves and Coffee Beans:

Wang Bldg, main lobby

- 4. Riverside Cafe: Yawkey Bldg, main lobby
- 5. Coffee South: Yawkey Bldg, main lobby

Drug Stores

- 14. MGH Pharmacy: Wang Building, 1st floor 617-724-3100
- 15. CVS Pharmacv: (next to MGH T Station) 155 Charles Street 617-523-1028
- 16. CVS Pharmacv: 191 Cambridge Street 617-367-0441

Food: Around MGH

- 6. Antonio's: 288 Cambridge Street
- 7. J. Pace & Sons: 75 Blossom Court
- 8. Starbucks: 222 Cambridge Street
- 9. Dunkin Donuts: 106 Cambridge Street
- 10. Au Bon Pain:
- 209 Cambridge Street 11. Finagle-a-Bagel:
- 277 Cambridge Street 12. Whole Foods:
- 181 Cambridge Street
- 13. Anna's Taqueria: 242 Cambridge Street

Hotels

- 17. Wyndham Hotel: 5 Blossom Street, Boston 1-888-465-4329
- 18. Liberty Hotel: 215 Charles Street, Boston 617-224-4000
- 19. Bulfinch Hotel: 107 Merrimac Street, Boston 617-624-0202
- 20. John Jeffries House: 14 David Mugar Way, Boston

617-367-1866

- 21. Beacon House:
 - 119 Myrtle Street, Boston 617-523-8295

What Happens after your Surgery

Day of your Surgery

After your surgery, you will be taken to the Recovery Room (PACU) until you are well enough to go to your assigned room. Most patients are able to walk with assistance from physical therapy (PT) or nursing the same day as their surgery.



A bay in the PACU where you go after surgery to recover from anesthesia



A typical inpatient room where you are moved after you leave the PACU

Post-Operative: Day 1

Your *urinary catheter* may be removed the day of your surgery. If not, it will be removed the next day (post-operative day 1).

The morning after surgery, a member of your doctor's team will check your dressing. They will remove any drains you may have. Your nurse will pre-medicate you with pain medication in anticipation of your morning physical therapy session. The nurse will ensure your thigh high compression stockings (TEDs) are on during the day to minimize swelling and the risk of DVT. You will also begin receiving your blood thinning medication to prevent DVT and pulmonary embolism.

You will work with a Physical Therapist who will show you how to use a walker or crutches, and give you exercises to complete while in bed. A goal for today is to walk to the nursing station and spend as much time as possible out of bed and in a chair.

Based on your progress, the Inpatient Nurse Case Manager will follow-up with you and other members of your inpatient care team to confirm or revise your preadmission discharge plans.



Jill Pedro, Clinical Nurse Specialist, explains how to use the call button

Post-Operative: Day 2

A member of your care team will come by in the morning to change your dressing. You will continue to work on your mobility, and your nurse and doctor will work together to control your pain. You may even learn to walk up and down stairs with your crutches.

If you have achieved your goals for discharge to your home and are medically stable, you will be able to continue to recover at your home and essential services will be arranged. Many of our patients discharge directly home from the hospital. Home equipment orders will be provided to the Home Care Agency, or you may be provided with a prescription for outpatient physical therapy.



A physical therapist works with a patient after surgery

If you made an outpatient PT appointment for sessions to begin within a few days of your hospital discharge, you may be able to discharge home and attend these outpatient sessions. You may not need any home care services.

If your care team determines you are ready and you have been approved to go to a facility, you may transfer to that facility to continue your recovery until you are able to go home. Any necessary equipment will be ordered by the facility.

Some insurance, like Medicare,

require patients to have a three night qualifying stay at the hospital before they would be covered by the insurance at a Skilled Nursing Facility. Please note that, most insurance plans do not cover bathroom equipment, but you are encouraged to check with your insurance company.

Post-Operative: Day 3

On the third day post-op, the same information applies as with post-op day two. However, for patients who have not achieved their goals or are not medically stable and need to stay another day, your Nurse, Physical Therapist, & Inpatient Nurse Case Manager will continue to work with you to achieve those goals and make your final discharge arrangements to home or to a facility.

Call your doctor's office to schedule your post-operative visit, which typically occurs four weeks after your surgery.



Kristen Hill, Occupational Therapist, shows a hip replacement patient different assistive devices that can help after surgery

Physical Therapy (PT) & Exercise

You will continue to work with the physical therapist on exercises and functional training throughout your hospital stay.

The first day after surgery you will meet with a physical therapist who will initiate exercises, review your hip dislocation precautions and progress your mobility. The following days, you will continue to progress your activity by practicing walking/gait training, using a walker (before advancing to crutches) and stair training.

For the first four to six weeks after surgery, you likely will need to use support, usually a walker, crutches or a cane. When you progress off support depends greatly on your health, strength and stability. Along with our office, your physical therapist will help you make the right transition.

