

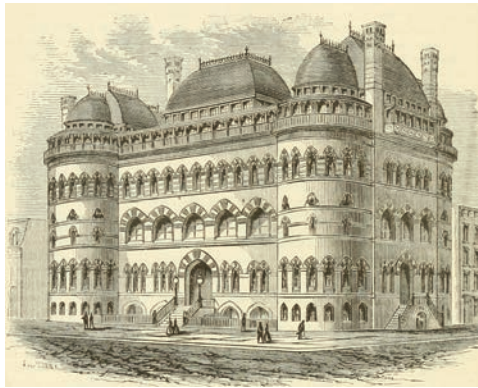
A photograph of an elderly couple smiling and embracing on a beach. The man is wearing a light yellow shirt and the woman is wearing a pink cardigan. They are standing on a wooden pier with a railing, and the ocean is visible in the background.

HSS

YOUR PATHWAY TO RECOVERY

A Patient's Guide to

Total Joint Replacement Surgery (Hip and Knee)



DEVELOPED BY:

Members of the Patient Care & Experience Committee of the Adult Reconstruction and Joint Replacement Service at Hospital for Special Surgery.

ABOUT HOSPITAL FOR SPECIAL SURGERY

Founded in 1863, Hospital for Special Surgery (HSS) is the world's leading academic medical center focused on musculoskeletal health. HSS has been nationally ranked No. 1 in orthopedics by *U.S. News & World Report* for the last 15 years. HSS is also a leader in the field of rheumatology, ranking No. 3, and is the first hospital in New York State to receive Magnet Recognition for Excellence in Nursing Service from the American Nurses Credentialing Center five consecutive times. HSS has one of the lowest infection rates in the country. HSS is an affiliate of Weill Cornell Medical College and, as such, all medical staff are faculty of Weill Cornell. HSS's research division is internationally recognized as a leader in the investigation of musculoskeletal and autoimmune diseases. HSS has locations in New York, New Jersey, Connecticut, and Florida.





Welcome to Hospital for Special Surgery (HSS). We are very thankful that you have chosen HSS for your joint replacement surgery. We are committed to making your experience a comfortable and successful one. It is with great pleasure that we provide you with this comprehensive manual for your upcoming surgical journey.

We urge you to read and refer to it often, and to bring it with you to all your hospital appointments. You can find more information and patient education materials on your patient portal (MyHSS) and on our website at www.hss.edu.

Research is an important focus at HSS. We are dedicated to improving care, including the design of joint replacements and development of less invasive techniques. We appreciate your participation in our research studies. We also welcome your input to help improve our Joint Replacement Program. On behalf of all members of our service, we hope that the information in this booklet helps answer your questions regarding your condition and treatment.

Douglas Padgett, MD
Surgeon-in-Chief and
Medical Director

David Mayman, MD
Chief, Adult Reconstruction
and Joint Replacement
Service

General Information	
Important Phone Numbers	6
Introduction	7
Preparing for Surgery	8
Your Diet and Preparing for Surgery	11
When You Come to the Hospital	12
Your Surgery and Hospital Stay	
Visitor Code of Conduct	14
Traveling to HSS	15
Hotel and Hospitality Partners	16
The Day of Surgery	17
Anesthesia	18
After Your Surgery	20
Recovering in the Hospital	21
How to Use the Incentive Spirometer	22
Managing Postoperative Pain	23
Your Personalized Pain Treatment Plan	23
Safe Medication Disposal	24
Managing Your Pain at Home	25
Rehabilitation and Mobility	26
Recovering: At Home	27
Guidelines for Recovering at Home	28
HSS@Home Virtual Physical Therapy	32
Outpatient Physical Therapy	33
The Weeks After Surgery	34
Preventing Infection	35
A Closer Look at Hip Replacement	36
Physical Therapy for Hip Replacement	38
A Closer Look at Knee Replacement	40
Total Knee Information and Physical Therapy	42
Conclusion	46
Providing Feedback to HSS	47



GENERAL INFORMATION

Important Telephone Numbers

<u>Hospital for Special Surgery Main</u>	<u>212.606.1000</u>
<u>Admitting Patient Access</u>	<u>212.606.1241</u>
<u>Spiritual Care</u>	<u>212.606.1757</u>
<u>Food and Nutrition Services</u>	<u>212.606.1293</u>
<u>Access Private Nursing Service</u>	<u>212.774.7187</u>
<u>Automatic Preoperative Information</u>	<u>212.606.1630</u>
<u>HSS Family Resource Line</u>	<u>212.774.7547</u>
<u>Pre-Admission Discharge Planning Team</u>	<u>212.606.1920</u>
<u>Patient Education</u>	<u>212.606.1263</u>

INTRODUCTION

A joint replacement can greatly enhance your quality of life. It can help you move better and reduce your pain for many years. In the last two decades, remarkable advances in materials and technology have made joint replacements safer, more durable and much more common.

