Yale
NewHaven
Health
Yale New Haven
Hospital

Your Guide to
Joint Replacement Surgery

Welcome

Thank you for choosing Yale New Haven Hospital (YNHH) for your upcoming joint replacement surgery.

Your care team of professionals includes orthopedic surgeons, anesthesiologists, physician assistants, nurses, physical therapists and surgical technicians, all of whom are specially trained in caring for joint replacement surgery patients. We are committed to keeping you safe and comfortable when you come to us for care – in our hospital, at our ambulatory facilities and in our physician offices.

Most importantly, you are a key member of the team and we want you to be prepared, knowledgeable and ready for success. We encourage you and your caregivers to be actively involved in your care and to communicate any questions or concerns you may have along the way.

This booklet provides information for you and your family to help you prepare for your surgery, hospitalization and recovery.

Table of contents

Your medical team

Many professionals are involved in your surgery, hospitalization and aftercare.

Orthopedic surgeon
The surgeon that is responsible for evaluating the need for surgery and performing the surgery itself. He or she will manage your surgical care during your hospitalization and in the office after your surgery.

Primary Care Physician (PCP)
The doctor who manages your routine health care will perform your pre-operative evaluation. He or she doesn't handle any of your surgical issues while you're in the hospital but could be involved with your medical care after surgery.

Anesthesiologist
Anesthesiologists are responsible for safe anesthesia during surgery and in the recovery room. They will monitor you during your post-operative care for any issues related to anesthesia.

Physician Assistants (PAs) and Advanced Practice Registered Nurses (APRNs)
PAs and APRNs are nationally certified and state-licensed medical professionals that practice under the supervision of a physician. They may assist your surgeon by visiting you in the hospital and communicating your progress, medication adjustments, dressing changes and test-result monitoring.

Hospitalist service
These are licensed physicians and professionals that provide 24/7 care to patients in the hospital and coordinate your care with your primary care physician.

Resident physicians
Yale New Haven Hospital is a teaching hospital. Orthopedic surgery residents may be a part of your treatment team under the supervision of your surgeon. They will be present during surgery and on the hospital units.

Nurses
Professional nurses are responsible for your bedside nursing care following your surgery. A licensed registered nurse (RN) will manage your care during your entire hospitalization.

Physical Therapists (PTs) and Occupational Therapists (OTs)
These therapists are trained to help patients safely start to move after surgery. They develop individual treatment plans to help reduce pain, restore function and prevent disability.

Patient Care Assistants (PCAs)
Under the direction of a licensed registered nurse, PCAs provide care to you in the hospital that includes blood pressure monitoring, bathing or toileting assistance, blood glucose monitoring and moving.

Case managers, social workers and discharge planners
Case managers, social workers and discharge planners work with you and all members of your team to make discharge arrangements and communicate with insurance companies. They also help set up home health services, outpatient therapy and stays in skilled nursing facilities.

Business Associates (BAs)
BAs greet visitors, answer the unit's telephone and respond to the patient call bell. They direct the calls to the appropriate team members.

Chaplain
Spiritual support is available at any time during your hospital stay. Let your nurse know if you would like to speak with a chaplain.

Preparing for surgery

Whether you're coming in for same-day surgery or expect to be admitted, there are certain procedures to follow to help make your experience go smoothly.

A nurse will be assigned to assist you throughout the process, from before surgery until after you're home. Your nurse navigator will make sure you're prepared for surgery, have a seamless journey and continue to make progress at home during your rehabilitation. Please contact your nurse navigator if you have any concerns throughout your surgical experience.

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 surgical team will review the results of your tests. You will be required to provide:

- A complete medical history
- A physical exam by your primary care physician (PCP)

Pre-admission testing
Pre-admission testing includes laboratory tests such as blood and urinalysis, a chest X-ray, and if applicable, an electrocardiogram. Before every surgery, Yale New Haven Hospital also tests every patient for bacterial colonization and/or viral infection.

- A nasal swab is collected to look for "staph" bacteria such as Methicillin Resistant Staph Aureus (MRSA) and Methicillin Sensitive Staph Aureus (MSSA). MSSA is sensitive to certain antibiotics, while MRSA is highly resistant.
- To check for viral infections such as coronavirus or influenza, staff uses the most current testing method which may involve collecting a nasal swab or saliva.

Four weeks before surgery

- Schedule your pre-operative physical with your PCP.
- If you're diabetic, your blood sugar levels should be within your target range, as noted by your physician, for one month prior to surgery.
- Reduce alcohol consumption and stop any smoking or vaping.
- If you're currently under the care of a pain management specialist, please make an appointment to be cleared for surgery. Also, be sure to ask for documentation with recommendations for pain medication while you're in the hospital.

Two weeks before surgery

- Attend a pre-operative education class.
- Start pre-operative exercises given to you by your doctor's office.

- Before your surgery, it's critical to prepare your home to minimize the risk of injuries. Review the safety checklist for your home on page X and take appropriate action.
- Prepare (or purchase) and freeze easy meals.
- Reduce and eliminate alcohol consumption and stop any smoking or vaping.
- Complete your pre-operative physical and lab work including your nasal swab testing (see Pre-admission testing on page 7).
- Visit your surgeon, who will review your records, obtain consent, perform nasal swab testing and provide you with Chlorhexidine Gluconate (CHG) antibacterial wash or wipes (see page X).
- If you're diabetic, please check with your doctor about taking your medications the day of surgery.

Medications to stop
Please let us know about any allergies, including those to medication or food. Your medical team will instruct you to stop taking any medication that will increase the risk of blood loss during surgery. It's important to discuss with your doctor herbal medications, vitamin supplements and any pain medications you take.

Preventing infections
Infections can enter the body most commonly through the mouth and skin.

- Please report to your doctor if you have any open sores, skin ulcers or infections.
- Bacteria can enter your bloodstream through the mouth during dental care and cause infection. Ideally, you should not have dental work performed within 2 weeks prior to surgery or 6 months after surgery, except for emergencies. Please see the Frequently Asked Questions on page X for the latest recommendations on dental care related to joint replacement surgery.

