

Preparing for Joint Replacement Surgery



YALE-NEW HAVEN
HOSPITAL



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Preparing for joint replacement surgery at Yale-New Haven Hospital

Exam by a medical doctor

Before surgery, you will need to be checked for any medical problems that could put you at risk during or after surgery. Your medical team will review the results of your exams or tests.

You will be required to have/provide:

- A complete medical history
- A physical exam (to be done within 30 days of surgery)
- Pre-admission testing

Pre-admission testing

Pre-admission testing consists of laboratory tests, including blood, urinalysis, a chest x-ray, electrocardiogram and nasal swab (MRSA testing).

Pre-op lab testing

MRSA and MSSA are bacterial infections. MSSA is sensitive to certain antibiotics, while MRSA is highly resistant. This testing is done to identify any possible sources of infection prior to surgery.

Allergies

Please let us know about any allergies, including allergies to any medication or food.

Medications to stop

You will be instructed by your medical team to stop taking any medication that will increase the risk of blood loss during surgery. It is important to discuss with your doctor all herbal medications, vitamin supplements, pain medications and alcohol consumption.

Pre-operative education class

Yale-New Haven Hospital offers a pre-operative class to help prepare you for your surgery. Please contact **888-700-6543** to schedule a date you can attend.



Preparing for surgery

Home safety

Before your surgery, it is critical to prepare your home and minimize the chance of injuries.



- Remove scatter rugs.
- Stairways should have hand railings.
- Tuck away long phone and lamp cords.
- Arrange furniture so that you can easily move about your house with crutches or a walker (if required).
- If needed, arrange for the care and safety of small pets that may run underfoot.
- It is a good idea to have a friend or family member help you for the first few days after you return home from the hospital.

Maximize your nutritional status

- Eat foods naturally rich in iron, such as lean meats, poultry, fish, liver, spinach, raisins, carrots, turnip greens or whole wheat bread.
- Include Vitamin C-rich foods such as strawberries, oranges, cantaloupe, green peppers, tomatoes, potatoes and broccoli with each meal.
- Your doctor may prescribe an iron supplement for you.

Exercise

Exercise is important to your recovery. Exercise begins before surgery and continues in the hospital before you return home. One goal of the pre-operative education class is to introduce you to your exercise program. Your doctor can also offer suggested exercises.



Preventing infections

- Infections can enter the body through various pathways, but most commonly do so through the mouth and the skin.
- Please report to your doctor if you have any open sores or any infections.
- Because bacteria can enter your bloodstream through the mouth during dental care and cause widespread infection, schedule a dental checkup in the month before your surgery. You should not have dental work performed within 2 weeks prior to surgery or 3 months after surgery, except for emergencies.

Four weeks before surgery

- Schedule your pre-operative physical with your primary care physician.
- If you are diabetic, your blood sugar levels should be within your target range, as specified by your physician, for one month prior to surgery.
- If you are currently under the care of a pain management specialist, please make an appointment to be cleared for surgery. Also, please request documentation with recommendations for pain medication while you are in the hospital.

Two weeks before surgery

- Attend pre-operative education class.
- Start pre-operative exercises.
- Prepare your home.
- Prepare (or purchase) and freeze easy meals.
- Reduce alcohol intake and smoking.
- Complete your pre-operative physical and lab work including your nasal swab testing for MRSA and MSSA.
- Receive bacterial wipes (CHG cloths) from surgeon's office.
- If you are diabetic, please check with your doctor about taking your medications the day of surgery.

Day before surgery

A hospital professional will call you the afternoon before your surgery. He or she will provide you with your arrival time to the hospital. If your surgery is on a Monday, you will receive a call on the Friday before.

- Do not eat or drink after midnight before surgery including water, gum, mints, or candy.
- Do not shave the area where you're having the surgery for three days prior to your procedure. Shaving can irritate the skin and lead to infection.
- Use the CHG cloth the night before on the operative area. DO NOT wash or rinse off the area. Repeat the morning of surgery.
- Remove nail polish.
- Do not apply lotion on the operative area.
- Call your surgeon before surgery if you do not feel well or develop any signs of illness: cold, fever, sore throat, chest pain or difficulty breathing.

Day of surgery

If you were instructed to take any medications the day of surgery, take with only a small sip of water.