All members of the HSS staff are committed to your well-being and satisfaction before, during and after your hospital stay. Each attending surgeon is supported by a multi-disciplinary team participating in different phases of your care.

They include:

- Internists
- Anesthesiologists
- Advanced Practice Providers (APPs), including Physician Assistants (PAs) and Nurse Practitioners (NPs)
- Physical therapists
- Registered nurses
- Social workers
- Fellows and residents
- Administrative personnel

In bringing you the latest advances in joint replacement surgery, HSS combines world-class skill and knowledge with personalized care. We offer a full array of diagnostic, surgical and rehabilitation services.

We are here to meet your needs. Help us help you. Any medical concerns should be discussed with your surgeon. Your surgeon's office staff can address any administrative matters. Your active participation in your treatment, and your understanding of your care plan, is vital to a successful recovery.



PREPARING FOR SURGERY

1. **Several appointments** will be scheduled for you once you schedule your surgery. These include a medical clearance visit, a physical therapy session, and a virtual webinar.
2. **Pre-Operative Medical Clearance:** About 3 to 4 weeks before your surgery, you will see an HSS internist and have pre-surgical tests. This process is commonly known as **pre-surgical screening (PSS)**. It can take place at the main hospital on the Upper East Side of Manhattan or at HSS Westchester, HSS Long Island or HSS Paramus.
 - The purpose of the visit and exams is to make sure it is safe for you to proceed with surgery. You do not need to see your own internist, general practitioner, or family doctor.
 - If you have certain chronic illnesses, you may be instructed by your surgeon or HSS internist to see an external physician (such as your cardiologist, oncologist, neurologist, etc.) for additional clearance before surgery. These external physicians must provide an official note confirming you have been medically cleared to proceed with surgery. This "external clearance note" can be sent to your surgeon's office so that it can be added to your electronic medical record.
 - **Bring a list of your current medications to your pre-operative appointments.** Be prepared to provide detailed information about your medical history, allergies, prior surgeries, and family health history. Your HSS internist will explain which medications you should continue taking or stop in preparation for surgery. **Some patients will see additional providers if appropriate. These may include anesthesiologists, pain management specialists, or others.**
 - Your PSS appointment also includes diagnostic tests. These include taking blood samples, doing an electrocardiogram (EKG), X-rays, and additional imaging if requested by your surgeon. The nursing staff will also provide information about how to be ready for your upcoming surgery. **There is no need to fast in preparation for your medical clearance appointments at HSS.**
3. **Pre-Operative Education:** About 3 to 4 weeks before your surgery, you may be scheduled for a **one-on-one informational session** with an HSS physical therapist. You may also be scheduled to attend a **patient education webinar** class. HSS staff will assist you in scheduling these appointments. They will also send you links to additional patient education content.

- A physical therapist (PT) from HSS will meet with you and give you information and instruction on your rehabilitation after surgery and post-discharge plans. This session may be done virtually or in person. If you have more questions regarding your post-discharge plans after your PT session, you may call the HSS Pre-admission Discharge Planning team at 212-606-1920. This team includes members of HSS Rehabilitation and Case Management who provide information and assistance with planning your post-operative care.
- **The patient education webinar class** is taught virtually by a Clinical Education Specialist from HSS. This session will educate you on your specific type of surgery and prepare you for each stage of your surgical journey. Each webinar class is approximately 60 to 75 minutes long and is attended by a group of patients who will be undergoing a similar procedure as you. **This is a group class, not a private session.** The class will cover the following information:
 - What to expect before, during, and after your hospital stay
 - Setting realistic expectations for your recovery
 - Ways to keep yourself safe and comfortable, maintain your mobility, and lower risks

If you have follow-up questions about information taught in the education class, please call the Patient Education Team at 212-606-1263.

4. **Prepare for leaving the hospital after surgery:** It's important for you and members of your support system to start planning for your discharge from the hospital as soon as you decide to have surgery. This will allow you to concentrate on your main task: getting well.

Healthy patients with support at home often go home on the the same day as their surgery. If you are scheduled to spend the night in the hospital, you will meet with a case manager/ social worker. They will discuss your post-discharge needs along with your surgeon and other members of the team. Your involvement is essential to be sure that your discharge plan meets your needs.