A surgical site infection (SSI) can occur on the skin or deeper in the area of the surgical site following surgery. An SSI can require additional surgery and lengthen recovery time. Before, during and after surgery, our staff will take precautions to prevent infection.

- Before surgery you'll be screened to see if you carry certain bacteria by swabbing inside the tip of your nose:
  - If you carry the bacteria, you'll be prescribed an anti-bacterial ointment to apply inside your nose and an antibacterial soap to use for 5 days before surgery.
  - You will be treated with an antiseptic applied in your nose on the day of surgery.
- You'll receive antibacterial soap or wipes to use the night before surgery on your entire body, including the area where your surgery will be performed (see page X for application instructions).
- Nurses in the pre-operative area will cleanse your body again with antibacterial wipes on the day of surgery.
- The hair on the hip or knee will be clipped prior to surgery as needed using a sterile clipper. Please don't shave this area at home for at least 3 days before surgery.

- Antibiotics are given before surgery intravenously to reduce the risk of infection.

Pre-operative education classes
For same-day joint replacement surgery, you're invited to attend our pre-operative "Total Joint Class." This class is focused on the protocols for patients having surgery and being discharged to home the same day. To schedule a same-day surgery, you must attend one of the sessions in person or virtually. Please bring a family member or friend with you to the class. To register, speak with your Nurse Navigator to assist with scheduling.

If you're being admitted, a mandatory pre-operative class introduces the team of caregivers who will help you understand your entire process from getting ready for your procedure through to admission and returning home. You must reserve space for a class before surgery is scheduled. This class is offered every Tuesday at Yale New Haven Hospital's Saint Raphael Campus and may be available virtually/electronically. Attendance at this class is required. Plan to attend the appropriate pre-operative class at least two weeks before your procedure is scheduled. See "Important Contacts and Phone Numbers" at the end of this booklet to schedule a class.

Exercise
It's important to maintain a healthy weight before and after your joint replacement surgery. If you would like to learn about our weight-loss program, please call the Yale Metabolic Health and Weight Loss Program. You'll find the number under "Important Contacts and Phone Numbers" at the end of this booklet. You may be a candidate to for a tele-rehabilitation system to help you with exercise in preparation for **your procedure.**

Maximize your nutrition

- Eat foods naturally rich in protein and 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.

Day before surgery

- A hospital professional will call you the business day before your surgery. He or she will give you your arrival time to the hospital. If your surgery is on a Monday, you'll receive a call the Friday before.
- Wash your bed linens the day before surgery.
- Don't eat after midnight before surgery including gum, mints, or candy. You may drink "clear liquids" up until two hours before your surgery. These include water, tea, black coffee, or clear juices. Don't drink any milk or cream on the day of surgery.
- Do not shave the area where you're having the surgery for three days prior to your procedure. Shaving with a razor can irritate the skin and lead to infection.
- Use the CHG wipes the night before surgery as described below. Do not wash or rinse off the area.

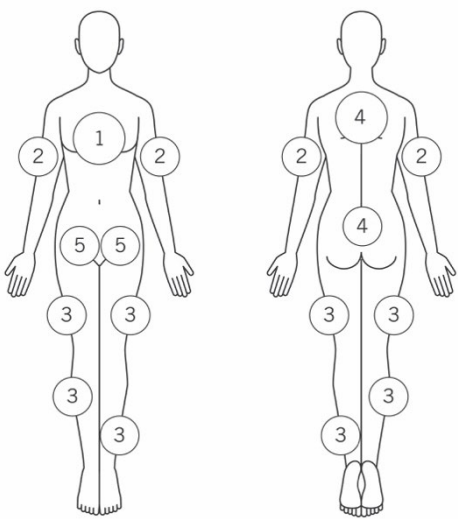
- After you use the CHG wipes, put on clean sheets and wear clean pajamas to sleep. In the morning, put on clean clothes. Keep pets away from your bed and body.
- - Do not apply lotions or oils to the surgical area.
- Call your nurse navigator or surgeon before surgery if you don't feel well or develop signs of illness: cold, fever, sore throat, chest pain, or difficulty breathing.

Using antibacterial soap or CHG wipes for surgical preparation
Take a shower the night before surgery using antibacterial soap. Use your regular soap and shampoo. Rinse your hair thoroughly to remove all shampoo residue.

Using CHG soap

- You can get 4% CHG antibacterial soap from a pharmacy without a prescription.
- Rinse your entire body with water from neck down.
- Apply the antibacterial soap directly on your skin or wet washcloth; wash gently.
- Move away from the shower stream when applying to avoid rinsing the soap too soon. Be sure to create a lather before rinsing.
- Do NOT use antibacterial soap on your head or face, on/in genitals or if you are allergic to it.
- Rinse with water. Dry skin thoroughly with a clean towel.
- Do not use your regular soap afterward.
- Do not use lotions, creams or deodorant.

Using CHG wipes



- You will receive 3 packages of CHG wipes from your doctor's office.
- Use the wipes one hour after you shower.
- Open the packages and wipe from top to bottom in the following order:
  - Neck
  - Chest
  - Abdomen
  - Both arms, shoulder to fingertips (front and back)
  - Both legs, hips to feet (front and back)
  - Back (neck to bottom of buttocks)
  - Both sides of groin (do NOT wash genitals with wipes)
- Re-wipe the surgical site with the wipes for 3 minutes and let dry completely for 1 minute.
- Do ***NOT*** use CHG wipes on your head or face, on genitals or if you are allergic to it.
- Do ***NOT*** use any lotions or creams after using the CHG wipes.

IMPORTANT: After using the CHG wash or wipes, be sure to use a clean towel, dress in clean clothes and sleep on clean bed sheets. You don’t need to shower again with CHG on the morning of your surgery. If you experience an allergic reaction, wash with soap and water to deactivate the CHG solution and notify your surgeon as soon as possible.

Day of surgery

On the day of your surgery, wear clothes that are easy to put on and take off. Make sure pants are loose enough to fit over a surgical dressing. For your safety, bring a friend or family member as your designated caregiver.