What to bring to the hospital

- Medical insurance or Medicare cards.
- A list of all medications and dosages.
- Note: Do not bring medications to the hospital.
- Eyeglasses (do not bring contacts).
- Dentures and hearing aids.
- A copy of your living will or health care proxy.
- A list of any allergies.

Arrival

- A friend or family member may want to come with you.
- Keep warm. In cold weather, heat up the car prior to getting in. Staying warm before surgery lessens your chance of infection.
- Please park in the George Street Garage. There is parking for surgical patients on Level 3A (look for the orange stripe on the wall).
- Upon entering the hospital on Level 3A, enter to the left through the door marked Scheduled Admissions. There is an elevator you may take to Level 2V.
- The receptionist will check you in and provide your hospital identification bracelet.

Holding area

You will be brought to a holding area prior to surgery.

- An admitting nurse will provide you with a warming hospital gown and your clothes will be placed in plastic bag. It's important that the gown be turned on so that you remain warm while you're waiting. If you wear dentures, eyeglasses or hearing aids, you will need to remove them. Give them to your family members to return after surgery.
- The nurse will recheck all of your medical records and conduct a brief assessment that includes taking your vital signs.



- An intravenous line will be started and the site of the surgery will be marked.
- The nurse may also draw additional labs while you are in the holding area.

Anesthesia

An anesthesiologist will meet and interview you before surgery to help determine which type of anesthesia is best for you, based on your personal health history. It's important to tell the anesthesiologist if you ever had any problems with anesthesia or medications.

Waiting Room

Your family will be instructed where they may wait while you are in surgery. You will be brought to the operating room and then to a recovery room after surgery.

- Nurses will check your blood pressure, pulse and breathing.
- You will be given medications for pain, as needed.
- Nurses will check your bandages and encourage you to take deep breaths and to move your ankles and feet.

Once you are ready to move from the recovery room to your hospital room, your family will be notified.

Postoperative care



Food and medicine

Initially after your surgery, you will receive fluids, nourishment and antibiotics through an intravenous tube.

It is possible that YNHH cannot provide the same name brand medications that you take at home.

You will be provided with an equivalent medication to what you currently use.

Dressings

A dressing will be placed over your wound after surgery and will be monitored by your medical team. A drainage tube may be placed near your surgical site during surgery. It will be removed prior to your discharge from the hospital.

Oxygen and vital signs

After surgery you may receive oxygen through a tube under your nose. Occasionally a monitor will be placed on your finger to measure the amount of oxygen in your blood. In addition, your blood pressure, temperature, pulse and pain score will be assessed every four hours.

Blood thinners

Blood clots can sometimes occur after joint replacement surgery. You will be given a blood thinner to prevent blood clots. The type of blood thinner and how long you are to take the medication will be determined by your doctor.

Signs of blood clots include:

- Swelling
- Redness
- Pain
- Warmth

Signs of infection

- Persistent fever (oral temperature greater than 100 degrees)
- Shaking or chills
- Increased redness, tenderness, swelling or drainage from incision
- Increased pain during activity and at rest
- Foul-smelling wound drainage

Pain management

Pain medication

Pain medication can be delivered orally, intravenously or through an epidural. The anesthesiologist will discuss with you how your pain medication will be delivered.

- Take your prescribed pain medication every three to four hours as needed. Gradually, you should be able to increase the length of time between pills.
- Take pain medication 20-30 minutes before the therapists arrives. This will help you to perform your exercises with less pain. After exercising, you may want to apply ice to your incision for about 20 minutes, three to four times per day to decrease swelling. Never apply ice directly to the skin.

Therapy and exercises

Physical and occupational therapy

During your hospital stay, you will receive physical and/or occupational therapy starting as early as the day of your surgery – depending on your surgeon's protocol. You will be instructed how to move and modify your daily activities using appropriate techniques and equipment.

You will be taught exercises and precautions related to your surgery daily during your recovery period. You should continue to perform the exercises daily after your dis-

charge. You will receive a handout from your therapist that has instructions and precautions that are specific to your individual surgery.

Coughing and deep breathing help prevent lung congestion after surgery.

- To cough, take a deep breath in and cough forcefully from your abdomen.
- To deep breathe, inhale as deeply as you can and hold while counting to 10. Now exhale all the air. Repeat the exercise five times. Another part of our deep-breathing

exercise involves the use of a small plastic device called an incentive spirometer. The spirometer helps you fully expand your lungs. You will be asked to breathe into your spirometer about 10 times every hour that you are awake.