It is important to prepare your home for your recovery before you come to HSS for surgery. Be sure to:

- Clear space around your home for walking.
- Consider using night lights to help you see better in the dark.
- Store items within easy reach. Take items you may need out of low cabinets or shelves before surgery because you may not be comfortable reaching down for them right after surgery.
- Prepare meals ahead of time and store them in the freezer.
- Ask a family member or support person if they can be available to assist with your care for the first 24 hours, and as needed after that.

PREPARING FOR SURGERY

Some patients with special needs may qualify for being discharged to an inpatient rehabilitation center. The typical stay is less than 7 days. Admission to inpatient rehabilitation requires a referral and insurance authorization be submitted AFTER surgery. **Please discuss with your surgeon before surgery if you believe you qualify for this option.**

- 5. Durable medical equipment:** Your surgeon will tell you if special equipment is needed during the first weeks after surgery (e.g., high toilet seat). Your surgeon's office will give you instructions on how to purchase what you need. Please make sure any equipment is assembled and installed before you go to the hospital. If you don't have a cane or a walker, we will provide whichever is most appropriate for you in the recovery room.
- 6. Pre-admission instructions:** Please call the HSS pre-surgical information line at 212-606-1630 **within 48 hours of your scheduled surgery**. It will play a pre-recorded message with general instructions and a review of the process of pre-admission to the hospital.
- 7. Nursing pre-operative call:** You will also receive a call from an HSS nurse with pre-surgical information 1 to 2 business days before your surgery between the hours of 1:00 PM and 7:00 PM. This phone call will provide detailed instructions to prepare you for surgery, including:
 - Specific medication and diet instructions
 - Specific time and place to arrive at HSS on the day of surgery
- 8. Prepare for the procedure:** Shower or bathe your full body with soap and water on at least the night before surgery. Soap can be antimicrobial or regular. Do not apply lotions, oils, powders, or deodorants to your skin after cleansing before your surgery. Sleep in clean bedding the night before surgery. Wear clean clothes the night before and day of surgery. Do not shave your legs and/or the surgical area the days before or the day of surgery. Specific instructions will be provided at the pre-surgical screening (PSS) appointment, the pre-operative education class, and during the preoperative phone call.

Very Important

Always have a list of your current medications and the amount you are taking. This will ensure that the correct medication and amount can be prescribed for you while you are at HSS. You should also have contact information for the pharmacy you will use to fill your post-operative prescription and any details on medical history and allergies current or past.



YOUR DIET AND PREPARING FOR SURGERY

Pre-Surgical Diet Guidelines

The pre-surgical diet guidelines below are for general purposes only. Your physician or surgeon may require you to follow an alternative plan. In that case, follow your physician's instructions rather than the guidelines below.

FOURTEEN DAYS PRIOR TO SURGERY

- Stop all nutritional and herbal supplements (vitamins/minerals/herbals)
- **EXCEPTIONS** – the following are OK to continue: calcium, iron & vitamin D

THE DAY BEFORE SURGERY

- Follow your regular diet

THE NIGHT BEFORE SURGERY

- Drink at least 20-24 oz (3 cups) of allowed clear fluids
- Do not eat any solid food after midnight (**CLEAR FLUIDS ONLY after midnight**)

THE DAY OF SURGERY

- Take **CLEAR FLUIDS ONLY**
- Drink at least 20 oz (2 ½ cups) of allowed clear fluids **PRIOR TO YOUR ARRIVAL AT THE HOSPITAL**
- If instructed, drink carbohydrate-rich drink (Ensure Pre-Surgery®, 10 oz), 3 hours before surgery, **COMPLETING PRIOR TO YOUR ARRIVAL AT THE HOSPITAL**
- **DO NOT EAT OR DRINK ANYTHING 3 HOURS PRIOR TO YOUR PROCEDURE AND AFTER ARRIVING AT THE HOSPITAL.**

CLEAR FLUID DIET (ANY MEAL)

ALLOWED

- Water
- Apple, Cranberry & Grape Juice
- Gatorade
- Black Coffee or Tea
- Clear Broth
- Ginger ale and Seltzer
- Jello and Italian Ice
- Chewing gum – **DO NOT SWALLOW**

NOT ALLOWED

- Milk or Dairy Products (including in coffee and tea)
- Citrus Juices
- Prune Juice
- Juices with Pulp
- Any food or beverage not listed in the "allowed" column

Pre-Surgical Diet Guidelines ONLY for Patients Taking GLP-1 Agonists

The pre-surgical diet guidelines below are for general purposes only. Your physician or surgeon may require you to follow an alternative plan. In that case, follow your physician's instructions rather than the guidelines below.