Most insurance companies permit a limited number of home visits for physical therapy. If your home PT expires before your first visit, please call the office and we will fax a prescription to the facility of your choice. If you continue with home PT until your first post-operative visit, we will give you a prescription for outpatient physical therapy at that time. Many patients continue with outpatient physical therapy for an additional four to six weeks.

See <u>page 61</u> for more information on physical therapy and common exercises you will do at home.

Deep Breathing

You will continue breathing exercises using the incentive spirometer, coughing and deep breathing. It is important to keep your lungs free of fluids and mucus.

Fluids & Diet

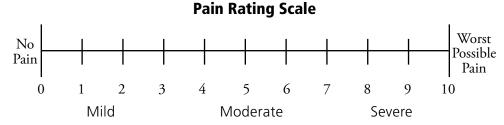
Most patients start eating solid food the first day after surgery. Depending on your unique situation, your doctor may recommend a clear liquid diet until you are ready to eat solid food.

Pain Management

During the first 4-6 weeks after surgery, patients often need to take narcotic pain medication. Most people are able to stop taking narcotics by four weeks post-operative. If you require narcotic pain medication beyond the normal post-operative course, you will be referred to the Pain Clinic or to your Primary Care Provider for further pain management.

Acetaminophen (eg. Tylenol) or nonsteroidal anti-inflammatories (NSAIDs: eg. Ibuprofen, Motrin, Aleve, Advil) are very effective for managing post-operative pain. NSAID's are good at alleviating swelling and pain and are often more effective than narcotics. You should only take NSAIDs if they do not upset your stomach and it is okay with your doctor.

<u>Remember</u>: Some narcotic pain medications cannot be called into a pharmacy. Plan ahead if your prescription is running low to allow for postal delivery.





Your Discharge from MGH

If you are being discharged home, any necessary home equipment will be ordered for you. If you are using a Home Health Care Agency, your care team will let the agency know what equipment you need. If you already have an outpatient physical therapy (PT) appointment scheduled, you may be given a prescription for the PT. If your surgeon feels that you should transition to outpatient PT prior to your first follow-up appointment, you may be given a prescription for PT. If you are being discharged to a facility, any necessary equipment will be ordered by the facility.

Most insurance does not cover bathroom equipment, but you can check with your insurance company. You could also borrow equipment from friends/family, or contact your local Council on Aging/Senior Center, as many of these organizations may loan you these items.

Time of Discharge

At the time of discharge, you will be provided with a discharge summary that includes:

- your current medications
- a summary of your hospital stay, and
- instructions for post-operative follow-up at MGH

Please call your doctor's office at your convenience to schedule your postop visit. Most patients return to the office in 4-6 weeks and see one of our Nurse Practitioners (NP) or your surgeon. During this visit, we will assess your incision, evaluate your functional mobility status, review your x-rays and address any questions you may have.

You will return to the office periodically (3-6 months, 1 year, 3 years, 5 years, 7 years, and 10 years) for repeat x-rays and a thorough evaluation. During these visits, you will participate in surveys regarding your general health, level of activity, pain and other symptoms. These "Outcomes" scores help us monitor how our patients fare before and after a joint replacement, and provides valuable information back to our clinical team to improve the care we provide. MGH Orthopaedics is a pioneer in compiling such valuable information about the quality of our services.

Care Plan Immediately Following Discharge from MGH

Once discharged from MGH, one of the following will happen:

- Outpatient Physical Therapy
- Home Care
- Skilled Nursing Facility Rehab
- Acute Rehabilitation Hospital

Outpatient Physical Therapy (PT)

You need to be up and around, and doing well, to go directly home from the hospital and participate in outpatient PT. You need to have transportation to your physical therapy appointments and a plan to have your surgical staples taken out.

Some patients schedule outpatient PT appointments prior to surgery to ensure availability of an appointment after discharge. Speak with your surgeon on when and if you should make an appointment. You will need a prescription from your surgeon.

Home Care

If you are independently mobile with the assistance of a walker or crutches, housebound and independent in your exercise program, you may be discharged directly home with home care services.

Home care services are intermittent (one to several times a week depending on your needs) and are provided by a Home Health Care Agency, which is similar to *Visiting Nurse Agency (VNA)* that is contracted with your insurance. These services need to be ordered by your physician if medically necessary. Home care services may be provided by visiting nurses, physical and/or occupational therapists. The duration of services is determined by your home care provider and physician based on your needs and progress.

The Preadmission Orthopaedic Nurse Case Manager will identify local agencies contracted with your insurance and can initiate a referral to the agency of your choice. An Inpatient Nurse Case Manager will follow up on your progress in the hospital and confirm home care referrals.