Keep warm. In cold weather, heat up the car prior to getting in. Staying warm before surgery lessens your chance of infection.

What to bring to the hospital:

- Medical insurance or Medicare cards
- A list of all medications and dosages. (Note: If you were instructed to take any medications the day of surgery, take only with a small sip of water. 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
- Bipap/Cpap machines and settings, if applicable

Arrival, parking and check-in

For in-patient (admitted) surgeries in the Saint Raphael campus main operating room, please ask your caregiver to park in the George Street Garage on Level 3A (look for the orange stripe on the wall). Have your caregiver bring the parking ticket in for validation. Upon entering at Level 3A, go through the door on the left marked “Scheduled Admissions.” You may use the stairs or the elevator to take you down to Level 2V. There will be a sign directing you to the reception desk in the pre-operative area.

For outpatient (same-day) surgeries at the Saint Raphael campus McGivney Center, please pull up and park right at the surgical center. Your caregiver will be responsible for taking you home afterward. You will receive specific instructions the day before your procedure on where to park. You cannot take public transportation or walk once you’re discharged after your procedure and recovery. You must have someone drive you. Our staff will keep your caregiver informed about your progress. Your caregiver can also follow your progress on the electronic patient status monitors in the waiting area of the McGivney Center.

For surgical procedures with a Yale Medicine physician that are scheduled at Bridgeport Hospital (Bridgeport or Milford campus) or Greenwich Hospital, please ask your nurse navigator or surgeon about parking and arrival details.

Check-in at all locations
The receptionist will check you in and provide your hospital identification bracelet.

Pre-operative area

- You will be brought to a pre-operative area before your surgery.
- A nurse will give you a warming hospital gown and your clothes will be placed in a 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, please remove them and give them to your family member/caregiver for safekeeping to return to you after surgery.
- The nurse will recheck your medical records and take 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're in the pre-operative area.
- If you haven't been screened for Staph Aureus, you will receive a nasal swab.

Anesthesia
An anesthesiologist and/or a nurse anesthetist will meet you before surgery to 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 in the past.

Pre-operative nerve block
Prior to hip, knee and shoulder surgery procedures, the anesthesia team will perform an ultrasound-guided nerve block, which is an injection of medications around the nerves to reduce the amount of pain you will experience after surgery.

Recovery
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 or nausea as needed.
- Nurses will check your bandages and encourage you to take deep breaths and to move your ankles and feet.

Your family/caregiver will be instructed where to wait while you're in surgery. For patients being admitted, your family/caregiver will be notified when you're ready to move from the recovery room to your hospital room.

Post-operative care

Preventing blood clots
Every patient having a total joint replacement is given a blood thinning medication following surgery. We use a standardized risk assessment to customize the selection of these medications for each patient. Your doctor will determine both the type of blood thinner you receive and how long you take it. You'll also have Sequential Compression Devices (SCDs) on your legs or feet while you're in bed or resting in a chair. Signs of blood clots in your legs include swelling, redness, pain or warmth. If you're concerned about a blood clot, notify your doctor or healthcare team right away.

Preventing infection after surgery
A surgical site infection (SSI) can occur on the skin or deeper in the area of the surgical site following surgery. An SSI can require additional surgery and lengthen recovery time. After surgery, our staff will take precautions to prevent infection.

- Your incision will be covered with a special waterproof sterile dressing to help prevent infection.
- You can shower with this dressing in place as long as it is intact. Your surgeon will remove it at a visit after surgery. If the dressing becomes loose or peels off before that time, call your doctor.
- Please be sure you and your visitors wash your hands using alcohol-based hand sanitizer or soap and water before entering the room while you're at the hospital and at home.

Be aware of the signs of infection. Please call your doctor if you experience any of the following after surgery:

- Persistent fever (oral temperature greater than 101.9 degrees)
- Shaking or chills
- Increased redness, tenderness, swelling or drainage from incision
- Increased pain during activity and at rest
- Foul-smelling wound drainage
- Separation of incision skin edges

Pain management
Our team of surgeons, anesthesiologists, and nurses will be focused on making sure your pain is well controlled before, during and after the surgery. There are different options and combinations of medications used for pain control. Your team will determine the best option for you. During the hours and days after your procedure while you recover, your team will continue to focus on your pain control.

If you're currently treated for chronic pain by a pain management specialist, please create a plan with your pain management provider in advance and share it with your surgical team prior to your surgery date.

Pain management tips:

- Request 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 starting physical therapy. This will help you to perform your exercises with less pain. After exercising, you may want to apply ice (a pack wrapped in a towel) to your incision for about 20 minutes, 3 to 4 times per day to decrease swelling. Never apply ice directly to the skin.

Dressings
An occlusive dressing (which holds moisture in and prevents dry skin/irritation) will be applied after your surgery. This dressing will protect the incision from water and bacteria. You can shower with this dressing on if your surgeon and team say it's acceptable. This dressing usually stays in place for up to 2 weeks unless loose or saturated. If you have questions about the drainage, contact your team. **Do not remove the dressing to inspect the surgical site.** Alert your doctor if there are any signs of infection, including swelling, redness, fever and fatigue. The team will give you instructions about changing the dressing if you need to.

Rehabilitation therapy
After your surgery but before you're discharged, you'll be seen by rehabilitation services. Post-operative rehabilitation now typically begins on the same day of surgery. Once the effects of anesthesia wear off, you can get out of bed, walk and climb stairs. Your therapist will supervise these activities, review your exercises for home and clarify your precautions for recovery. Once you're home, it's important for you to do your exercises and walk every day.

Food and medicine
Initially after your surgery, you'll receive fluids through an intravenous tube. Your diet will be advanced from liquids to solids when you're able to tolerate it.

YNHH may not be able to provide the name brand medications that you take at home, so you may receive an equivalent.

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 eight hours.