FOURTEEN DAYS PRIOR TO SURGERY

- Stop all nutritional and herbal supplements (vitamins/minerals/herbals)
- **EXCEPTIONS** – the following are OK to continue: Calcium, Iron & Vitamin D

THE DAY BEFORE SURGERY

- If you are taking any of the following medications take **CLEAR FLUIDS ONLY BEGINNING AT NOON** the day before surgery:

GLP-1 Agonists: Brand (Generic):

- Trulicity (Dulaglutide)
- Byetta, Bydureon (Exenatide)
- Saxenda, Victoza (Liraglutide)
- Adlyxin (Lixisenatide)
- Ozempic, Wegovy, Rybelsus (Semaglutide)
- Mounjaro (Tirzepatide)
- Xultophy (Insulin degludec and liraglutide)
- Soliqua (Insulin glargine and lixisenatide)

Follow up with your medical clearance provider regarding specific fasting guidelines as you may be required to switch to clear liquids sooner and may need to modify your other diabetic medications.

THE NIGHT BEFORE SURGERY

- Drink at least 20-24 oz (3cups) of allowed clear fluids

THE DAY OF SURGERY

- Take **CLEAR FLUIDS ONLY**
- Drink at least 20 oz (2 ½ cups) of allowed clear fluids **PRIOR TO YOUR ARRIVAL AT THE HOSPITAL**
- **DO NOT EAT OR DRINK ANYTHING 3 HOURS PRIOR TO YOUR PROCEDURE AND AFTER ARRIVING AT THE HOSPITAL.**

CLEAR FLUID DIET (ANY MEAL)

ALLOWED

- Water
- Apple, Cranberry & Grape Juice
- Gatorade
- Black Coffee or Tea
- Clear Broth
- Ginger ale and Seltzer
- Jello and Italian Ice
- Chewing gum – **DO NOT SWALLOW**

NOT ALLOWED

- Milk or Dairy Products (including in coffee and tea)
- Citrus Juices
- Prune Juice
- Juices with Pulp
- Any food or beverage not listed in the "allowed" column

WHEN YOU COME TO THE HOSPITAL

Items to Bring on the Day of Your Surgery

- ☐ A legal picture identification (driver's license, passport, birth certificate, social security card, green card/permanent resident card, military ID); a copy is acceptable
- ☐ Your insurance cards, including medical and prescription insurances
- ☐ X-rays or laboratory reports (if instructed by the staff)
- ☐ Any assistive device you use (e.g., cane, walker, brace)
- ☐ Your completed Health Care Proxy form
- ☐ An up-to-date list of your current medications and dosages
- ☐ Nonslip, flat, closed-toe athletic or walking shoes
- ☐ Mobile phone and charger
- ☐ A book, magazine or hobby item to occupy time
- ☐ Eyeglasses, dentures and/or hearing aids

PLEASE DO NOT BRING

MEDICATIONS

- Please do not bring medications, including narcotic substances (unless instructed by your HSS pharmacist). Self-medication during your hospital stay is not allowed. It may lead to unsafe conditions like overdoses and/or drug interactions.

VALUABLES & JEWELRY

- Remove and leave all piercings and jewelry, including wedding rings, at home to ensure your safety during your hospital stay. See a jeweler for assistance with removal if needed.
- Do not bring a suitcase. You should bring a small tote bag with your belongings.
- If you use a CPAP machine, do not bring the machine. You may bring an unused, disposable mask if preferable.

VISITOR CODE OF CONDUCT

When visiting our patient care units, we ask that you follow the visitor code of conduct for the safety and well-being of our patients.

1. Please be advised that all visitors under the age of 14 are not permitted; for the surgical unit, visitors must be 18 years or older.
2. Sleeping in patient rooms is not allowed. Please note, semi-private rooms are not equipped to accommodate visitors wishing to spend the night.
3. If the patient you are visiting is sharing a room, please be mindful of the other patient's privacy and need for quiet.
4. Plan on spending a short time visiting. Although the visit is almost always welcome, it can be very tiring for the patient.
5. Carry on cheerful conversation in soft tones.
6. Please silence your mobile phone while visiting.
7. Do not visit if you are unwell, particularly if you have cold or flu-like symptoms or if you have had a stomach upset in the last 48 hours.
8. For the patient's safety, please do not assist patients out of bed. Please contact a clinical staff member for assistance.
9. Upon arrival to HSS, visitors are required to check in at the main lobby information desk and provide a photo ID to receive a visitor's pass before visiting the patient.
10. A maximum of two visitors are permitted at the bedside at a time during visitation hours, which are 8:00am to 8:00pm. Visitors can rotate but must wait in the main lobby when not visiting the patient.