Skilled Nursing Facility Rehabilitation (SNF)

If you are not independently mobile and do not have assistance at home, you may need an inpatient rehabilitation setting. To qualify for inpatient rehab in a SNF, you need to meet criteria for admission and have insurance coverage. SNFs are primarily nursing homes that provide short term rehabilitation in addition to long term care. They provide skilled nursing, physical and occupational therapy.

The Preadmission Orthopaedic Nurse Case Manager will provide you with options of SNFs contracted with your insurance. You, along with your family and friends, are encouraged to tour facilities and inform the Preadmission Orthopaedic Nurse Case Manager of your selections before your surgery.

Referrals per your request will be initiated by the Preadmission Orthopaedic Nurse Case Manager in an effort to secure bed availability. There is no guarantee of bed availability, unless the facility has a prebooking policy, so we encourage you to provide more than one option.

An Inpatient Nurse Case Manager will follow up on your progress in the hospital and confirm the SNF referrals, acceptance by facility, insurance authorization and bed availability.

Resources for helping to compare skilled nursing facilities are available at: www.medicare.gov/nhcompare
http://webapps.ehs.state.ma.us/nursehome

Transportation

The Inpatient Nurse Case Manager, with your doctor and therapist, will assess the most appropriate transportation for you to travel home or to a facility. The Inpatient Nurse Case Manager will also identify insurance coverage and assess if an ambulance is medically necessary. Most patients can travel home in a car. Most insurances don't cover an ambulance home and some do not cover any ambulance transportation.

Discharge time is approximately 10:00am, but speak with your inpatient care team for the most accurate timeframe for your discharge.

Acute Rehabilitation Hospital

If you are not independent with your mobility, do not have assistance at home and have complex medical issues, you may qualify for intense medical management and rehabilitation.

It is unlikely that a patient undergoing single total joint replacement surgery will meet admission criteria for this level of care, but if so, you also need to have insurance coverage for this.

The Preadmission Orthopaedic Nurse Case Manager can provide additional information if you feel that you may qualify for this level and explore further qualifying criteria and options with you.

An Inpatient Nurse Case Manager will follow up on your progress in the hospital and confirm the acute rehabilitation referrals, acceptance by the facility, insurance authorization and bed availability.

MGH Outpatient Pharmacy

The MGH has an outpatient pharmacy, which is located on the first floor of the Wang Ambulatory Care Building.

If you are being discharged home, you can get your prescriptions filled here before you go home. Please have your prescription card with you so the pharmacist may verify your insurance coverage and what out-of-pocket costs you will incur. The pharmacy accepts cash, credit cards and checks. Payment is due when medications are picked up. Your pharmacy costs cannot be added to your inpatient hospital bill.

Inform your nurse as early as possible if you are interested in utilizing the MGH outpatient pharmacy. If you are transferring to another facility, discharge prescriptions will be coordinated by the facility.

Hours of Operation: Mon-Fri: 9:00 a.m. – 5:30 p.m.

Sat-Sun: 9:00 a.m. – 12:30 p.m.

Phone Number: 617-724-3100

Hip Precautions

During your stay at the hospital and after you return home, there are specific hip precautions you should follow. For the first three months after your total hip replacement, there is a risk of the hip coming out of the joint socket. After three months, the risk of dislocation lessens, but you should never force your hip into excessive flexion.

Gradually you will be able to increase your activity level as your endurance increases. This may take several months, but if you follow the hip precautions, keep up with the exercise program from your physical therapists and avoid sudden jarring and twisting motions of your hip, you will begin to feel more comfortable participating in more activities.

These precautions apply whether you had a posterior or anterior incision. If you are unsure which incision you have, check with your surgeon.

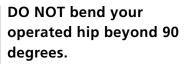
In the following photos, the model has a right hip replacement.

Take these precautions if you had:

anterior lateral incision



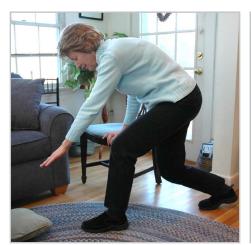
posterior lateral incision



For example, never bend forward/straight down to pick up something from the floor with your knees straight.



Instead, to pick things up off the floor, support your body with one arm and kneel directly on the knee of your operated leg.

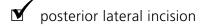




WRONG

Take these precautions if you had:

anterior lateral incision



DO NOT combine flexion and internal rotation of your operated leg.

For example, never place your operated foot out to the side while putting on your shoes or sitting.



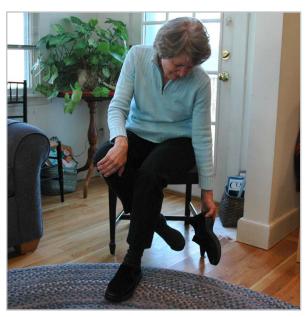
Take these precautions if you had:

anterior lateral incision

☐ posterior lateral incision

DO NOT combine extension with external rotation.

For example, when standing or lying in bed, do not point your foot and knee outward. And DO NOT move your leg behind and turn your foot outward at the same time.