Obstructive Sleep Apnea (OSA)
If you're considered to be at high risk for, or already have OSA, you'll be placed on telemetry (an electronic monitoring device), a pulse oximeter and continuous oxygen therapy as

appropriate. **Please be sure to bring your portable CPAP or BiPAP device with you for use in the hospital following the surgery.**

Therapy, movement, and lung congestion
During your hospital stay, you'll receive physical and/or occupational therapy starting as early as the day of your surgery. Ideally, our goal is to have you up and moving within 4 hours after your arrival to the recovery floor after surgery. You'll learn how to move and modify your daily activities using appropriate techniques and equipment. During your in-patient recovery, you'll be taught exercises that you should continue to do daily after your discharge.

Coughing and deep breathing help prevent lung congestion after surgery.

- Take a deep breath in and then cough forcefully from your abdomen.
- To deep breathe, inhale as deeply as you can and hold, then exhale all the air. Repeat five times per hour.
- Another part of deep-breathing exercise involves using a small plastic device called an incentive spirometer. The spirometer helps you fully expand your lungs by breathing in. You will be asked to use your spirometer about 10 times every hour you're awake.

Leg exercises
Immediately following surgery, you will be encouraged to do ankle pumps every hour. These are done by moving your foot up and down. Ankle pumps assist with circulation in your lower legs. Other exercises will be provided by your therapist in the recovery area.

Turning in bed/positioning
Turning in bed helps prevent skin breakdown, lung congestion and blood clots. For knee patients, a pillow will be placed under your heel while your leg is elevated to encourage your knee to remain straight. You should not place a pillow under your knee when lying on your back. We encourage you to dangle your legs several times a day for short periods of time as tolerated.

For hip patients, to protect your hip from dislocation, you may place a bed pillow between your legs for comfort and to keep your legs neutral (depending upon your surgeon's protocol).

Walking
Your therapist will teach you how to get out of bed and how much weight you can place on your new joint using a walker. 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.

Length of stay
We want to help you recover at home as soon as possible in a familiar, comfortable setting. Your length of stay in the hospital is based on medical necessity, not your physical capabilities after surgery.

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. Most surgeon's offices will have already scheduled your initial follow-up appointments. If you don't already have an appointment to see your surgeon after your operation, please contact your surgeon's office.

Discharge planning

You will be discharged home when you meet the following criteria:

1. Vital signs are stable (blood pressure, pulse, respiration)
2. Able to walk with a cane or walker
3. Able to drink liquids by mouth and tolerate food
4. Able to urinate
5. Pain is within acceptable limits
6. Accompanied by a designated caregiver

Discharge instructions and prescriptions
When you leave the hospital, you'll receive discharge instructions, a description of how to look for signs of infection and information on care for your wound. You'll also get any prescriptions from your surgeon, information about medications and possible side effects, as well as important phone numbers for your doctor and our facility.

Calling for help
If you have questions once you're home, please first contact your nurse navigator. On weekends and after-hours, call your physician's office. These numbers are noted on your instructions. For emergencies, call 911. Be sure to follow up with your surgeon at scheduled appointments.

Meds-To-Beds program
Located in the hospital at the Apothecary and Wellness Center, this program can save you a trip to the pharmacy by delivering your medications to you prior to your discharge.

- Your provider sends your prescription(s) to the Apothecary and Wellness Center where a licensed pharmacist will fill your prescription(s). Most pharmacy insurance plans are accepted.
- Any insurance/cost/inventory issues will be communicated promptly to you and your healthcare team. The apothecary team will coordinate with your nurse navigator to ensure bedside delivery for your expected discharge time.
- An apothecary team member will contact you to provide any necessary medication counseling and discuss your co-pay. All major credit cards are accepted.

Apothecary hours
Monday – Thursday 8 am - 8 pm
Friday 8 am - 6:30 pm
Saturday – Sunday: 8 am - 2 pm

After-visit summary

Before you're discharged, you'll receive an After-Visit Summary (AVS). It's a printed explanation to help you to understand and remember what was discussed with you during your visit.

MyChart®
At the bottom of your AVS is an activation code for MyChart, 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 link.

Home health care
For patients who need help at home, we've partnered with several preferred provider agencies that offer high-quality care and follow our surgical protocols. Your Nurse Navigator will help with setting up these services and getting any equipment.

Durable medical equipment
You'll see our therapists while in the hospital. If you need equipment (a walker, commode, raised toilet seat, etc.) when you return home, your therapist will alert the Nurse Navigator who will discuss the details of cost and delivery.

Rehabilitation facilities
If due to special circumstances you can't go home immediately, there are rehabilitation facilities you may go to if approved by your surgeon and insurance company.

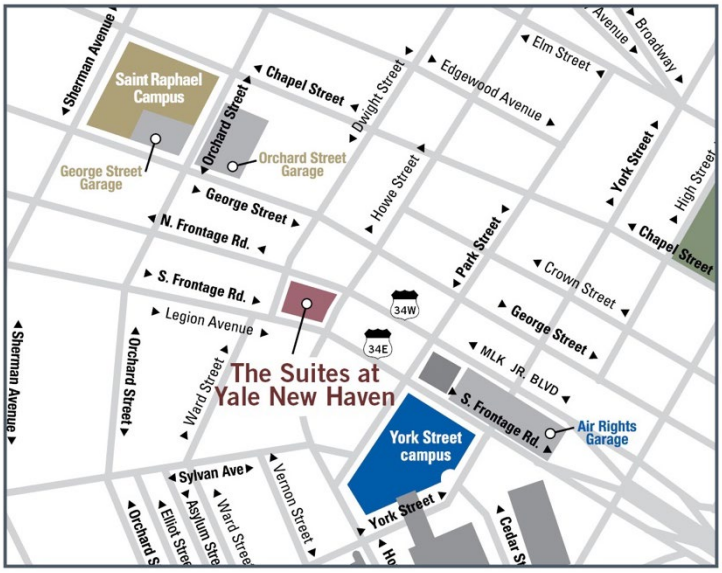
- Yale New Haven's Grimes Center has a short-term rehabilitation unit for patients after hospitalization.
- The YNHH Rehabilitation and Wellness Center located at Bridgeport Hospital's Milford Campus is a short-term acute rehabilitation unit for patients who have had more than one joint replaced at the same time or need more intensive rehabilitation services.

