

# *Total Joint Replacement Surgical Guide*



**WMC Health**

Westchester Medical Center Health Network

# Welcome

Dear Patient,

Welcome to the Joint Replacement Program. Our goal is simple: to return our patients to normal function quickly and safely, achieving the highest possible quality of life. Our surgical team partners with fellowship-trained orthopedic surgeons, anesthesiologists and other specialists to provide quality outcomes and a full continuum of care for patients at all risk levels. We use leading robotic-assisted joint replacement technologies, such as Stryker's Mako platform, and can provide hypoallergenic alloys for patients with metal allergies. The skills and experience of our staff make WMCHHealth a leader in orthopedic care for the Hudson Valley.

Our hospital is proud to participate in the Agency for Healthcare Research and Quality Program for Improving Surgical Care and Recovery. Through standardization of care and strong partnerships with our patients, we strive to improve the patient experience and surgical outcomes. We believe that patient engagement, education and reassurance are an essential part of a joint replacement program. Understanding the procedure, and what to expect afterward, can ease recovery, prevent complications and ensure the maximum benefit from your joint replacement. You can help optimize your recovery by becoming an active partner with your orthopedic care team before, during and after your surgery. We encourage you to ask questions, voice concerns or speak up if you do not understand any part of the process. This educational handbook will guide you along the path from preparation to recovery.

Your orthopedic team has a unique, individualized approach to care, with you in the center. At WMCHHealth, your safety and successful recovery are our top priorities. Your orthopedic care team will help you prepare for your surgery and answer any questions you may have along the way. Your total joint coordinator will be the key contact for you and your family before, during and after your surgery and can be reached at 845.483.5856.

Best,  
Joint Replacement Team

# Table of Contents

Welcome	2
Pre-op Checklist	4
Hip Replacement	6
Knee Replacement	7
Preparing for Surgery	8
Preparing Your Home for a Safe Return	11
The Days Before Your Surgery	12
Packing for the Hospital	12
The Day of Surgery	13
The Operation	14
Going Home	18
Frequently Asked Questions	20
How to Use an Incentive Spirometer	21
Total Hip Replacement Exercises	22
Total Knee Replacement Exercises	25
Car Transfer After a Total Joint Replacement	28
Notes	30

# Pre-op Checklist

Use this checklist as a guide to help you prepare for your surgery.

Action	Completed
Complete medical clearance appointment	
Complete pre-surgical testing appointment	
Complete dental checkup (if needed)	
Notify your surgeon of metal allergy (if indicated)	
Identify your coach for home support	
Prepare advance directives if you wish	
Obtain the medical equipment needed (front-wheeled walker, toilet riser, etc.)	
Prepare your home for your safe return	
Arrange transportation to and from hospital, follow-up appointments, physical therapy	
Arrange care for your pets	
STOP smoking	
Start pre-op exercises	
Start doing deep breathing exercises	
Maintain a healthy lifestyle	

Within one week before surgery	Completed
Stop taking all anti-inflammatories (Advil, Motrin, etc.), vitamins and supplements	
Make your outpatient physical therapy appointments	
Confirm you have your chlorhexidine (CHG) wipes for your skin preparation	

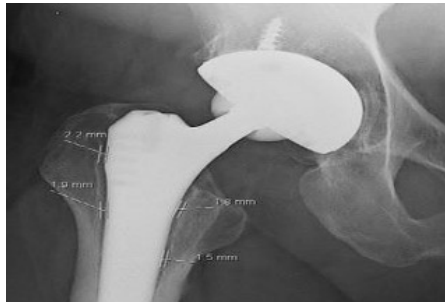
One day before your surgery	Completed
Receive phone call from the hospital between 2-4 p.m. for your arrival time	
Shower with antibacterial soap, complete CHG wipes, sleep in clean PJs and linens	

Day of surgery	Completed
Complete second pack of CHG wipes as directed	
Remove all jewelry and piercings	
No solid food for six hours prior to your arrival time	
You may continue to drink small amounts of clear liquid up to two hours before surgery	
Complete your pre-surgery drink (if provided) before leaving the house	
Take medications as instructed with a sip of water	

## Hip Replacement

More than 450,000 total hip replacements are performed in the United States each year due to arthritis, traumatic injury and other causes. The hip is one of the largest joints in the body, and is composed of a ball and socket joint. The upper end of the leg bone (femur) has a rounded head (femoral head) that fits into a socket (acetabulum) in the pelvis to form the hip joint.

During a total hip replacement, the damaged parts of the bone, including the femoral head, are removed and replaced with implants. Your surgeon will choose the implant components that are best for you based on your age, activity level and body type. These components are made from a combination of cobalt, chromium, titanium and ceramic.