Discharge planning

Preparing for discharge

When you leave the facility, you will be given a yellow discharge folder that will have all postoperative and discharge instructions, describe what to look for as signs of infection, and explain how to care for your wound.

The folder also includes any post-op prescriptions prescribed by your surgeon, information about the medications and possible side effects, as well as important phone numbers for your doctor and our facility.

After visit summary

Before you are discharged, you will receive an After Visit Summary (AVS), which is a printed explanation to help you to better understand and remember what your provider discussed with you during your visit.

MyChart®

At the bottom of your After Visit Summary is an activation code for MyChart, which is a free, secure online health tool that lets you communicate with your doctor, request prescriptions, and access your test results. Feel free to ask your healthcare provider for a MyChart brochure, or visit ynhh.org and click on the MyChart button.



Length of stay

One of our goals is to have you recover at home as soon as possible in a familiar and comfortable setting. Occasionally, a stay in a rehabilitation facility is helpful. Please note the length of stay in the hospital is based on medical necessity and not physical capabilities after surgery. If you have additional questions, please call **203-789-3258** and ask for the Care Manager.

Unless any complications arise, patients having their knee or hip replaced should plan on being in the hospital for one to three nights. Shoulder replacement patients should plan to return home after a one-night stay in the hospital. Some patients may be discharged the day of surgery.

Patients are responsible for making their follow-up appointment with their surgeon postoperatively.

Home services

If you are to return directly home after your hospital stay, a homecare agency will be arranged for you. This will include a nurse and a physical therapist who will visit you in your home for approximately two weeks.

Durable medical equipment

You will be seen by our therapist while in the hospital. If any equipment is required for you when you return home, he or she will alert the Care Manager who will discuss possible costs and delivery times with you.



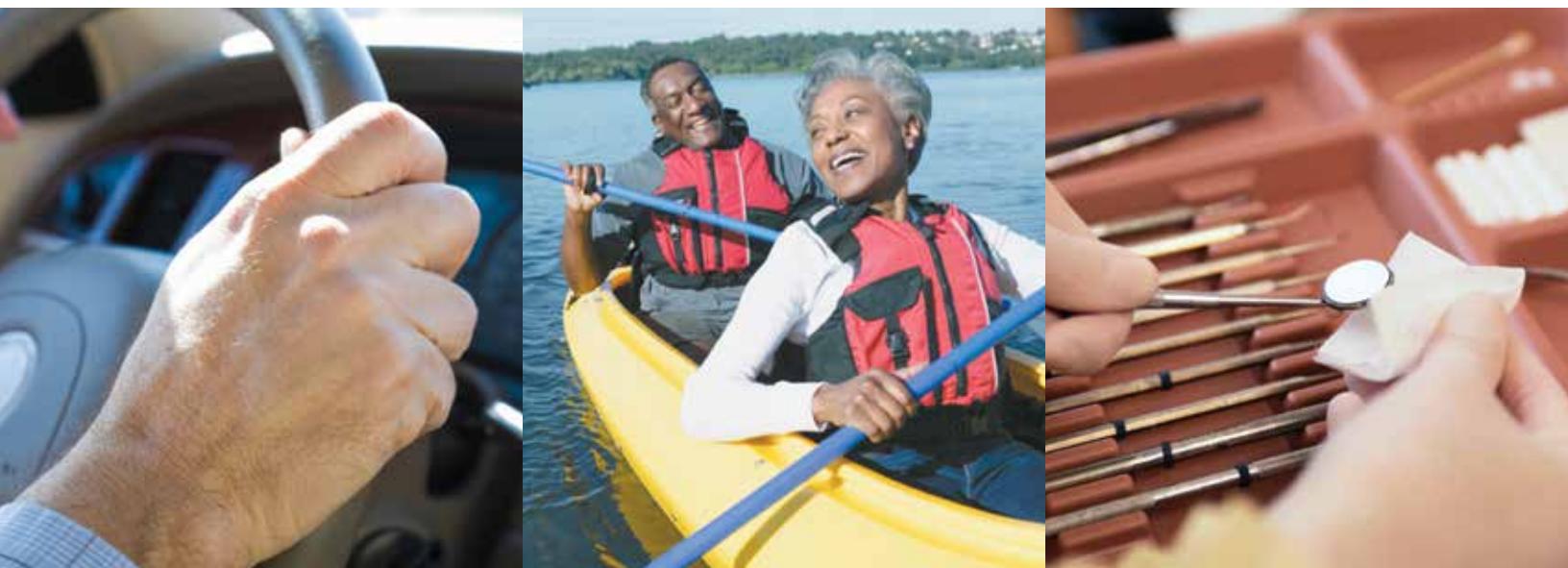
Rehabilitation facilities

If you feel you are unable to return home immediately after the hospital, there are rehabilitation facilities you may go to if approved by your surgeon and insurance company. We encourage you to speak with your doctor and call your insurance company prior to admission to discuss covered benefits for rehabilitation facilities.