For any questions related to the Visitors' Code of Conduct, please contact us at 212.774.7547.



YOUR SURGERY AND HOSPITAL STAY

TRAVELING TO HSS

Hospital for Special Surgery is located at 535 East 70th Street between York Avenue and the FDR Drive. It is easily accessible by car and public transportation, and is less than a one-hour drive from Kennedy, LaGuardia and Newark International airports.

For directions, visit hss.edu/maps-directions.asp

By Bus

The M66, M72 and M31 buses run within one block of the Hospital.

By Subway

The Q train stops at East 72nd Street & Second Avenue.

The local number 6 train stops at East 68th Street & Lexington Avenue.

The M66 eastbound cross-town bus to York Avenue can be picked up at the 68th Street subway stop.





HOTELS AND HOSPITALITY PARTNERS

Please note that discounted rates are based upon availability; blackout dates may apply. It is recommended that you verify that the desired amenities are available. Level of Handicapped Accessibility varies per property. Please speak with the property directly.

\$\$\$

The Plaza • 212.759.3000

The Guest Suites at HSS • 212.606.1989

Mandarin Oriental • 1.800.526.6566

The Carlyle • 212.744.1600

The Equinox Hotel • 212.812.9200

The Mark Hotel • 212.606.4520

\$\$-\$\$\$

AKA Sutton Place (Extended Stay) • 646.378.7627

Marriott Courtyard NY Manhattan/ Upper East Side • 800.321.2211

\$\$

Residence Inn NY

Manhattan/Midtown East • 212.980.1003

Kimberly Hotel • 212.702.1643

Helmsley Medical Tower • 212.774.5700

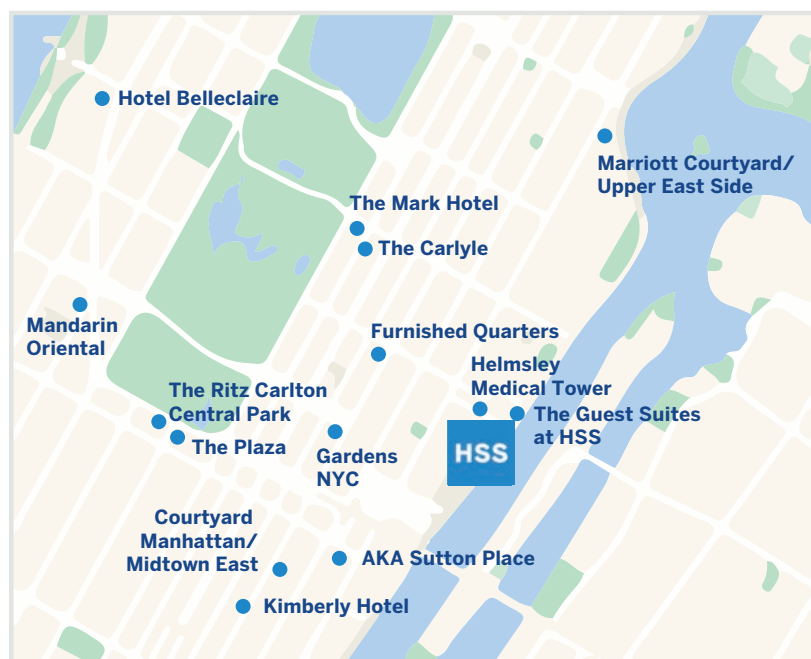
Gardens, NYC • 866.233.4642

Fairfield Inn by Marriot (Astoria) 718.267.0008

\$-\$\$

Mariott Midtown East • 212.644.1300

Hotel Belle Claire • 877.468.3522



*Note, not all hotels are pictured.

\$

Beekman Tower • 888.838.38306

Fairfield Inn & Suites by Marriott • 718.482.0100

Fairfield Inn & Suites: West Side • 212.757.8550

Furnished Quarters • 646.809.0915

Legend

\$ Below \$200/night

\$\$ \$200 - \$350/night

\$\$\$ Above \$350/night

View this complete guide to food, accommodations and services in the area of the HSS main campus.

[Neighborhood Directory >](#)





THE DAY OF YOUR SURGERY

You and your companion will start your day at the information desk in the main lobby. Our patient liaisons will begin your initial check-in. They will then direct you to Patient Access Services, where you will complete your admission and receive a wrist band. From there you'll head to the Family Atrium. Here, you will complete your surgical day check-in and get important information about the structure of the day.