### After surgery you will need to maintain hip precautions to prevent dislocation



- DO NOT** cross your legs
- Sit in a higher chair
  - Bend of knee should align with the seat



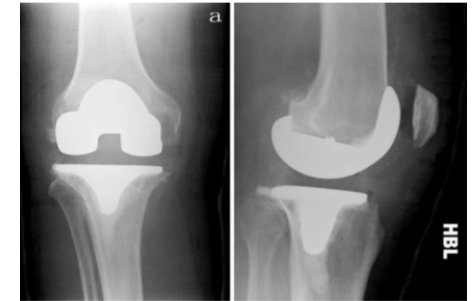
- DO NOT** bring your knees above your hips
- Maintain a 90-degree position



- DO NOT** internally rotate your toes

## Knee Replacement

More than 700,000 total knee replacements are performed in the United States each year. Knee replacement surgery is a life-changing event for many people. It can dramatically reduce the pain that people feel each day and allow them to get back to living the life they once had. Most people who undergo a total knee replacement recover much more quickly and easily than they expected, and express a wish that they had done it years earlier.



A total knee replacement is a procedure during which the worn cartilage is removed and replaced with metal and polyethylene (plastic) implants. The operation involves the removal of all cartilage from the end of the femur (thigh bone) and the top of the tibia (shin bone). Implants cover these surfaces. By resurfacing your knee's damaged and worn surfaces, knee replacement surgery can relieve your pain, correct your leg deformity and help you resume your normal activities.

### Tips for after your knee replacement

- ✓ When lying down or sitting keep your legs straight with your toes facing the ceiling
- ✓ Put a rolled-up towel under your ankle to promote knee extension
- ✗ Never put a rolled towel or pillow behind the knee
- ✓ When resting, ice for 15 minutes every four hours and elevate your leg

# Preparing for Surgery

## Medical clearance

To ensure it is safe for you to proceed with your joint replacement surgery, you will need to be evaluated to determine your specific risk for surgery. Medical problems that you may have can be identified and addressed prior to your surgery. This will help decrease your risk during and after surgery. The risk evaluation is done by your primary care physician or a designated medical clearance provider. All results will be sent to your surgeon prior to your surgery.

## Pre-surgical testing

Pre-surgical testing (PST) is required for all joint replacement patients. An appointment for PST will be made by your surgeon's office, or the hospital will call you to make an appointment. At this visit, you will undergo a series of tests, including blood work (non-fasting), electrocardiogram (EKG), possible urine sample and possible chest X-ray. Please bring an accurate list of all medications you take, including any herbals, vitamins or supplements, with the name of the medication, dose and frequency. You will be given instructions on which medications to take on the day of surgery, and which medications you will need to stop taking before surgery.

## Dental work

Procedures such as dental extractions, periodontal work, mouth surgery and dental cleaning may increase the likelihood of bacteria developing in your blood. The American Academy of Orthopedic Surgeons recommends completing these types of dental procedures before your surgery. After a joint replacement, you will have to wait three months before undergoing any non-emergency dental work or routine cleaning. If you are considered to be at high risk for developing an infection due to your medical history, such as uncontrolled diabetes, a compromised immune system or a history of an infection in an artificial joint, you need to take antibiotics prior to any dental work. If antibiotics are needed, your dentist should write the prescription for you. If not, call your surgeon.

## Identify a coach

Your coach can be your spouse, partner, relative or friend. The coach should attend the pre-operative class with you, and review this handbook. A coach can help you by providing motivation and support, and ensure you attend all of your follow-up and physical therapy appointments. The coach can also help with shopping, cooking, cleaning, laundry and pet care.

## Advance directives

An advance directive can be used to appoint a healthcare agent, someone you trust to make healthcare decisions for you. It can also be used to communicate your personal preferences about treatments that may be used to sustain your life. Advance directives are optional. If you have an advance directive, please bring a copy to the hospital if you want it to apply to your upcoming visit. An advance directive can be removed or revised at any time.

## Exercise

Strengthening and stretching your whole body before surgery will improve your flexibility and strength, both prior to and after your surgery. You can refer to the procedure-specific exercises on pages 22-27 of this handbook. These exercises have been designed for you by your physical and occupational therapists.

## Nutrition

Before and after surgery, eat a healthy, well balanced diet, high in lean protein, low-fat dairy, whole grains, fruits and vegetables. Drink at least six 8-ounce glasses of water each day. Certain vitamins and nutrients are important in the healing process, and facilitate a quicker recovery. An anti-inflammatory diet can benefit patients with different types of arthritis. Information on the anti-inflammatory diet can be found on WebMD.com.

## Preparing Your Home for a Safe Return

### Blood sugar

If you have diabetes, it is very important to manage your blood glucose before your surgery and throughout your recovery. You will have your hemoglobin A1c checked in pre-surgical testing to ensure your diabetes is under control. Your orthopedic team will manage your blood sugar during your hospital stay; however, uncontrolled blood sugar can adversely affect the healing process and places you at a higher risk for infection.