Instead, to reach your foot, initially before your hip limbers up, you may need to reach for your foot under the opposite knee.

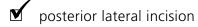


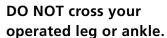
Instead of pointing your foot and knee outward while standing or lying in bed, keep your foot and knee pointed straight.

WRONG

Take these precautions if you had:

■ anterior lateral incision





For example, do not cross your operated leg over your other leg.



Take these precautions if you had:

anterior lateral incision



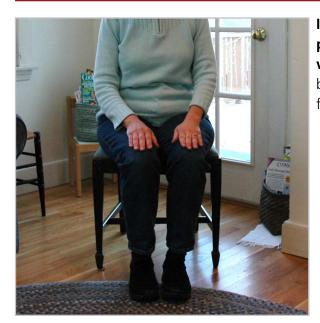
DO NOT bend forward past 90 degrees.

posterior lateral incision

For example, do not lean forward when sitting.



Instead of crossing your legs, sit with both of your feet on the floor.



Instead of putting more pressure on your hip while sitting, sit with both of your feet on the floor.

Assistive Devices from Occupational Therapy

After surgery you may have limitations in hip movements until further into your recovery. These limitations may include not being able to bend forward at your waist. This can make activities like dressing a challenge. The following tools may allow you to complete your daily care while you maintain your hip restrictions.

Retrieving Items Out of Reach with a Reacher



Frequently used items should be kept at waist level or higher. However if you need something out of reach, you can use your reacher to pick up an item.



The reacher will allow you to retrieve lightweight items without bending forward at your hip.

Putting on Socks with a Sock Aid



Place the sock opening over the end of the device.



Pull the sock onto the device until it is just below the knots on each side.



Use the strings to toss the device in front of your foot.



Pull on the strings to pull the device and sock up over your foot.

It is recommended that you have shoes that are easy to slide into like loafers or sneakers. Elastic shoe laces are available if your hip limitations prevent you from reaching your foot.

Putting on Shoes with a Reacher & Shoe Horn



If your shoe is out of reach, use the reacher to pick it up, and place it by your foot.



Use the shoe horn to keep the back of your shoe open. Try to keep your toes pointed forward while you are putting on your shoes.



The shoe horn provides a smooth surface for your foot to slide against as you are placing it into your shoe.

Assistive Equipment Frequently Used Following Joint Replacement



Tub Bench: This bench straddles a tub edge, allowing you to sit outside the tub and slide across the bench while lifting your legs into the tub. The bench is helpful if you have weight bearing restrictions following surgery or if your balance is impaired.



Raised Toilet Seat: This seat is setup on top of your home toilet. It increases the height of a low toilet and includes grab bars to assist with getting on and off your toilet.



Reacher



Sock Aid



The reacher has a clip to latch onto your walker or cane.

Taking Care of your Skin After Surgery

It is important to carefully monitor your skin after you return home from the hospital. Examine all areas of your skin, and in the areas you cannot see, ask somebody else to look for you or try using a hand magnifying mirror. Areas where your bones are near the surface of the skin can break down and cause sores. A sore will look pink or red at first, and then the skin might break open.

Areas to examine include:

- shoulders
- buttocks
- elbows
- heels

• hips

These areas should be kept clean and dry. Rub these areas with lotion to help circulation, but do not put lotion directly on your hip incision. Let your doctor know if you have any areas on your skin that are red or have an open sore.

Your Surgical Incision

You may shower at any time. It is best to keep the incision dry with a bandage while you shower. Once you are out of the shower, change the dressing. The general rule is to keep your knee incision clean and dry. A dry sterile dressing should be applied until there is no drainage at the incision site. At that point, your incision can be open to the air.

If the staples catch on your clothes, you may continue to cover it with a gauze dressing. The staples will be removed approximately 10 days after your surgery. If you go to a facility, your staples may be removed there depending on how long you stay. If you are discharged before the staples are removed, the facility will need to make arrangements for the home health agency to remove the staples in your home. If you don't require home care services, then you will need to make an appointment with your PCP or surgeon.

If you are going directly to outpatient PT, arrangements need to be made with your surgeon's office or your Primary Care Physician to remove the staples.

Many patients have their skin closed with sutures under the skin that dissolves on their own. No staples are used in such cases.

Preventing Infection - Antibiotic Prophylaxis

The word prophylaxis means prevention. If you are having any kind of medical procedure after your joint replacement surgery you need to take antibiotics to prevent infections. This includes any dental work (including cleanings), upper respiratory tract procedures such as an endoscopy, or before any genitourinary/gastrointestinal procedures such as a colonoscopy.

Joint replacements usually are very successful and patients can return to an active lifestyle soon after the surgery. Still, patients should be cautious about the potential for an infection. Infection of any joint replacement is a serious concern and may even require removal of the joint replacement components.