The Family Atrium is a lounge area and central hub where our patients and their support person can wait before their surgery begins. To enhance communication on the day of surgery, phone calls and/or text message updates may be sent to a person of your choosing. A status board is also available in the Family Atrium to keep visitors up to date on the patient's location. The atrium has Wi-Fi and cell phone use is allowed. Please be mindful that there are other patients and visitors in the atriums and keep noise level low while using your cell phone or other electronic devices. Children under the age of 14 and pets are not allowed in the hospital.

Members of the preoperative nursing staff will greet you and escort you to the pre-surgical holding area. Here, you will meet an advanced practice provider. They will reassess your health status and medical/surgical history while preparing you for surgery.

The preoperative nursing staff will complete your admission process, check your identification band, help you change into a hospital gown, and prepare your surgical site. The nurses will also start an intravenous (IV) line. This is a thin, clear tube that will be placed in one of your veins. The IV line will be used by your team to give you fluids, medications, and blood products, if needed. They will also review the surgical consent form with you and have you sign it. Your surgeon will confirm your identity and sign your surgical site with a surgical marker. These steps are an important part of the process designed to ensure your safety.

Once you have been prepped, the nurses will gather your belongings, which should fit in one small HSS bag that is labeled. Your belongings will remain with the Security Department until you are either awake enough to receive them in the recovery room or until you reach your inpatient room. Eyeglasses and hearing aids can be securely stored in our lock-up for valuables, which is managed by HSS Security. They will return them to you after your surgery.

Please do not smoke or vape on the day of surgery. The use of nicotine products (i.e., cigarettes, cigars, gum or patches) has been shown to increase the risk of complications following surgery. They can inhibit bone and wound healing by decreasing blood flow to the surgical site. They can also increase the risk of deep vein thrombosis (DVT), also referred to as blood clots. Please discuss quitting smoking with your surgeon and HSS internist.

Joint replacement surgery generally takes about 1.5 to 2 hours. The total amount of time from entering the operating room to moving to the post-anesthesia care unit is usually about 2.5 hours. Your surgeon will provide more specific details. They will also plan to meet with your family in the Family Atrium or will make other arrangements to contact them after your surgery.

You can call the Family Resource Line (212.774.7547) if you would like further information on what to expect the day of surgery and for updates on our visitor policy. Please encourage your visitors to call if they have any questions.

Anesthesia

Members of your anesthesia team will review and explain the plan for pain management. This includes going over the different types of anesthesia that can be used, including epidural or spinal. They will also discuss your level of sedation (how asleep you will be) and managing your pain after surgery.

The anesthesiologist will also ask you to sign the consent form to perform anesthesia. Most of our joint replacement patients receive IV sedation and a combined spinal or epidural anesthetic. With the epidural method, a narrow catheter (very thin tube) is inserted in the lower spine. It allows a constant flow of medication to block all feeling during the surgery. The level of sedation and anesthesia is tailored to your specific needs. It will allow you to awaken very soon after the surgery is over.

Members of the OR staff will recheck that all the appropriate paperwork and tasks have been performed. They will then escort you on a stretcher or a wheelchair into one of the operating room suites.

Some of our patients see a non-HSS provider for pain management. If this applies to you, your anesthesiologist at HSS will talk to you about pain management after surgery and what to do after you leave the hospital.



Anesthesia for Hip or Knee Replacement

What to Expect During and After Surgery

The Anesthesia Service at HSS works closely with orthopedic surgeons and the entire perioperative team to ensure the safest and most comfortable experience for our patients.

Your plan for anesthesia will be tailored to you. It will account for any medical conditions you have, your medical history, experience with anesthesia in the past, the surgery you are having and your recovery after surgery.

Some questions you may want to ask your anesthesiologist include:

- Can you help lower the risk of nausea after surgery?
- What is the difference between spinal and general anesthesia and which kind is best for me?
- What is spinal versus epidural anesthesia?
- Will I be awake during spinal versus epidural anesthesia?
- What is regional anesthesia and are there any side effects?
- When do I need general anesthesia?
- What happens after surgery?
- What is nerve block pain management after surgery?
- How do I manage pain after hip or knee replacement?

Learn more about the questions above by scanning the QR code.



The Department of Anesthesiology, Critical Care & Pain Management at HSS is a world leader in regional anesthesiology and pain management for orthopedics. We strive every day to make anesthesia a smooth, safe and effective experience that is personalized to your needs. Please do not hesitate to bring your questions and concerns to the attention of your anesthesiologist. We look forward to providing you with the best care possible.