Yale-New Haven's Grimes Center has a short-term sub-acute rehabilitation unit where patients may go after their hospitalization. Yale-New Haven offers a short-term acute rehabilitation unit for those patients who are having more than one joint replaced at the same time.

Shoulder patients with medicare

Patients with Medicare A/B as their primary insurance will not meet the minimum 3-night hospital inpatient stay to qualify for covered inpatient short-term rehabilitation.



Living with your joint replacement

General activity

Please discuss with your doctor when you can:

- Return to work
- Drive a car
- Participate in sports
- Take a tub bath or shower
- Resume sexual relations

Metal detectors

Your new joint may activate metal detectors used for security in airports and some buildings. Tell the security agent about your joint replacement.

Dental visits

- Because infections commonly enter the body through the mouth, you must take certain precautions before having dental work.
- Tell your dentist that you've had joint replacement surgery.
- Your surgeon or dentist may prescribe an antibiotic which will help prevent bacteria from entering your bloodstream.

Precautions for KNEE replacement patients

Ankle pumps

Immediately following surgery, you will be encouraged to do ankle pumps every hour. This is done by moving your ankles up and down and wiggling your toes. Ankle pumps help increase circulation in your lower legs and prevent blood clots.

Continuous Passive Exercise Machine (CPM)

A CPM, or continuous passive machine, promotes circulation and your knee's range of motion. If your doctor has ordered it, it will be placed on your operated leg for approximately four to eight hours per day. The degree of bend will be increased daily, with goals of 90 degrees of flexion and zero degrees extension.

Turning in bed

Turning in bed helps prevent skin breakdown, lung congestion and blood clots. Nurses will help you turn onto your side and will position you with pillows. A pillow will be placed under your heel during the day to help get your leg straight. You should not place a pillow directly under your knee while lying on your back.

Walking/ambulation

Physical therapists will teach you how to get out of bed and how much weight you can place on your new joint using a walker to move to a chair. You will sit up for a few hours. Each day, you should try to increase your walking distance. You will learn to walk to the bathroom, in the hallway and to climb stairs.

Safety

For safety, follow these precautions, particularly during the first four weeks after surgery.

- **DO NOT** step until your walker is flat on the floor.
- **DO NOT** sit on low chairs. A chair with arms will allow you to get up and own easier.
- **DO** change positions frequently to avoid knee stiffness.
- **DO** push to gain maximum motion of your knee during the first six to eight weeks after surgery.
- **DO** stay active. When your therapist says you are ready, you should take daily walks, increasing your distance as your strength improves.
- **DO** step on your operated leg first.
- **DO** ask for assistance, especially in the first few days.
- **DO** elevate your legs throughout the day and apply ice to your knee.

Precautions for HIP replacement patients

Ankle pumps

Immediately following surgery, you will be encouraged to do ankle pumps every hour. This is done by moving your ankles up and down and wiggling your toes. Ankle pumps help increase circulation in your lower legs and prevent blood clots.

Turning in bed

Turning in bed helps prevent skin breakdown, lung congestion and blood clots. Nurses will help you turn to your non-operative side. To protect your hip from dislocation, a pillow or abduction wedge will be placed between your legs to keep your legs apart.

Walking/ambulation

Physical therapists will teach you how to get out of bed and how much weight you can place on your new joint using a walker to move to a chair. You will sit up for a few hours. Each day, you should try to increase your walking distance. You will learn to walk to the bathroom, in the hallway and to climb stairs.

Safety

For the safety of your new hip, follow these precautions, particularly during the first three months after surgery.