### Smoking

If you are a smoker, quitting four to six weeks before surgery is crucial, and will significantly decrease your risk of impaired healing, blood clots and infection. Talk to your surgeon or primary care physician about your quitting options, or contact the New York State Smokers' Quitline at 866.NY.QUITS or at [nyssmokefree.com](http://nyssmokefree.com).

### Metal allergy

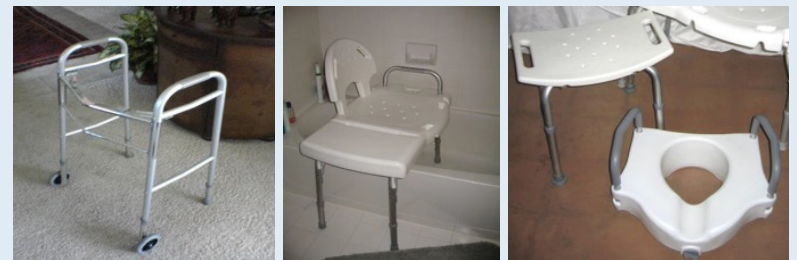
If you are having your knee replaced and are allergic to metal, notify your orthopedic surgeon. A special implant will be ordered that does not contain nickel. A metal allergy may be exhibited by a rash, redness, swelling or itching when you come in contact with metal.

- » Remove throw rugs and any tripping hazards to help prevent falls during your recovery.
- » Move furniture to ensure a wide path for a walker during your recovery.
- » Make sure you have a firm chair with a higher-than-average seat and sturdy arms. Such a chair is safer and more comfortable than a low, soft-cushioned chair.
- » Make sure you have safe handrails along all stairs in your home, both inside and out.
- » Consider installing safety bars and a hand-held hose in the shower, and purchasing a shower bench so you can sit while showering. Place a rubber mat or nonskid adhesive on the floor of the tub or shower.
- » Store frequently used items at waist level.
- » Prepare and freeze healthy meals before your surgery.

You will need durable medical equipment at home during your recovery (examples appear below). Please obtain a 5-inch front-wheeled walker, a cane and a toilet riser prior to your surgery. If you have a two-story home it is recommended that you borrow or buy a second walker. If you are having a hip replacement, a hip-kit, containing a long-handled shoehorn, long-handled sponge, a sock aid and a grabbing tool, is recommended.

After surgery, you will be evaluated by a physical therapist and occupational therapist; they may recommend other equipment if needed.

### Examples of durable medical equipment



Ask the person who will be driving you home after surgery to bring your walker and leave in the car.

# The Days Before Your Surgery

You will receive a call from the hospital the day before your surgery between 2 and 5 p.m. to advise you what time to arrive at the hospital. If your surgery is on a Monday or Tuesday following a major holiday, you will receive a call the Friday before. If you do not receive a call by 5 p.m., please call 845.431.8844.

- » Do not shave your legs for three days prior to your surgery. If hair needs to be removed from your surgical area, our trained staff will clip and clean the area before you enter the operating room. Abrasions can lead to infection.
- » Do not get a pedicure for two weeks prior to your surgery.
- » Remove acrylic nails prior to your surgery.
- » Follow all instructions, and complete the chlorhexidine wipes the night before and the morning of your surgery.
- » Sleep in clean linens.
- » Tell your healthcare provider if you develop a fever, sore throat, skin problem or any other infection or illness.
- » Obtain durable medical equipment needed for a safe recovery at home.
- » Complete advance directives, if you wish.
- » STOP taking all vitamins, herbals, supplements and anti-inflammatories seven days prior to your surgery.
  - » Common anti-inflammatories: Motrin, Naproxen, Aleve, Advil, Ibuprofen

If you are on a blood thinner it is important that you follow your physician's instructions on when to stop these medications prior to your surgery.

## Packing for the Hospital

### What to Bring and What Not to Bring

Use this checklist to keep track of what you need to bring. Please leave all valuables at home. Please do not bring money or jewelry with you. The hospital cannot be responsible for lost belongings. Please do not bring any medications unless otherwise instructed to.

- » Cases for eyeglasses, dentures and hearing aids
- » Loose-fitting athletic clothing or pajamas
- » Sneakers or shoes with flat bottoms and non-skid soles (NO open-toe footwear, slippers or heels)

- » A copy of your advance directives: Power of Attorney, Medical Orders for Life-Sustaining Treatment (MOLST) form, Healthcare Proxy or Living Will
- » Insurance cards and photo identification
- » A current list of all medications (including herbals, vitamins or supplements) with the dose and frequency, noting which, if any, medications have been stopped prior to surgery, and when they were stopped

## The Day of Surgery

- » Remember to take your medications as instructed.
- » Complete the second pack of chlorhexidine wipes; wear clean, loose-fitting clothing; and do not apply any lotions, powder, makeup, deodorant or hairspray.
- » All jewelry must be removed before surgery, including wedding rings, earrings and any other body piercings.
- » You may eat solid foods up to six hours before your surgery and drink clear liquids up to two hours before your surgery.
- » Complete your pre-surgery clear nutrition drink, if provided with one, before leaving the house.