The Suites at Yale New Haven

The Suites at Yale New Haven is a hotel offered by Yale New Haven Hospital. When patients are faced with short- or long-term inpatient hospital care, families and caregivers can stay comfortably nearby. Located just two blocks from the York Street Campus, Smilow Cancer Hospital and Yale New Haven Children's Hospital and minutes from the Saint Raphael Campus, the facility has 24 suites. Daily, weekly and monthly rates are available.

The Suites offers the following conveniences and amenities:

- Wireless Internet access
- Flat screen TVs
- Business center
- Full kitchens with cooking and dining essentials
- On-site laundry
- 24-hour security
- Spacious rooms with modern décor
- Fitness center and portable exercise equipment
- Complimentary parking and transportation to and from the hospital campuses



The Suites at Yale New Haven
25 Dwight Street, New Haven, CT
203-654-7500
SuitesAtYale-NewHaven.com

Living with your joint replacement

General activity

Please discuss with your doctor when you can:

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

More information is also provided in the physical therapy protocols section of this guide. Your doctor may have special instructions for your exercises after discharge. The physical therapist will discuss these instructions with you.

Preventing infections after joint replacement surgery

Dental visits
Because infections can enter the body through the mouth, you may need to take certain precautions before having dental work. Tell your dentist that you've had hip or knee replacement surgery.

- Patients with a healthy immune system normally have a low risk of infection. If invasive dental procedures (such as tooth extraction, root canal, jaw surgery, etc.) are performed, then oral antibiotics can be considered at the discretion of the treating dentist.
- If you're considered to be at high risk for an infection, your dentist should prescribe an appropriate oral antibiotic as a preventive measure even for routine cleanings.
- If you suspect you might have an oral infection or dental abscess, it's important to seek treatment right away.

Non-Invasive medical procedures
If an examination or procedure does not involve making an incision in the skin, most patients do not require preventive antibiotics. Examples of such procedures include a bladder scope (cystoscopy), colonoscopy and routine vaginal and rectal exams.

Invasive medical procedures

- Skin biopsies or Mohs surgery performed in an office setting may require oral antibiotics.
- Surgeries performed in an operating room environment (such as gallbladder, appendix, abdominal and extremity surgery) routinely require intravenous (IV) preventive antibiotics. These are given just prior to surgery for almost all patients having these procedures in order to prevent a surgical site infection.

High-risk patients
For patients in the groups listed below, use of appropriate preventive antibiotics is suggested even for routine dental cleanings.

- Uncontrolled diabetes mellitus
- History of a prior infected joint replacement (prosthetic joint infection)
- Infection with HIV/AIDS
- Active chemotherapy for cancer treatment
- Immunosuppression after an organ transplant (such as with Prednisone, Cellcept or similar medications.)
- Immunosuppression treatment for autoimmune disease (such as with Enbrel or Humira for RA).
- Chronic immune system dysfunction (such as with chronic leukemia or lymphoma).

Metal detectors

Your new joint may activate metal detectors used for security in airports and some buildings. Tell security agents at the airport about your joint replacement and ask to be screened using the stand-up “Wave Form” full body scanner. Due to federal regulations from the Department of Homeland Security and the need for universal screening of all travelers, we no longer provide wallet cards stating you have had a joint replacement.

Our commitment to you

We continually strive to improve. After you’re home, you may receive a survey in the mail asking for feedback on your hospital experience 6 weeks after your discharge. We value your thoughts. Your answers and comments help us make improvements in caring for patients. If you have questions about the survey, please call Patient Relations at the number listed under Important Contacts and Phone Numbers on page X. Thank you for taking the time to share your experience with us.

Physical therapy protocols

For patients with anterior (front) hip replacement

Things to do after surgery

- Weight bear as tolerated using your walker, crutches or a cane as instructed
- Walk normally, including “step through gait.” You may extend your surgical leg in order to walk normally
- Bend your hip in order to dress yourself, such as reaching to put on your socks and shoes
- Sit on a seat whether elevated or not. While you may find it helpful to use an elevated toilet seat and add a pillow or cushion when sitting in a chair, it’s okay to use normal toilets and seats
- Get in and out of cars normally

Things to avoid

- Excessive extension of your surgical leg behind you, such as forceful lunging. Avoid taking long strides while walking
- “Plant and pivot” – planting your surgical leg on the floor while you are making a turn over it
- Straight leg raising and “hip hiking” exercises for the first six weeks
- Strenuous activity and heavy lifting, such as yard work or chopping wood

For patients with posterior (back) hip replacement

Things to do after surgery

- Weight bear as tolerated using your walker, crutches or a cane as instructed
- Walk normally, including “step through gait”

Things to avoid

- Excessive bending forward at your waist
- Crossing your legs
- Sitting on any low surfaces (such as toilet, couch, chair). A raised toilet seat or commode over toilet is required for low toilets
- Bending past 90 degrees at the hip
- Reaching down to put on your socks, shoes, or pants without equipment that can assist you to reach these areas (such as sock aide, reacher)
- Bending down to pick something off the floor without the use of a reacher
- Turning your surgical leg inward. Keep your toes pointing towards the ceiling on your surgical leg as you get in or out of bed or while lying in bed
- “Plant and pivot” – planting your surgical leg on the floor while you are making a turn over it

For patients with lateral (side) hip replacement

Things to do after surgery

- Weight bear as tolerated using your walker, crutches or a cane as instructed
- Walk normally, including “step through gait”
- Bend your hip in order to dress yourself, such as reaching to put on your socks and shoes
- Sit on a seat whether elevated or not. You might find it more helpful to use an elevated toilet seat and add a pillow or cushion when sitting in a chair, but it’s okay to use normal toilets and seats

Things to avoid

- Making a turn over your surgical leg. Avoid planting your surgical leg on the floor while you are making a turn
- Abduction exercises (moving your leg out to the side) for the first 6 weeks after surgery but you can move your leg out to the side to get in and out of bed
- Excessive extension of your surgical leg behind you, such as forceful lunging. Avoid taking long strides while walking
- Toeing out – keeping your toes of your surgical leg pointing toward the ceiling as you get in and out of bed or while lying in bed