Bacteria from your mouth can spread to your blood and from there to your joint replacement, particularly in patients with ongoing dental problems. Thus, good oral hygiene can prevent infection of a joint replacement. Even prior to having a total joint replacement, patients should aspire to achieve good dental health and resolve their dental issues. Importantly, patients with joint replacements should be diligent in maintaining daily oral hygiene.

If you are having any dental procedures, an endoscopy or colonoscopy, tell your doctor that you have a joint replacement and may require preventive antibiotics. Your doctor will recommend appropriate antibiotics before the procedure if you are within two years from your joint replacement surgery. After two years, you may still need antibiotics before dental work if your immune system is compromised, or if you have certain medical conditions putting you at a higher risk of infection.

Your doctor will determine the specific drug and dosage appropriate for you.

Patients at Increased Risk of Joint Infections

- All patients during the first two years after joint replacement.
- Patients whose immune response is suppressed by medications, chemotherapy or radiation therapy; or patients with diseases such as rheumatoid arthritis or systemic lupus erythematosus.
- Patients with a previous joint infection, or with medical conditions, such as hemophilia; HIV infection; insulindependent (Type 1) diabetes or any cancer.

Driving After Surgery

Patients ask when they can begin to drive again after having joint replacement surgery. Your surgeon, nurse practitioner or physician assistant will consider several factors and advise you whether it is safe or unsafe to drive. Please discuss your driving needs with your doctor's office. In general, patients can drive 2-3 weeks after surgery when they are no longer taking any narcotic pain medications.

Preventing Blood Clots

You will be prescribed medication to prevent blood clots from developing. This medication may be an injection and/or a pill. If your doctor decides injection is your best option, your nurses will teach you how to give yourself these injections. It is important to know the signs & symptoms of a blood clot:

- Pain and tenderness in the calf of the leg
- Swelling in the leg that does not go down with rest and elevation
- Low grade fever

Remember to wear your TED elastic stockings when you are walking or sitting and have someone take them off at night when you go to bed. If either of your legs becomes swollen, get into bed and elevate your legs on two or three pillows. If the swelling does not go down, call your nurse or doctor.

When to Call a Nurse or Doctor

- If you have chills or a fever greater than 101°F (38.3°C)
- If you develop pain at your incision site that gets worse
- If you have redness, swelling, incision pain, drainage (such as blood), pus or a foul smell at the incision site
- If you develop calf pain or tenderness in either leg, swelling, redness or a low grade fever

What to do in an Emergency

- If it is an emergency, go to the MGH Emergency Room or the closest ER. If it is a life-threatening situation, call 911
- If you have chest pain and/or shortness or breath, call 911
- When you are able, have the ER physician notify your surgeon

Walkers, Crutches, Canes

These devices provide support through your arms to limit the amount of weight on your operated hip. Initially, after a total hip replacement you will use a walker to get around. When you are ready, the physical therapist will advance you to crutches. Eventually you can advance to a cane when your surgeon clears you to put more weight on your leg. The amount of weight bearing on your leg ordered by your surgeon can be:

- Touch down weight bearing: Almost no body weight should be placed on the operated leg, just touch the foot to the floor
- Partial weight bearing: 20% 50% of your weight can be placed on the operated leg
- Weight bearing as tolerated: As much weight as you want to put on your operated leg.

Getting into Bed

- Sit on the edge of the bed with both feet on ground
- Scoot your hips backwards as you keep your weight on your hands
- Lower yourself onto your forearms
- Slide your legs onto the bed; keep your operated leg straight
- Once in bed, keep your toes pointed up



Getting out of Bed

- Slide your legs toward the edge of the bed; keep your operated leg straight
- Push yourself up to your forearms and onto your hands
- Slide your legs so that your heels are over the edge of the bed
- Scoot your hips forward until both feet are on the ground



Rehabilitation Rehabilitation

Sitting in a Chair:

To sit down in a chair:

- Stand in front of the chair. Turn around and back-up until the back of your legs touch the chair
- Place your operated leg far out in front of you
- Place your crutches in the hand opposite of your operated side, and place your free arm on the arm of the chair
- Gently ease down into the chair
- Once you are seated, you may bring your operated leg back so your foot is under your knee

When sitting, always keep your knees lower than your hips. In the early stages, avoid sitting for long periods of time. Get up every 20-30 minutes to stretch up and down on your toes or take a walk before sitting again.



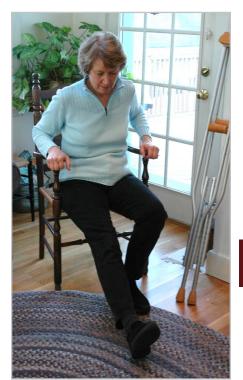


Rising from a Chair:

To rise up from the chair:

- Place the foot of your operated leg far in front of you
- Bring your hips forward to the edge of the seat
- Again, place the operated leg far in front of you
- Push up on the arms of the chair and rise on your good leg
- Do not try to use your operated leg in standing up
- Place the crutches in the hand on the good side and finish standing
- Once standing, place one crutch under each arm

Do not try to get up with your hips at the back of the chair. Always first bring your hips to the front of the seat before getting up.