- **DO NOT** force hip beyond 90 degrees. This happens either by bringing your knee up close to your chest or by bringing your chest to close to your knees.
- **DO NOT** cross your legs. Imagine a line down the middle of your body (from the tip of your nose to the space between your two feet). Do not bring your operated hip across that line.
- **DO NOT** reach forward to the floor from a sitting position.
- **DO NOT** sit on low chairs or low toilets. This can force your hip to bend beyond 90 degrees.
- **DO NOT** roll your leg either inward or outward – this will depend on the surgical approach.
- **DO NOT** do not extend your leg back if you had an anterior approach.
- **DO** use a pillow or towel between your legs when sleeping, especially when you turn onto your non-operative side to rest. This will help keep your operated hip on its side of the imaginary line.

Precautions for SHOULDER replacement patients

Ankle pumps

Immediately following surgery, you will be encouraged to do ankle pumps every hour. This is done by moving your ankles up and down and wiggling your toes. Ankle pumps help increase circulation in your lower legs and prevent blood clots.

Turning in Bed

Turning in bed helps prevent skin breakdown, lung congestion and blood clots. Nurses will help you turn toward your non-operative side.

- **DO NOT** roll onto your operated arm when getting out of bed.
- **DO NOT** let your operated arm rotate away from your body.
- **DO** support your operated arm with a pillow while in bed for improved support/comfort.