For patients with knee replacement

Things to do after surgery

- You can put weight on your leg as tolerated using your walker, crutches or cane as instructed
- It's important to keep moving your knee. So do your exercises as recommended
- Engage in low-stress activities like walking, biking and swimming when your therapist advises
- Elevate your leg when you're seated or lying down
- Wear your elastic stockings, if recommended
- Use stool softeners or laxatives as recommended if your pain medications cause constipation

Things to avoid

- Overdoing it. Take it slow. Do activities in small, frequent doses and rest in between
- Kneeling and deep squatting as they will be uncomfortable
- Jumping, running or jamming your foot as in shoveling or other physical strenuous activities that put stress on your knee
- Lifting heavy objects
- Placing a pillow or rolled towel under your straight knee

Things to do to control pain

- If your medication isn't relieving pain sufficiently, be sure to contact your doctor
- To control swelling and help reduce pain for better circulation and range of motion, elevate your knee and use an ice pack on it
- Place a pillow or rolled hand towel under your ankle when lying down

For patients with shoulder replacement

Things to do after surgery

- It is important to follow the specific instructions from your physician.
- Wear your sling when you're out of bed. You may remove your sling as long as you have your arm supported with a pillow.
- Ice your shoulder using an ice pack wrapped in a towel to help with pain and swelling.
- When dressing, put the sleeve of your operated arm in first through your shirt.
- Wear loose clothing with easy fastenings, avoid zippers and tie shoes (unless elastic shoe laces are available).
- You may use adaptive equipment, such as a long-handled shoe horn, reacher, elastic shoe laces or long-handled sponge to assist with your self-care.
- Do your specific exercises as recommended.
- Use stool softeners or laxatives as recommended if your pain medications cause constipation.

Things to avoid

- Avoid carrying anything with your operated arm or using your operated arm to lean on or push up .
- Avoid external rotation of your shoulder (reaching up and back) or internal rotation (shoulder motion behind the back) until advised you may begin these active motions (see illustrations).
- Avoid reaching or lifting with your operated arm.
- Do not roll onto your operated arm when getting out of bed. Use your non-operated arm to push up. It is better to roll towards your non-operated arm when getting out of bed.
- Do not allow your operated arm to rotate away from your body.

Things to do to control pain

- If your medication isn't relieving pain sufficiently, be sure to contact your doctor.
- To control swelling and help reduce pain, use an ice pack on your shoulder.

Sleeping instructions

- Consider initially sleeping in a recliner or reclined position using pillows and/or wedges; the sling should remain on.

- If you're lying flat in bed, place a small pillow or towel roll behind the elbow to avoid shoulder hyperextension. You should be able to see your elbow when you look down.

Showering instructions
After surgery you may shower as soon and as often as you wish as long as you:

- Cover the incision site with plastic wrap taped into place to prevent the incision and dressing from getting wet; your bandage must stay dry.
- Do nothing with the arm on your operated side – just let it hang at your side or hold it close to your body with your elbow bent at 90 degrees. The key here is to keep the incision and dressing dry and not to move your operated shoulder. If your dressing becomes wet, remove it and replace it with a clean, dry dressing.
- It is essential to restore your balance for safety; handrails and grab bars are useful. A shower chair can be used for sitting in the shower. Do not bathe in a tub, pool, hot tub or an outdoor body of water (ocean, lake, etc.) for at least 4 weeks after your surgery.

Driving instructions
When you can start driving after surgery depends on your surgery, pain level and recovery. In general, your pain has to be minimal so that you're no longer taking any pain medication that can impair your ability to drive. For up to 3 months, the arm with the replaced shoulder will need to be at your side. You'll have to do most steering with the hand on your non-operated side. To be safe, speak with your doctor specifically about this issue and get your surgeon's permission before returning to driving.

Sexual activity
You can resume conservative sexual activity about 2 weeks after your surgery. Avoid strenuous positions and modify if you feel discomfort.

Exercises for patients with anterior (front) hip replacement

Note: Speak with your physical therapist about the most appropriate exercises for you.

Lying down

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 your buttock muscles while counting out loud for 5 seconds, then relax and repeat.

Hip abduction/adduction (extending your leg out to the side and back in): Lie on your back with your knee straight and toes pointing up. Move your leg out to the side as far as possible. Slowly move your leg back to the starting position.

Heel slides: Bend your knee and pull your heel toward your buttocks.

Seated

Knee extension: While sitting up in a chair, straighten your knee, hold for 3 - 5 seconds. Slowly return to the starting position. Relax.

Seated marching: Alternate lifting your legs in a seated “march.”

Standing

Note: For all standing exercises, hold on to a table or counter for balance.

Heel raises: Raise your heels off the floor by coming up onto your toes, then return to the starting position.

Toe raises: Lift your toes off the floor with weight on your heels, then return to the starting position.

Knee flexion: Bend your knee to bring your heel up toward your buttocks, then return to the starting position.

Marching: Lift your knee up, then return to the starting position, as if “marching” in place. Don’t bend your hip more than 90 degrees after your total hip replacement.

Modified squats: Stand with your feet shoulder-width apart. Bend your knees and squat 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.

Hip abduction: Lift your leg out to the side, then return to the starting position. Be sure to keep your toes pointing forward.

Exercises for patients with posterior (back) hip replacement

Note: Speak with your physical therapist about the most appropriate exercises for you.

Lying down

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 your buttock muscles while counting out loud for 5 seconds, then relax and repeat.

Hip abduction/adduction (extending your leg out to the side and back in): Lie on your back with your knee straight and toes pointing up. Move your leg out to the side as far as possible. Slowly move your leg back to the starting position.

Heel slides: Bend your knee and pull your heel toward your buttocks.

Seated

Knee extension: While sitting up in a chair, straighten your knee, hold for 3 - 5 seconds. Slowly return to the starting position. Relax.

Standing

Note: For all standing exercises, hold on to a table or counter for balance.

Heel raises: Come up on toes by raising your heels off the floor, then return to the starting position.