Your safety is our priority. Patients play a vital role in optimizing safety by becoming active, involved and informed participants in their care and recovery. We not only welcome but count on your participation. Understanding your needs, beliefs and goals will allow your healthcare team to fine-tune your treatment plan. Always ask questions as they arise.

Make sure your healthcare providers confirm your identity by asking for your full name and date of birth and checking your identification wristband before any medications are administered, treatments are rendered or procedures are initiated.

### Pre-operative

One adult family member or support person will be allowed to stay with you in the pre-operative area until you go into the operating room. We can update your family or support person about your care with the use of the Family First app. Our team will help you register your family or support person for the app on the day of surgery.

You will meet your nurse, who will ask you a series of questions, perform a physical assessment, draw samples for laboratory tests, if needed, and establish an intravenous (IV) line for fluids and medications.

# The Operation

- » You will be asked to empty your bladder and bowels, and change into a hospital gown.
- » You may need to have hair clipped from the surgical area.
- » If indicated, a nerve block may be administered by anesthesia.
- » Your surgeon will address any last-minute questions or concerns and verify and mark your surgical site.
- » Your anesthesiologist will answer any questions you may have and discuss the anesthesia plan that best fits you.

## Operating Room

You will be in the operating room for about two hours; the actual joint replacement takes about one hour. You will be connected to monitoring devices to monitor your heart and lungs during the procedure. Your surgical site and procedure will be verified one last time before anesthesia is administered. The anesthesiologist will administer anesthesia as discussed. Once the procedure is complete, you will be moved to the Post-Anesthesia Care Unit (PACU).

## Understanding anesthesia

**Spinal anesthesia** involves the injection of a local anesthetic to provide numbness from the waist down and a long-acting pain medication for pain control. Medications are also given through your IV to relax and sedate you. If there is any contraindication for the use of spinal anesthesia, the anesthesiologist will use general anesthesia.

**General anesthesia** involves administering medications that provide complete loss of consciousness and mobility, and requires intubation and ventilation.

**Nerve block** is the injection of numbing medication near specific nerves to decrease your pain in a certain part of your body during and after surgery.

**A long-acting local anesthetic** can also be administered in the operating room. Local anesthetic medications cause absence of all sensation by stopping the nerves in a part of your body from sending pain signals to your brain.

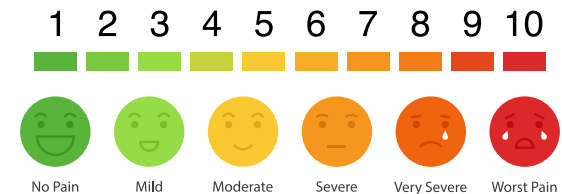
## Post-Anesthesia Care Unit (PACU)

Your nurse will continue to monitor your blood pressure, heart rate, and breathing; assess and manage pain; and assess for regained sensation. You will be encouraged to do deep breathing exercises and to move your feet and ankles to promote circulation. Once you are awake and able to follow commands, all vital signs are within normal limits, pain (if any) is controlled and you have regained sensation, you will move to the next phase of recovery.

## Recovery

### Pain management

Our Total Joint Replacement Program uses a multimodal approach to pain control. Multimodal pain control means that you will receive two or more medications that provide pain relief, and when used together; more effectively block pain signals. You will be given these medications pre-operatively, in the operating room, and at all recovery phases to manage your pain effectively. We will assess your pain level and medicate you as needed with the prescribed pain medications. The key to effective pain control is treating the pain as soon as it begins. You will be asked to rate the intensity of your pain using a scale of 0 to 10, zero being no pain at all and 10 being the most severe pain you could imagine. A score of 1-3 is considered mild pain, 4-6 is moderate pain and 7-10 is severe pain. Pain medications will be ordered for every level of pain and administered appropriately. You will also be asked about your acceptable pain goal. Knowing that, postoperatively, a goal of zero pain is not attainable, we will ask what your everyday pain level was before surgery, decrease that number by 2 or 3 and make that your pain goal. Your candid communication to help manage pain is essential and appreciated.



### Eating and drinking

It is best to start with sips of water to be sure you can tolerate water without experiencing nausea and vomiting, and then gradually increase your intake until you are able to tolerate solid foods.

### Intravenous (IV) fluids and medications

Your IV will remain in place until you are discharged. You will receive IV fluids until you are able to eat and drink without nausea. You may also receive medications through your IV.