Beginning to Walk after Surgery

At first, you will use a walker as you begin to walk. Once you are steady on your feet, you will progress to crutches.

Using a walker:

- Place walker one step ahead of you
- Lean into it and pick up the operated leg, bend the knee and step forward, planting the heel down first
- Bring your good leg up to the front of the operated leg
- Repeat the process



Using crutches:

- Place the crutches one step ahead
- Place weight on your good leg and bring the operated leg up between the crutches
- Bring your good leg up beyond the crutches



Beginning to Walk after Surgery (continued)

As you gain strength and endurance, you will advance to a two-point gait pattern. This means you will move the crutches and operated leg at the same time, and then move your good leg beyond the crutches.

In this gait pattern, you should distribute one third of the weight to each hand and one third on the operated leg. Early on it may be more comfortable to take more weight on the hands, particularly the hand opposite the operated side.

It is important to remember that while standing, the crutches should always be kept in front of you and slightly out to the side. If the crutches are even with your body when you are standing still, they will not keep you from falling. Also, do not carry your weight on the armpits when using crutches. This can be painful and can cause permanent nerve damage. The weight should be taken on your hands and good leg.

Stair Climbing

You will begin to walk stairs with a physical therapist before you are discharged from MGH.

In the following photos, the model has a right hip replacement.

Going Upstairs:

- Put one hand on banister & carry the crutch under the other arm
- Put your weight through your arms and step up with your good leg
- Then step up with operated leg
- Then the crutch



Coming Downstairs:

- Place the crutch under one arm and the opposite hand on the banister
- Start down the stairs with the crutches first
- Then your operated leg
- Then your good leg

A way to remember this is: Up with the good leg and down with the operated leg.



Bathing

Use a stall shower if you have one. It is okay to use a tub shower, but follow the directions given. Use a stable shower chair in both a stall shower and tub shower. Never sit in the bottom of the tub. Have someone help you the first time you shower at home. Place a non-skid mat outside the shower for your safety.

Getting in a stall shower with a chair:

- Walk to shower with walker. Back-up to the shower stall
- Reach back with one hand for the chair while leaving the other hand on walker
- Sit down on chair and lift your legs over threshold of the shower
- Turn to sit facing the faucet



If you are strong enough to stand in the stall shower:

- Walk up to the shower with your walker or crutches
- Step over the threshold with good leg followed by the operated leg

Rehabilitation

Bathing Continued

Getting into a tub shower with a chair:

- Walk to the tub with your walker and back up to the tub until you can feel the tub at the back of your legs.
- Reach back with one hand for chair; leave other hand on walker
- Sit down on the chair with your operated leg out straight
- Lift your legs into tub, helping your operated leg with your hands
- Keep your operated leg out straight





Getting into a tub shower without a chair:

- Walk to the tub with your walker or crutches
- Facing sideways, have your good leg against the tub
- Bend your good leg at the knee and side step over the tub
- Repeat with operated leg, bending your knee to clear the tub

Bathing Continued

Getting out of a tub shower with a chair:

- Place a robe or towel securely around your body after drying off
- Turn on the seat and lift your legs out of tub keeping your operated leg out straight
- Push off the back of the chair and keep one hand on the walker
- Stand up straight





Assistive Devices for Bathing:

A shower chair (pictured above) or a tub bench (pictured to the right) can make showering easier following your joint replacement surgery. See <u>page 41</u> for more information on assistive devices after joint replacement surgery.

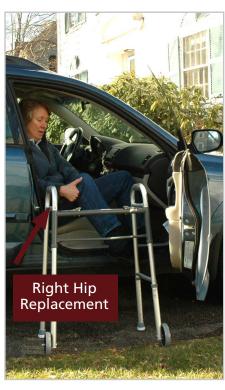


Getting in and out of Cars

Front seat:

- Open the front door and back up to the seat
- Put one hand on the dashboard and other on back of front seat
- Sit down & slide back as far as possible in a semi-reclining position
- Bring legs into the car, helping the operated leg with your hands
- Swing your operated leg into car without bending knee above hip
- Reverse the procedure to get out of the car





Back seat:

- Enter the car from the side that allows your operated leg to be supported by the seat of the car
- Slide back into the seat as explained above
- Reverse the procedure to get out of the car

If you had a left total hip replacement, you would enter from the driver's side. If you had a right total hip replacement, you would enter from the passenger side.

Sexual Activity After THR

You may start having sex again about four to six weeks after you are discharged from the hospital. Your incision and the muscles around your hip need this time to heal. The exact time will depend on when you feel comfortable.

Follow the hip precautions laid on in this guide during sex, which can be found on page 35.