AFTER YOUR SURGERY

After surgery, you will be moved to the Post-Anesthesia Care Unit (PACU), also called the Recovery Room. Here, you will be given oxygen and your vital signs (breathing, heart rate and blood pressure) will be monitored. The team will also focus on managing your pain so you are comfortable when you begin to move around. Once you are in the PACU, the person who accompanied you will be updated. No visitors are allowed in the PACU. Your visitor will be allowed to see you while we explain the instructions you need to follow after being discharged home.

While most patients go home on the day of surgery, some are scheduled to spend the night in the PACU or in a regular hospital floor. There are a few milestones that patients who will spend the night at HSS have to meet before they can leave the PACU. First, anesthesia must have worn off. Second, your heart rate and blood pressure should be back to normal. And finally, your pain must be well managed.

Spiritual Support

HSS formally recognizes the role that spiritual support can play in coping with and recovering from physical illness. To help meet your spiritual and emotional needs, HSS provides a chaplaincy service as an integral part of the healthcare team. The chaplains are here to serve you and your family. They provide pastoral support in any faith. Please call [212.606.1757](tel:212.606.1757) to contact the HSS Spiritual Care Office.

Private Nursing Service

If you wish to have a private nurse during your hospital stay, please call [212.774.7187](tel:212.774.7187).



Recovering in the Hospital

Hospital staff will plan, provide and monitor your care. This may include a physician, physician assistant, nurse, nurse practitioner, physical therapist and/or social worker. Our nursing staff will position you properly in bed and help you turn until you are able to move on your own. You may have a pillow between your legs if ordered by your surgeon. Anesthesia can temporarily inhibit urination. A catheter may temporarily be inserted into the bladder to remove urine, though this is not common.

Exercise

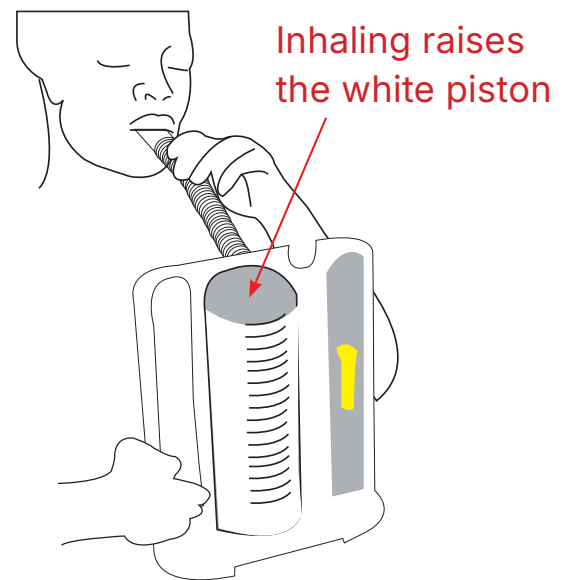
Gentle exercises will improve your range of motion, help your blood circulate, and help strengthen your muscles. These basic exercises are reviewed at your pre-op physical therapy visit. A physical therapist may review your exercise program with you after surgery.

Deep Breathing

Deep breathing exercises prevent mucus from building up in the airways or lungs, which may cause pneumonia. Typically, you take deep breaths automatically. But when you are in pain or on sedating pain medications, your breathing may be more shallow. To ensure you take deep breaths regularly, the nursing staff may provide you with and educate you on using an incentive spirometer. You should do deep breathing exercises every 2 to 3 hours while you're awake.

How to Use the Incentive Spirometer

1. Hold the incentive spirometer in an upright position. To start, breathe out (exhale) normally. Then close your lips tightly around the mouthpiece.
2. Take a slow, deep breath through your mouth (inhale). Breathe in as deeply as you can. When you breathe in, try to keep the yellow cup in the BEST to BETTER flow range. The white piston in the main chamber moves up slowly when you breathe in to measure how deep your breaths are. Try to move the white piston as high up as you can.
3. Relax, remove the mouthpiece and then breathe out normally. The white piston will slowly fall to the bottom of the chamber.
4. Rest for a few seconds. Repeat this exercise at least 10 times every hour while you are awake.



Managing Postoperative Pain

Some pain and discomfort after surgery is normal. We can offer many treatment options that greatly reduce the pain most patients feel. Pain management begins with you.

How Does It Feel?