### Sequential compression stockings

While you are in the hospital sequential compression stockings will be placed on both of your lower legs. These stockings inflate and deflate automatically, simulating muscle activity that occurs when walking; they are used to assist in the prevention of blood clots and should be on while you are in bed. When you are out of bed during the day, your physical therapist will reinforce ankle pumps and toe curls, which also promote circulation.



### Oxygen

During surgery, you will breathe slowly and shallowly, which can often deplete the oxygen level in your blood. After surgery, you may need supplemental oxygen through a plastic tube under your nose. While in the hospital we will monitor your oxygen level in your blood, using a small probe that is placed on the end of your finger.

### Coughing and deep breathing

You will be encouraged to take deep breaths and cough before and after your surgery. This exercise will help keep secretions in your lungs from accumulating. Fluid accumulation in your lungs can cause pneumonia. You will be given a device called an incentive spirometer to help you with deep breathing. Instructions on how to use an incentive spirometer can be found on page 21 of this handbook. You will be encouraged to do this once an hour, five to 10 breaths each time, while awake. Please take your incentive spirometer home with you, and continue to use it at home.

### Constipation

The anesthesia, pain medication and being less active than usual may make you constipated after surgery. You can help prevent constipation by eating a healthy diet with whole grains, fruits and vegetables, and drinking plenty of water and other fluids such as prune juice. You will be routinely given stool softeners and laxatives while you are in the hospital, and will be discharged on a mild laxative. If you are already on a special routine to maintain bowel function, please inform your healthcare team.

### Incision care

You will have a dressing over your incision to protect your wound and promote healing. Hand washing is the most effective way to prevent the spread of bacteria. Everyone coming in and out of your room, including visitors, will wash their hands. If you notice anyone not washing their hands, please ask them to do so. You will be given specific discharge instructions on how to care for your incision.

### Blood thinner

Preventing blood clotting is important after joint replacement surgery. The blood thinner your surgeon prescribes is patient-specific, and depends on your risk of developing a blood clot. You will continue to take a blood thinner for up to 30 days after surgery. If you are on a blood thinner already, we will resume the same medication after surgery.

### Early ambulation

Early ambulation decreases the risk of complications after surgery. The sooner you move, the better the outcome. In recovery a staff member will help you get up. Please take your time when getting up for the first time after surgery. Please NEVER get up without assistance. Ring the call bell and wait for assistance to arrive. Always remember: "call, don't fall."

### Physical and occupational therapy

A physical therapist and an occupational therapist will assess your physical abilities and home situation, and make recommendations for a safe discharge home. The physical therapist will reinforce the pre-operative exercises and teach you additional post-op exercises, proper use of equipment, how to get in and out of bed and a chair, how to go up and down stairs, how to get in and out of a car, and how to step into a bathtub if you don't have a walk-in shower at home. The occupational therapist will assist you with fine motor skills, such as dressing and bathing.

### Resuming your current medications

Your physician will order your current medications after surgery, using the list you provided at your presurgical testing visit. Take all medications as prescribed by your physician. Discuss the medications you were on prior to surgery; some medications may not be appropriate after surgery. Remember to check with your physician before restarting any over-the-counter medications, herbals or supplements.

- » **DO NOT** drink alcoholic beverages while taking narcotic pain medication.
- » **DO NOT** take sleeping pills while taking narcotic pain medication.
- » **DO NOT** drive while taking narcotic pain medication.

# Going Home

## Discharge planning

Discharge planning begins before admission to the hospital. Each discharge plan is tailored to the individual and his or her needs. You may go home the same day or stay in the hospital overnight and be discharged the next day. Your orthopedic team's goal is to make your transition from the hospital to home as safe and smooth as possible. Most patients go home and start outpatient physical therapy. Please call to set up your appointments the week before your surgery. If your insurance allows, we also offer home physical therapy. If you choose home physical therapy, a case manager will provide you with a list of providers in your area.

## Exercise

Now that the surgery is done, it is your turn to do the work. Your dedication and commitment are essential for an optimal recovery. Please follow the exercise plan your surgeon and physical therapist have established for you. Start physical therapy within 2-3 days of going home.

## Swelling

It is normal to have swelling in your legs following surgery. Do not sit with your feet on the floor for any extended length of time. Get up and walk around. Let your soreness be your guide as to what you can handle. When you are not ambulating or exercising, remember to rest, be sure to elevate and ice. Remember "toes above the nose" when elevating. If you develop any unrelieved pain with swelling, call your surgeon.

## Bruising

It is normal to have some bruising down your leg to your toes. Bruises may not appear until after you are home for a few days. The bruising should disappear after a few weeks. Your surrounding muscles and incision may feel sore for several weeks after surgery.