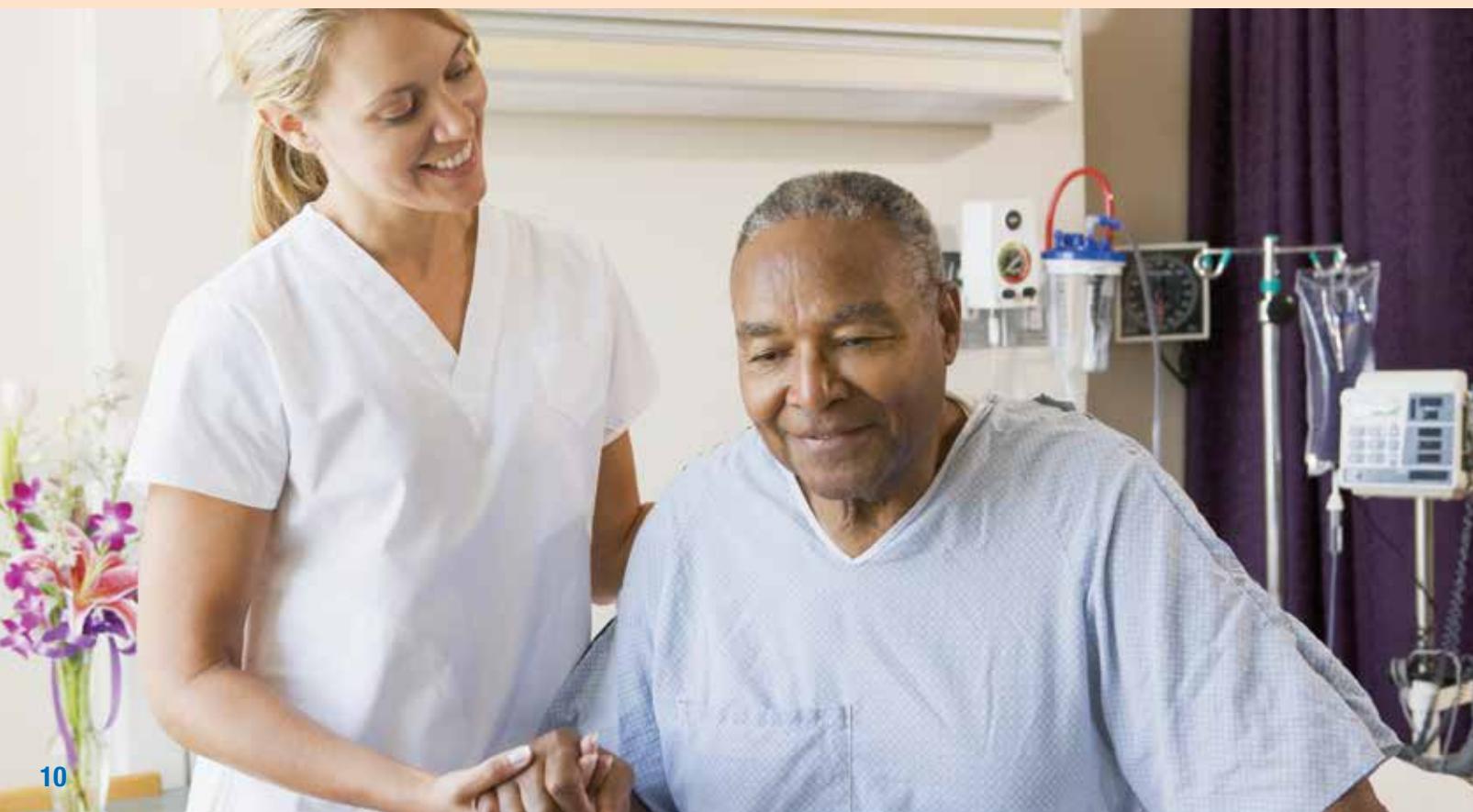
Walking/Ambulation

Physical therapists will teach you how to transfer out of bed without placing weight through your operated arm. They will determine the appropriate assistive device to assist you with balance for walking safely, if necessary. You will sit up for a few hours in a chair. Each day, you should try to increase your walking distance. You will learn to walk to the bathroom, in the hallway and to climb stairs.

Safety

For the safety of your new shoulder, you should adhere to the following precautions.

- **DO NOT** carry anything in your operated arm.
- **DO NOT** use your operated arm to lean on or bear weight through during transfers/mobility or walking.
- **DO** wear your sling when you are out of bed. You may remove your sling as long as you have your arm up on a pillow while in bed/chair.
- **DO** use ice on your shoulder to help with pain and swelling. Place a towel between your skin and the ice.
- **DO** sleeve your operated arm first through your shirt when dressing.



Hip and knee exercises

BED

NOTE: Hip replacement patients – please refer to your physical therapist to maintain your total hip precautions after surgery during exercises. Before surgery, you can perform one to three sets of each exercise for 10 to 30 repetitions, as tolerated. After surgery, consult with your physical therapist for the appropriate number of exercise sets and repetitions.



ANKLE PUMPS Stretch your toes toward you, then point them away.



QUAD SETS Tighten your thigh muscles by pushing the back of your knee down into the bed. Hold for 5 seconds, then relax.



GLUTEAL SETS Squeeze buttock muscles together while counting out loud for 5 seconds, then relax.



SHORT-ARC QUADS Place a towel roll under your knee. Straighten the knee lifting your heel off the bed. Hold for 5 seconds, then relax.



HIP ABDUCTION/ADDITION Lie on your back with your knee straight and your toes pointing up. Move your leg out to the side as far as possible. Now slowly move your leg back to the starting position.

continued next page

BED



STRAIGHT LEG RAISE Tighten your thigh muscle with the knee fully straightened on the bed. Lift your leg several inches off the bed. Slowly lower your leg back down to the starting position.



HEEL SLIDES Bend your knee and pull your heel toward your buttocks. NOTE: Don't bend your hip more than 90-degree after your total hip replacement.

STANDING



HEEL RAISES Raise your heels off the floor, then return to the starting position.



TOE RAISES Lift your toes off the floor, then return to the starting position.



MODIFIED SQUATS Stand with your feet shoulder-width apart. Bend your knees and squat pushing your buttocks back as though you were about to sit in a chair. Keep your back straight. Your knees should stay behind your toes. Don't bend your hip more than 90-degrees after your total hip replacement.

SITTING



KNEE EXTENSION

While sitting upright in a chair, straighten your knee, hold for 3- 5 seconds, then slowly return to the starting position. Then relax.



KNEE FLEXION Bend your knee to bring your heel toward your buttocks then return to the starting position.

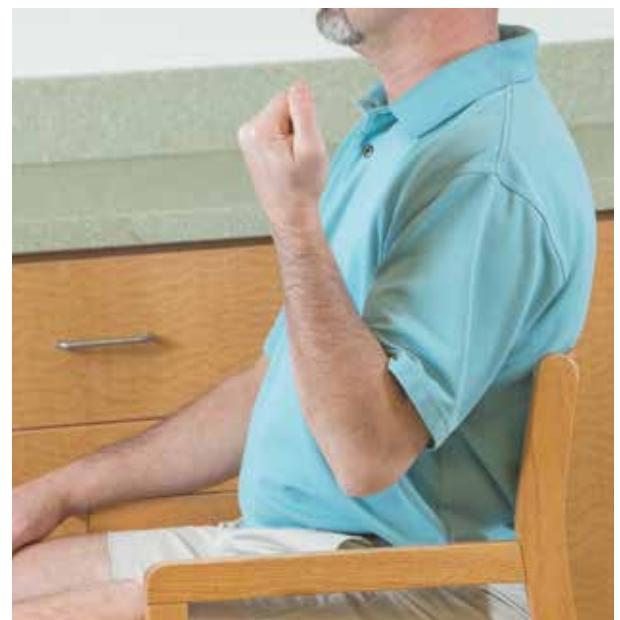


MARCHING Lift your knee up, then return to the starting position. Don't bend your hip more than 90-degrees after your total hip replacement.