Toe raises: Lift your toes off the floor with weight on your heels, then return to the starting position.

Knee flexion: Bend your knee to bring your heel up toward your buttocks then return to the starting position.

Marching: Lift your knee up, then return to the starting position, as if “marching” in place. 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. Be sure to keep your toes pointing forward.

Hip extension: Raise one leg slightly backward keeping the knee straight, hold then lower.

Modified squats: Stand with your feet shoulder-width apart. Bend your knees and squat while 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 total hip replacement.

Exercises for patients with lateral (side) hip replacement

Note: Speak with your physical therapist about the most appropriate exercises for you.

Lying down

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 your buttock muscles while counting out loud for 5 seconds, then relax and repeat.

Heel slides: Bend your knee and pull your heel toward your buttocks.

Seated

Knee extension: While sitting up in a chair, straighten your knee, hold for 3 - 5 seconds. Slowly return to the starting position. Relax.

Seated marching: Alternate lifting your legs in a seated “march.”

Standing

Note: For all standing exercises, you may hold on to a table or counter for balance.

Heel raises: Come up on toes by raising your heels off the floor, then return to the starting position.

Toe raises: Lift your toes off the floor with weight on your heels, then return to the starting position.

Knee flexion: Bend your knee to bring your heel up toward your buttocks, then return to the starting position.

Marching: Lift your knee up, then return to the starting position, as if “marching” in place. Don’t bend your hip more than 90 degrees after your total hip replacement.

Modified squats: Stand with your feet shoulder-width apart. Bend your knees and squat while 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.

Hip abduction: Lift your leg out to the side, then return to the starting position. Be sure to keep your toes pointing forward.

Exercises for patients with knee replacement

Note: Speak with your physical therapist about the most appropriate exercises for you.

Lying down

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 your buttock muscles while counting out loud for 5 seconds, then relax and repeat.

Short-arc quads: Place a rolled bath towel under your knee. Straighten the knee lifting your heel and holding for 5 seconds, then relax.

Hip abduction/adduction (extending your leg out to the side and back in): Lie on your back with your knee straight and toes pointing up. Move your leg out to the side as far as possible. Slowly move your leg back to the starting position.

Straight leg raise: Tighten your thigh muscle with the knee straightened. Lift your leg several inches off the bed. Slowly lower your leg to the starting position. You can bend your non-operative leg for comfort.

Heel slides: Bend your knee and pull your heel toward your buttocks.

Seated

Knee extension: While sitting up in a chair, straighten your knee, hold for 3 - 5 seconds. Slowly return to the starting position. Relax.

Seated marching: Alternate lifting your legs in a seated “march.”

Standing

Note: For all standing exercises, you may hold on to a table or counter for balance.

Heel raises: Come up on toes by raising your heels off the floor, then return to the starting position.

Toe raises: Lift your toes off the floor with weight on your heels, then return to the starting position.

Knee flexion: Bend your knee to bring your heel up toward your buttocks then return to the starting position.

Marching: Lift your knee up, then return to the starting position, as if “marching” in place.

Hip abduction: Lift your leg out to the side, then return to the starting position. Be sure to keep your toes pointing forward.

Hip extension: Raise one leg slightly backward keeping the knee straight, hold then lower.

Exercises for patients with shoulder replacement

Elbow flexion/extension: Keeping your palm or fist facing upward, gently bend your elbow as far as possible, then straighten it and relax.

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.

Pendulums (back and forth): Use a counter to lean on as you bend at the waist and swing your operated arm forward, then backward. The counter will give you some stability as you swing.

Pendulums alternate (circular): Try swinging the arm in a circular motion in clockwise then counter-clockwise directions.

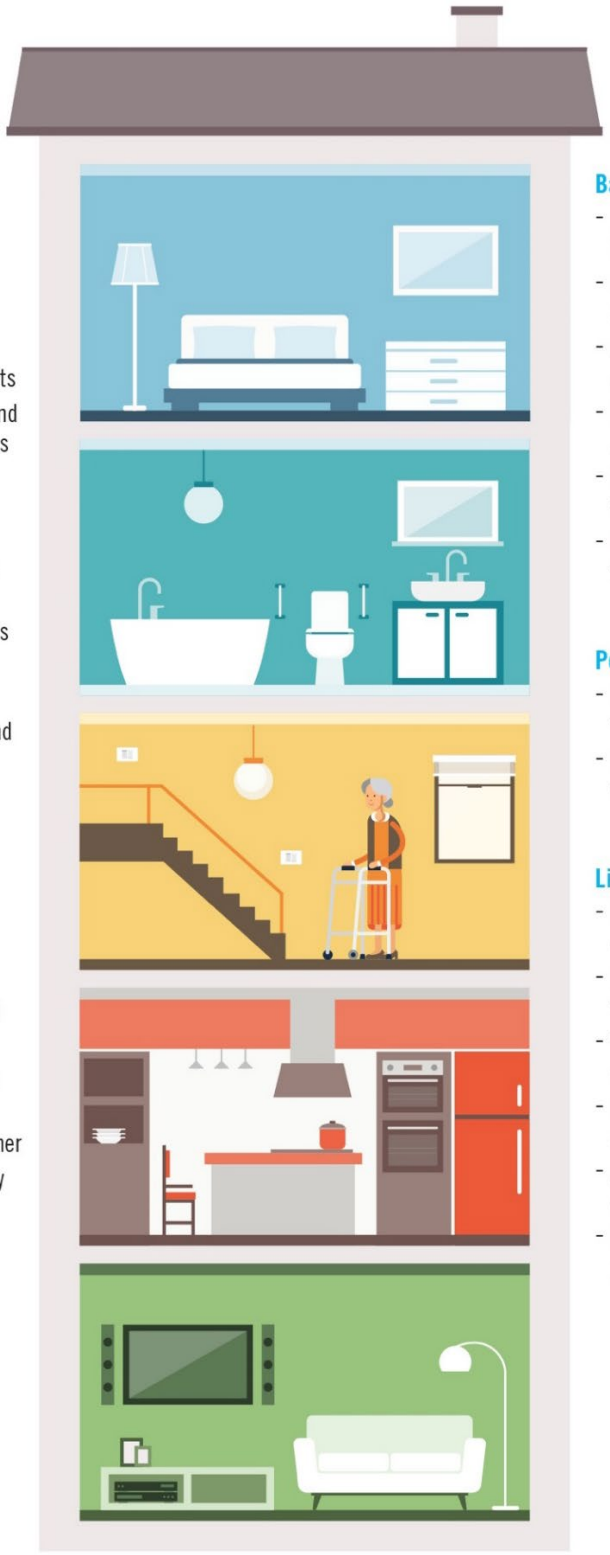
Finger extension/flexion: Open your hand, extending your fingers wide, then grip the fingers into a fist.