## Difficulty sleeping

Although you may have difficulty sleeping after surgery, DO NOT take sleep medication. It can be dangerous when taken with narcotic pain medication. It is recommended to sleep with a pillow wedged between your legs when lying on either side.

## Dressing and bathing

NO tub baths or swimming are permitted until your surgeon says it is OK to do so. If your incision is open to air, let the soap and water run over the incision. DO NOT scrub the area. Blot it dry with a clean towel, and do not apply any lotions or creams to your incision. Dress in clean, loose-fitting clothing.

## Sexual activity

Many people worry about resuming sexual activity after joint replacement. Generally, it is safe to resume sexual activity as soon as you are comfortable. If you have had a hip replacement, be sure to maintain your hip precautions. Please discuss any specific concerns with your surgeon or physical therapist.

## Driving

Be sure to have rides arranged for physical therapy and follow-up appointments. Your surgeon is the only person that can clear you to drive. Driving while under the influence of narcotics is against the law and is considered a driving while intoxicated (DWI) violation.

## Call your surgeon's office right away if you experience any of the following:

- » Increased redness or drainage from the incision site
- » A temperature greater than 101.0 degrees for more than one day
- » Increased swelling, pain or tenderness of the thigh, calf or ankle
- » Nausea and/or vomiting
- » Worsening or unrelieved pain
- » Abnormal bleeding of any kind

**If you experience chest pain or shortness of breath, call 911.**

## Additional important information to know

- » Your first post-op visit with your surgeon should be scheduled approximately two weeks after your surgery. If you do not have a visit scheduled, call your surgeon's office to make an appointment. Be sure to keep all of your follow-up appointments.
- » Avoid walking on uneven surfaces, snow and ice.
- » Yes, your implant will set off alarms at the airport.
- » It is safe to have an MRI after joint replacement surgery; the implants are non-magnetized.
- » After surgery, inform all of your physicians that you have a prosthetic implant, especially your dentist.
- » If you have diabetes, your blood sugars may be elevated after surgery. It is very important to manage your blood sugar; uncontrolled blood sugar can impair healing and increase your risk for infection.

## Frequently Asked Questions

### Q: Should I exercise before my joint replacement surgery?

Definitely! Strengthening and stretching prior to surgery will help you recover faster.

### Q: Will I have pain after surgery?

Yes, although the pain and discomfort will decrease gradually over the first couple of weeks. The key to effective pain control is treating it as soon as you start to become uncomfortable.

### Q: How soon after the surgery can I stand?

Shortly after your surgery, a member of your healthcare team will help you stand and walk with your walker.

### Q: When can I return to work?

Depending on the type of work you do, your needed time off can vary. Talk to your surgeon about your work activities and the right time for you to return to work.

### Q: When can I play sports again?

After full rehabilitation, you can participate in low-impact activities such as walking, dancing, golfing, swimming and biking.

If you have any other questions, please contact your total joint coordinator at 845.483.5856

## How to Use an Incentive Spirometer

1. Relax and breathe out.
2. Place your lips tightly around the mouth piece. Make sure the device is upright.
3. Breathe in as much air as you can through the mouth piece. Don't breathe through your nose. Breathe in slowly and deeply. Hold your breath long enough to keep the piston raised for at least three seconds. Take your mouth off the mouth piece and breathe out.

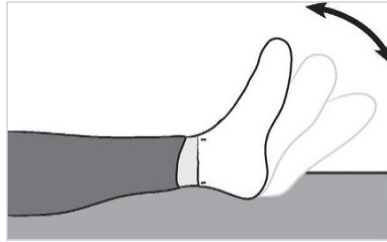


# Total Hip Replacement Exercises

## Ankle pumps

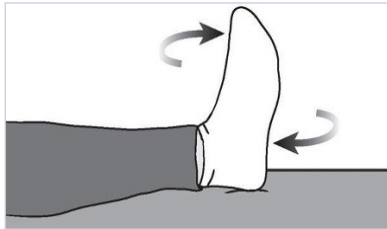
- » Slowly push your foot up and down.
- » Repeat this exercise several times, as often as every five or 10 minutes.
- » If you are watching television, you should pump your feet every time a commercial comes on.

Begin this exercise immediately after surgery and continue with it until you are fully recovered.



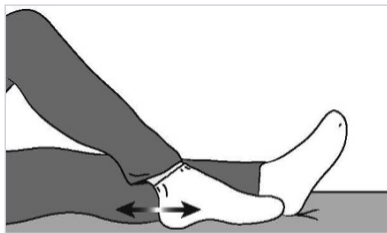
## Ankle rotations

- » Move your ankle inward toward your other foot and then outward away from your other foot.
- » Repeat five times in each direction.
- » This exercise should take three minutes.
- » Do three to four sessions a day.