At first, usually it is more comfortable for both male or female patients to be on the bottom when having sex. This position helps to keep stress off your hip replacement. After three months, as your hip heals, you can have sex in any comfortable position.

Following your surgery, you will have many weeks of physical therapy (PT) to help ease your operated knee back into activity. PT is an integral part of your recovery and is very important in determining the success of your surgery.

After surgery it is important to work with a physical therapist. A physical therapist works with you to create an individualized exercise program that will help you achieve your goals and return to the activities you love. PT will help to improve your strength, range of motion, endurance and function. Exercise has been shown to improve function and quality of life after joint replacement.

These PT exercises are important to your overall recovery – preventing blood clots, improving circulation, improving flexibility and knee movement, and strengthening muscles. While they may feel uncomfortable at first, they will become easier with time and help you return to normal activity.

We have compiled a list of commonly used exercises, but your surgeon and physical therapist may prescribe a specific set of exercises that is best for your unique case.

- ☐ Quad Sets
- ☐ Glut Sets
- ☐ Ankle Pumps
- ☐ Hip & Knee Flexion (Heel Slide)
- ☐ Hip Abduction
- ☐ Knee Extension (Long Arc Quad)
- ☐ Short Arc Quad
- ☐ Standing Hip Flexion
- ☐ Squats

Quad Sets:

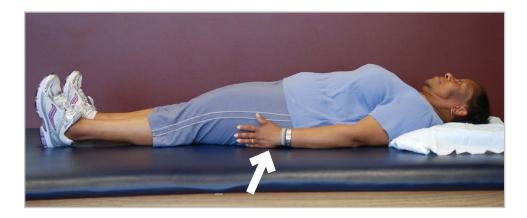
Quad sets are an important part of your PT regimen because they increase strength in your quadriceps muscle without straining your joint replacement. This is an exercise that uses your muscles without moving your hip or knee.



- Lie on your back with your legs extended in bed
- Tighten the quad muscle on the front of your leg
- Push the back of your knee into the bed
- Hold for 5 seconds
- Perform one set of 10 repetitions 3 times a day

Glut Sets:

Glut sets will increase circulation and strengthen the muscles of your buttocks, which you use when walking and moving. This is an exercise that engages your muscles without moving your hip or knee.



- Lie on your back with your legs extended
- Squeeze your buttocks together
- Hold for 5 seconds
- Perform one set of 10 repetitions 3 times a day

Ankle Pumps:

This exercise will help you increase your ankle flexibility, strengthen your calf muscles and improve blood circulation in your legs. Strengthening the muscles in your lower leg will help support your hip as you recover.





- Lie on your back with your legs extended
- Support operated leg with a folded towel or pillow under your ankle
- Engage your calf muscles, and move your ankle towards your shin
- Hold for five seconds
- Move your ankle away from your shin
- Hold for 5 seconds
- Perform one set of 10 repetitions 3 times a day

Heel Slides / Hip & Knee Flexion:

Heel slides are an important component of your recovery because they stimulate both your quadriceps and hamstring to improve range of motion in your knee and hip. As you build strength throughout your physical therapy, you will be able to bend your knee more comfortably and completely.





- Lie on your back with your legs extended
- Slide the heel of your operated leg toward your buttock so that your knee and hip bend
- Hold for 10 seconds
- Slide your heel back so that your leg is flat
- Keep the opposite leg flat
- Perform one set of 10 repetitions 3 times a day

Hip Abduction:

Weak hip abductors can negatively affect your posture and walking gait, so hip abductions target these muscles to strengthen them, and stabilize your legs and pelvis.





- Lie on your back and keep your knee straight
- Slide your leg out to the side (away from your body) then back to the starting position
- Do NOT allow your leg to cross the midline of your body
- Make sure your feet are always pointed up
- Do NOT let your leg roll in or out while sliding it
- Perform one set of 10 repetitions 3 times a day

Long Arc Quad / Knee Extension:

Active *knee extension* increases your knee flexibility range of motion and improves quadriceps strength.





- Sit upright in a firm chair
- Raise your heel forward until the knee is straight
- Hold for 5 seconds
- Slowly lower and bend your knee as far you can
- Perform one set of 10 repetitions 3 times a day

Short Arc Quads / Terminal Knee Extensions:

Short art quads take your quadriceps muscle through a short motion to develop and strengthen this important muscle, improving range of motion in your hip and knee. The quadriceps muscles are a group of four muscles that control your knee joint while you are standing and prevent your knee from buckling. The quadriceps are important after total hip replacement because the knee and the muscles that support the knee help support your hip.





- Lie on your back with your legs extended in bed
- Support your operated leg with pillow to keep knee bent at 45°
- Straighten operated leg at knee by lifting only your heel off the bed
- Hold for 5 seconds
- Lower leg back to resting position
- Perform one set of 10 repetitions 3 times a day

Standing Hip & Knee Flexion:

Standing *hip and knee flexion* is an exercise that helps lubricate your hip joint and stabilize your hip muscles. Stabilizing and strengthening your hip muscles is important in preventing further injury to your hip and providing stability in your knee and ankle.