HIP ABDUCTION Lift your leg out to the side, then return to the starting position.

Shoulder and arm exercises



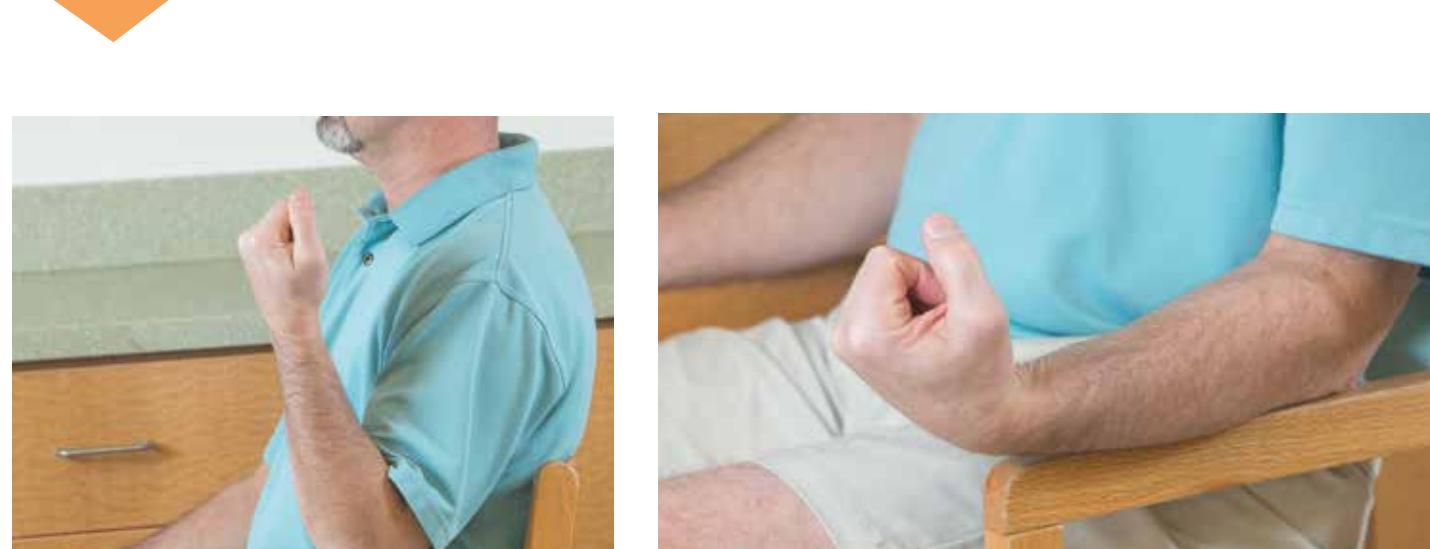
ELBOW FLEXION/EXTENSION Keeping your palm or fist facing upward, gently bend your elbow as far as possible, then straighten it and relax.



PENDULUMS Lean forward resting your arm on a stable table or counter. Allow the operated arm to swing forward, then backward. Sway your body weight to move the arm front to back.



PENDULUMS ALTERNATE Try swinging the arm in a circular motion in clockwise then counter-clockwise directions.



WRIST FLEXION With your arm on an armrest – palm or fist facing up – bend your wrist up and down.



WRIST EXTENSION With your arm on an armrest – palm facing down – bend your wrist up and down.



FINGER EXTENSION/FLEXION Open your hand, extending your fingers wide, then grip the fingers into a fist.

Your medical team members

There are significantly more professionals involved in your surgery, hospitalization and aftercare than just your surgeon. Below is information to familiarize you with the roles that each team member plays.

Orthopedic Surgeon: The surgeon doctor that is responsible for evaluating the need for surgery and performing the surgery itself. They will manage your orthopedic care during your hospitalization and in the office for months following surgery.

Primary Care Provider: An internist who manages a preoperative evaluation and medical clearance for surgery. They do not manage surgical issues during hospitalization, but may be called upon to assist with any medical issues during your hospitalization.