Room-by-room fall prevention checklist

Bedroom
- Keep lamp near you in bed/or night light on in room
- Sit down in chair to get dressed
- Keep floor clear of objects
- Keep phone on nightstand with emergency numbers

Stairs/Hallways
- Handrails on both sides of stairs
- Anti-slip treads on stairs
- Keep steps clear of all items
- Light switches at top and bottom of stairs
- Keep good lighting in all areas/nightlights when darkened

Kitchen
- Move most commonly used items within reach
- No step stools
- Dining chairs with arms and no wheels
- No high gloss floor cleaner
- Clean spills immediately



Bathroom
- Install handheld shower head for bathing
- Use nonslip mats in shower or tub
- Sit on a bath bench or shower chair
- Install grab bars in shower and by toilet
- Use a comfort height toilet or seat riser
- Use rubber backed mat to help keep the floor dry

Personal Precautions
- Use non-slip footwear while walking
- Keep walker or cane within reach

Living Room
- Keep walkways free from cords and objects
- Remove excess furniture for safe walkways
- Watch for small pets or objects on the floor
- Remove scattered rugs or secure edges with tape
- Add firm pillows to low couches of chairs
- Keep list of emergency phone numbers by phone

Frequently asked questions

Should I exercise before my surgery?
Yes, if you are able. Ask your surgeon for suggestions for beneficial exercises and ones to avoid.

What happens when I leave the hospital after surgery?
You may go directly home with therapy exercises to do on your own before starting outpatient therapy. If you need to have a physical therapist visit you at home, your nurse navigator can help make arrangements through an agency. Following home physical therapy, you may have additional therapy at an outpatient facility.

If you need to go to a rehabilitation facility, you may have home physical therapy visits after you're discharged or may have therapy at an outpatient facility.

After my surgery, are there certain positons I should avoid when sleeping?
You may sleep in any comfortable position. You can use a regular bed pillow or body pillow between your knees for comfort as needed. You may find lying on your non-operated side may be more comfortable initially.

How soon can I shower, swim or use a hot tub after surgery?
You can shower when approved by your doctor, usually 2 days after surgery. Your surgical dressing is waterproof, so you may keep it on it the shower. It's important to maintain your balance for safety – handrails or a grab bar can help. A shower chair can be used for sitting in the shower. Do not bathe in a tub, pool hot tub or the ocean for the first 4 weeks after surgery.

Can I drive after surgery?
No. Usually it takes several weeks before you can drive. Talk to your surgeon about your exact timeframe. You can safely be a passenger by following precautions given to you by your surgeon or physical/occupational therapist. Also review the physical therapy protocols your specific surgery.

When is it safe for me to drive again after my procedure?
A return to driving is generally possible in 2 weeks after left hip surgery if you drive an automatic car. After right hip surgery a return to driving is possible in 4 weeks. You should not be taking narcotic pain medicine when driving and should be able to get in and out of the car safely. Start with short drives around your neighborhood and then progress to longer periods in the car.

When can I return to sexual activity after surgery?
You may resume conservative sexual activities after 2 weeks. You should avoid strenuous positions and modify as needed to avoid discomfort.

When can I start exercising?
Check with your surgeon or physical/occupational therapist before starting any exercise. You may be able to engage in low-impact sports like walking, swimming, dancing and golf fairly soon. Exercise may even be required for your full rehabilitation. High-impact sports like running, tennis and basketball should be avoided until after you're fully recovered.

Is it safe for me to lift or carry things?
You shouldn't lift or carry heavy things for 6 - 8 weeks after surgery. This includes young children.

When can I return to work?
Most often after 4 - 6 weeks, depending on the type of work that you do and your specific surgery.

Do I need to take antibiotics before having my teeth cleaned?
This is one of the most common questions asked of both dentists and surgeons after hip and knee replacement surgery. If you have a healthy immune system, there is no need to take antibiotics. Instead, practice daily dental hygiene. Plan an oral exam and dental cleaning at least 2 weeks prior to surgery. Wait 6 months after surgery for the next routine cleaning or procedure, unless it's an emergency.

Taking antibiotics as a preventive measure is recommended under some conditions.

- If you're having an invasive procedure such as tooth extraction, root canal, jaw surgery, etc., discuss taking oral antibiotics with your dentist.
- If you have a medical condition that compromises your immune system and increases your risk of infection like cancer, uncontrolled diabetes, HIV/AIDS, autoimmune disease or prior joint replacement infections.
- If you have a history of a prior infected joint replacement (prosthetic joint infection).

Please discuss your concerns with your surgeon.

Contact information

Questions about surgery at YNHH: 203-200-2775

Schedule your pre-operative surgery class: 888-700-6543

General questions

- York Street Campus: 203-688-4242
- Saint Raphael Campus: 203-789-3000
- McGivney Advanced Surgery Center: 203-680-7542

Yale Medicine
Coordination, Appointment, Referral & Engagement (CARE) Center: 877-925-3637

Yale Metabolic Health and Weight Loss Program: 203-785-4138

Apothecary and Wellness Center
Pharmacy for Meds-To-Beds Program: 203-789-4076

Billing Office: 855-547-4584

Patient Relations: 203-688-3430

Billing Office: 855-547-4584

Patient Relations: 203-688-3430

The Suites at Yale New Haven: 203-654-7500

Your Personal Contacts: _____

Primary Care Physician: _____

Others: _____