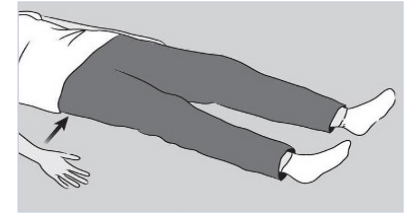
## Bed-supported knee bends

- » Slide your foot toward your buttocks, bending your knee and keeping your heel on the bed. Do not let your knee roll inward.
- » Hold your knee in a maximally bent position for five to 10 seconds.
- » Straighten your leg.
- » Repeat 10 times.
- » This exercise should take three minutes.
- » Do three to four sessions a day.



## Buttock contractions

- » Tighten your buttock muscles and hold to a count of five.
- » Repeat 10 times.
- » This exercise should take 90 seconds.
- » Do three to four sessions a day.



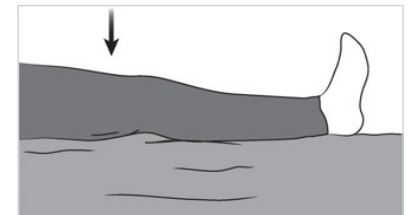
## Abduction exercise

- » Slide your leg out to the side as far as you can and then back.
- » Repeat 10 times.
- » This exercise should take 90 seconds.
- » Do three to four sessions a day.



## Quadriceps set

- » Tighten your thigh muscle. Try to straighten your knee. Hold for five to 10 seconds.
- » Repeat this exercise 10 times during a 10-minute period, rest one minute and repeat.
- » Continue until your thigh feels fatigued.
- » This exercise should take two minutes.



### Standing knee raises

- » Lift your operated leg toward your chest. Do not lift your knee higher than your waist. Hold for two or three counts.
- » Put your leg down.
- » Repeat 10 times.
- » This exercise should take three minutes.
- » Do three to four sessions a day.



### Standing hip abduction

- » Be sure your hip, knee and foot are pointing straight forward. Keep your body straight. With your knee straight, lift your leg out to the side.
- » Slowly lower your leg so your foot is back on the floor.
- » Repeat 10 times.
- » This exercise should take two minutes.
- » Do three to four sessions a day.



### Standing hip extensions

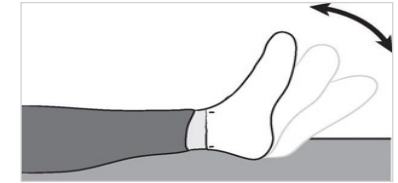
- » Slowly lift your operated leg backward. Try to keep your back straight. Hold for two or three counts.
- » Return your foot to the floor.
- » Repeat 10 times.
- » This exercise should take two minutes.
- » Do three to four sessions a day.



## Total Knee Replacement Exercises

### Ankle pumps

- » Slowly push your foot up and down.
- » Repeat this exercise several times, as often as every five or 10 minutes.
- » If you are watching television, you should pump your feet every time a commercial comes on.



Begin this exercise immediately after surgery and continue with it until you are fully recovered.

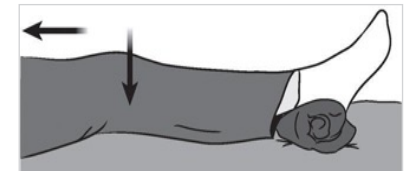
### Quadriceps sets

- » Tighten your thigh muscle.
- » Try to straighten your knee. Hold for five to 10 seconds.
- » Repeat this exercise approximately 10 times during a two-minute period, rest one minute, and then repeat.
- » Continue until your thigh feels fatigued.



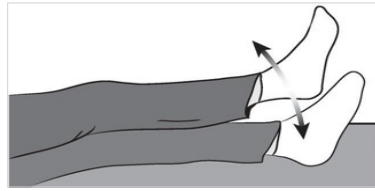
### Knee straightening exercises

- » Place a small rolled towel just above your heel so that your heel is not touching the bed.
- » Tighten your thigh.
- » Try to fully straighten your knee and to touch the back of your knee to the bed. Hold fully straightened for five to 10 seconds.
- » Repeat until your thigh feels fatigued.
- » This exercise should take three minutes.



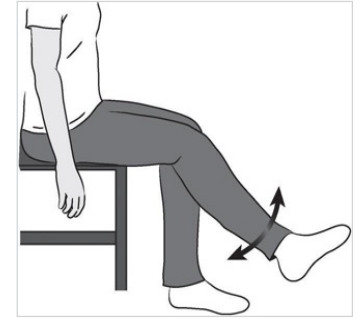
### Straight leg raises

- » With your non-operative leg bent, tighten your thigh muscle with your knee fully straightened on the bed, as with the quadriceps set above.
- » Lift your leg several inches. Hold for five to 10 seconds.
- » Slowly lower.
- » Repeat until your thigh feels fatigued.
- » This exercise should take three minutes.