Anesthesiologist: Responsible for safely monitoring anesthesia during surgery and in the recovery room. They will check with you during your postoperative care for any issues related to anesthesia.

Physician Assistants: (PA's): Professionals that practice under the supervision of the physician. When your surgeon is not available for immediate hands on care the PA will round daily on patients to assist with medication adjustments, dressing changes, test result monitoring and communicate daily with the orthopedists on patient care needs.

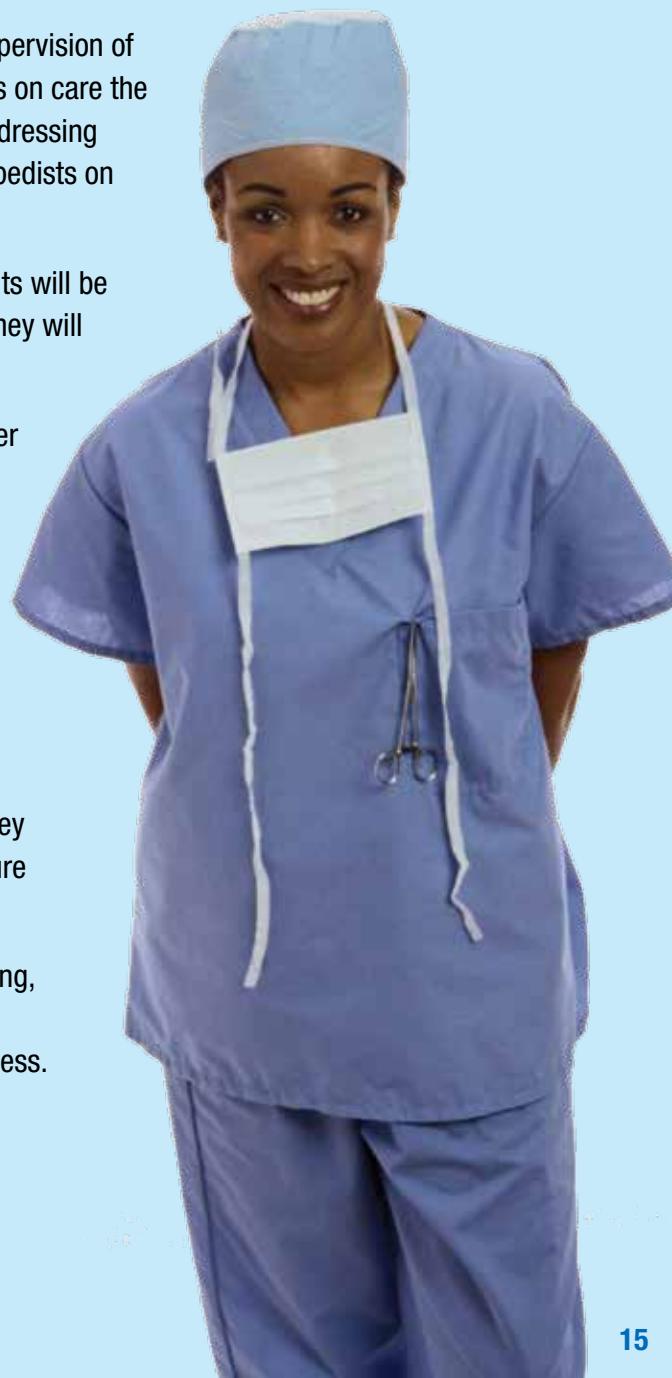
Resident Physicians: YNHH is a teaching hospital, orthopedic residents will be a part of your treatment team. Under the supervision of the surgeon, they will be present during surgery and on the hospital units.

Nurses: Nurses are essential to care in the recovery of all patients after surgery in both the recovery room and on the orthopedic floor after surgery. They have expertise in the care of orthopedic patients and your postoperative needs.

Physical Therapists/Occupational Therapists: The therapists are trained to help patients safely start to move after surgery. They will provide reinforcement and education on the surgeon's directions for walking, sitting, dressing and movement after surgery.

Certified Nursing Assistants: Under the direction of a licensed RN they will provide care to you in the hospital and office such as blood pressure monitoring, bathing or toileting assistance.

Case Managers: These are registered nurses who assist in the planning, coordination, and monitoring of medical services for the patient with emphasis on quality of care, continuity of services, and cost effectiveness.





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