- Hold onto a chair or table
- March in place
- Do not bring your knees above 90 degrees
- Perform one set of 10 repetitions 3 times a day

Squats:

It is important to have proper technique when performing squats following total joint replacement. This exercise engages all the major muscle groups in your legs, especially your quadriceps, gluteus and hip abductors, which helps strengthen your hips and knees.





- Hold onto a chair or table
- Bend your knees halfway
- Hold for five seconds
- Straighten your knees to your starting position
- Perform one set of 10 repetitions 3 times a day

Following is a list of terms you may hear regarding your surgery:

Aspirin: Aspirin is considered a nonsteroidal anti-inflammatory drug (NSAID) and it is often used to manage pain from arthritis.

Assistive Devices: Items provided by an occupational therapist, which help you maintain your activities of daily living. Examples include a reacher, long-handled show horn, sock aid, dressing stick, long-handled sponge and elastic shoelaces.

Coumadin: Generic name: warfain; coumadin is blood thinner that reduces the formation of blood clots.

Deep Vein Thrombosis (DVT): Formation of a blood clot inside of a body part, often in the legs. DVT usually impacts large veins, and the clot can cause swelling and pain.

Extension: Straightening or extending a flexed limb.

Flexion: Bending a joint or limb; flexion decreases the angle between two adjoining bones.

Hemovac: A drain that is placed at your surgery site to drain blood and fluid from the area.

Incentive Spirometer: A device you use to exercise your lungs; it helps you to take deep breaths. It is used after surgery to help keep fluid from building up in your lungs. Using this device will help to keep you from getting pneumonia. Your nurse will teach you how to use it.

IV (intravenous) or heplock: A small, soft plastic tube inserted in your vein to give IV fluid or medication

Post-Anesthesia Care Unit (PACU): Recovery room where you are taken following your surgery before going to your assigned room.

Patient Controlled Analgesia (PCA): Pain medicine that is in a pump attached to your IV. You control the amount of medicine you receive by pushing a button attached to the pump. Your nurse will teach you how to use it. Depending on your unique care, your surgeon may or may not recommend PCA.

Pneumatic boots: A tubular device that is placed around your legs which inflates and deflates to keep the blood moving in your legs. This helps improve circulation and prevents the formation of blood clots. Depending on your unique care, your surgeon may or may not recommend a pneumatic boot.

PO: Medications taken by mouth.

Prophylaxis: Prevention; antibiotic prophylaxis is the use of antibiotics to prevent an infection.

Plavix: Generic name: clopidogrel; Plavix is used to keep your platelets from clotting to prevent unwanted blood clots.

Skilled Nursing Facility (SNF): A facility (often a nursing home) where patients who are not independently mobile and do not have assistance at home may go for inpatient rehabilitation.

Surgical Dressing: A sterile gauze pad placed over the incision to keep it dry and clean.

TED Stockings: Elastic stockings that increases blood return to the heart, prevents swelling in the legs and prevents blood clots from forming.

Urinary Catheter (Foley): A soft tube placed in your bladder to measure the amount of urine you make. It also prevents retention of urine in your bladder.

VNA nurse: A nurse who is part of a home care agency like a Visiting Nurses Association (VNA). The Home care agency has different healthcare providers including nurses, physical and occupational therapists who can provide intermittent services at home to supplement a patient's independent home exercise program.

Pre-Surgical Checklist	Notes
Steps to complete before your surgery ☐ Read the information from your surgeon's office. Call the office if you have any questions.	
☐ Schedule appointments with other doctors (like a cardiologist or PCP) if advised by your surgeon.	
 Prepare for your Pre-Admission Testing evaluation by gathering your health information including: Allergies Medications Implanted devices Medical history 	
 □ Complete blood work, tests, and other doctor visits. • Go to the 2nd floor of the Wang Building for blood work & ECGs. • On weekends, go to the Medical Walk-In Unit (1st floor, Wang Building) Hours: Monday 6:00am-6:00pm Tues/Wed/Thursday 6:00am-6:30pm Friday 6:00am-5:00pm Saturday & Sunday 9:30am-3:30pm 	
☐ Complete your Pre-Admission Testing evaluation either by phone or in-person. Your surgeon will decide which is best for you.	
 Prepare your after-surgery arrangements: Prepare your living space Ensure your prescriptions for your usual medications are filled prior to your surgery Stock up on prepared foods and groceries prior to your surgery Arrange rides 	
☐ Follow the instructions for the day of surgery as advised by your surgeon.	
Note: If necessary, any post-operative recovery like physical therapy, home care, or skilled nursing facility will be arranged by your healthcare team.	
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