### Sitting unsupported knee bends

- » While sitting at bedside or in a chair with your thigh supported, bend your knee as far as you can until your foot rests on the floor.
- » With your foot lightly resting on the floor, slide your upper body forward in the chair to increase your knee bend. Hold for five to 10 seconds.
- » Straighten your knee fully.
- » Repeat several times until your leg feels fatigued or until you can completely bend your knee.
- » This exercise should take three minutes.

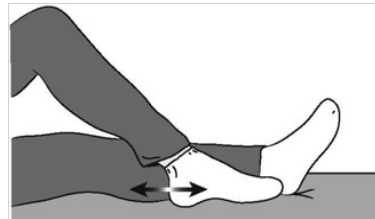


### You also can do leg raises while sitting:

- » Tighten your thigh muscle and hold your knee fully straightened with your leg unsupported.
- » Repeat as above.
- » Continue these exercises periodically until full strength returns to your thigh.

### Bed-supported knee bends

- » Slide your foot toward your buttocks, bending your knee and keeping your heel on the bed. Hold your knee in a maximally bent position for five to 10 seconds.
- » Straighten your leg.
- » Repeat several times until your leg feels fatigued or until you can completely bend your knee.
- » This exercise should take two minutes.



### Sitting supported knee bends

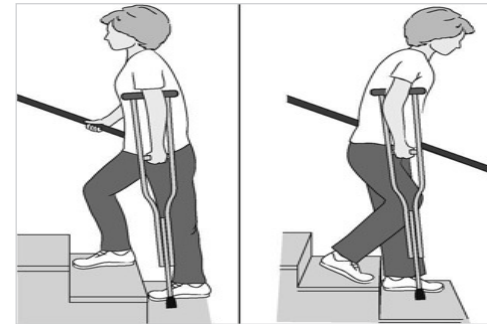
- » While sitting at your bedside or in a chair with your thigh supported, place your foot behind the heel of your operated knee for support.
- » Slowly bend your knee as far as you can. Hold your knee in this position for five to 10 seconds.
- » Repeat several times until your leg feels fatigued or until you can completely bend your knee.
- » This exercise should take two minutes.



### Stair climbing and descending

Stair climbing is an excellent strengthening and endurance activity, and it also requires flexibility.

- » At first, you will need a handrail for support and will be able to go only one step at a time. Always lead up the stairs with your good leg and down the stairs with your operated leg. Remember: "up with the good" and "down with the bad."
- » You may want to have someone help you negotiate stairs until you have regained most of your strength and mobility.
- » Do not try to climb steps higher than the standard height (7 inches) and always use a handrail for balance.
- » As you become stronger and more mobile, you can begin to climb stairs foot over foot.



# Car Transfer After a Total Joint Replacement

On the day you are discharged from the hospital after your joint replacement, you will be taken to the car in a wheelchair. Please have whomever is picking you up bring your walker with them. This brochure will give you some helpful suggestions for getting into and out of the car and having a safe and comfortable ride home.

## Patients recovering from a hip replacement must follow the hip dislocation precautions (movements to be avoided) at all times:

- » Do not cross your legs past your midline (at your ankles, knees or hips).
- » Do not turn your knees or toes inward ("pigeon toes" or reaching your toes or feet across your body).
- » Do not bend your hips (flexion) beyond 90 degrees. Your knees should be below your hips when sitting.

## Preparing the car

Ask your family to bring an extra pillow for comfortable positioning. You may want to place it on the seat of the car to raise your height and to help ensure you will not bend beyond 90 degrees at the hip. Before getting in the car:

- » Keep the front seat clear of any objects such as purses, cell phones or sunglasses.
- » Move the front passenger seat as far back as it will go. Recline the seat to give yourself more room.

## Getting into the car

- » Position the wheelchair on the front passenger side of the car.
- » Make sure the wheelchair is locked before standing up.
- » Use your walker to walk to the car.
- » Turn around so your backside is lined up with the seat and you feel your legs touching the edge of the seat.
- » Place your left hand on the doorframe or dashboard of the car and your right hand on the top of the passenger seat for support before sitting down. Do not hold on to the car door because it could move.
- » Make sure your recovering leg is extended in front of you to prevent too much bending of the hip.
- » After you are safely seated, scoot back toward the driver's seat as far as possible.
- » Avoid turning your recovering leg inward or twisting your body as you bring your legs into the car. Recline your seat and lean back as you bring your legs into the car in order to maintain at least 90 degrees between your thigh and torso. You may have someone help you bring the recovering leg into the car.



## While riding in the car

### Remember to:

- » Keep your legs apart.
- » Keep your knees below the level of your hips.
- » Do not turn your operated leg inward (no "pigeon toes").
- » Always wear your seat belt.

## Getting out of the car

- » To get out of the car, reverse the process.
- » If possible, have someone waiting with your walker.
- » Wait until you are stable to take your walker.



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