The best way you can help is to describe your pain, showing its location and describing its intensity, as well as reporting any changes. Pain may be constant, or it may come and go. It can be sharp, burning, tingling, or aching. A pain scale is used to help you and our staff gauge the level of pain and effectiveness of treatment. Your description will help us provide you with a plan of care.

You will be asked to rate how much pain you have on the pain scale above and what your tolerable level of pain is.

PAIN SCALE



Your Personalized Pain Treatment Plan

The pain management team will use many different techniques to manage your pain. This may include nerve blocks, oral medications, injections, IV medications and catheters connected to special pumps. We try to avoid giving injections but sometimes these are necessary. We aim to recognize and treat pain quickly to allow you to fully take part in your physical therapy program.

The goal is to transition to pain medications that you take by mouth. Usually these are opioids or narcotics. If appropriate, you will be placed on Tylenol, an anti-inflammatory, and an opioid pain medication.

AFTER YOUR SURGERY

- We will teach you how to safely take your medications and give you more information before discharge. Take your pain medication as prescribed.
- It is normal to have pain after surgery. It can often increase after discharge when the anesthesia nerve blocks wear off. Unless otherwise instructed, take your opioid pain medication as needed when you start to feel pain.
- Narcotic medication may have side effects including nausea, vomiting, light-headedness, and constipation.
- As you heal, the pain should gradually lessen. You can expect to use less pain medication after the first week or so following your surgery.

There are also alternative methods to control pain without medication. These include:

- icing
- guided imagery
- relaxation techniques
- deep breathing exercises

Some patients may require limited refills of pain medication. Call your surgeon's office to make this request or if you are having any other difficulty with pain control. More information will be provided before your discharge from the Hospital.

Safe Medication Disposal

Many patients do not use all of the pain medication prescribed to them after surgery. Once your pain has subsided, it is important to properly dispose of any leftover medications right away. Here are ways to safely dispose of your leftover medications:

1. **Use DisposeRx®:** This is a safe disposal product provided by HSS. Follow the instructions to dispose of medications at home.
2. **Drop-Off Locations:**
 - **HSS Drop Box:** Bring unused medications to the prescription medication drop box at HSS, located on the ground floor of the Belaire Building at 525 E 71st Street.
 - **Other Locations:** You can find other public drop-off sites near you by visiting apps.deadiversion.usdoj.gov/pubdispsearch.

Managing Your Pain at Home

Your discharge pain management plan will combine different methods to help with pain.

These measures include:

- **Movement:** Early and regular movement, as guided by your physical therapist, is essential for recovery and can help reduce pain and stiffness.
- **Ice Therapy:** Using a cold therapy device or applying ice packs to the surgical area as directed can help minimize swelling and relieve pain.
- **Other Medications:** Additional medications may be recommended for pain management, such as:
 - **Acetaminophen (Tylenol):** To help reduce pain and discomfort.
 - **NSAIDs** (nonsteroidal anti-inflammatory drugs, e.g., ibuprofen), if approved by your surgeon, to manage inflammation and pain.
 - **Muscle relaxants:** To address muscle tension and spasms that may contribute to pain.

Your care team will work with you to create a personalized pain management plan. The goal is to support your recovery while minimizing the risks associated with opioid use. Please follow all discharge instructions carefully and contact your care provider with any questions or concerns.

Rehabilitation and Mobility

Your rehabilitation program starts in the hospital. The goal for most of our patients is to stand and take a few steps within the first few hours after surgery.

It is crucial that you actively participate in your physical therapy program. It is very important for the success of your surgery and your overall recovery. Plan to play an active role from the start!

A physical therapist or rehabilitation nurse will help you with:

- Sitting on the side of the bed with your feet on the floor
- Transferring in and out of bed safely
- Walking with the aid of a device (walker, cane, or crutches)
- Climbing stairs (physical therapist only)

The therapist may instruct you in daily activities such as getting in and out of a car, bathing, showering, getting dressed, and using the toilet. The use of a high-chair and high toilette seat may be recommended by your surgeon. This is based on the specific precautions your surgeon gives you.

Beginning to Walk

Do not get into or out of bed by yourself! Our team of mobility specialists will help you get out of bed and walk with an assistive device. The amount of weight you can support with your operated leg will depend on your surgery. Your physical therapist will give you precise instructions on how much weight you can bear. Before you leave the hospital, you will also practice how to go up and down stairs. It is likely you will do well enough to go home on the same day as your surgery. If you end up staying, we encourage you to get out of bed with the help of nursing staff throughout the day.

The HSS Rehabilitation team has created specific videos on how to:

- Stand up and sit down
- Walk with a cane or walker
- Go up and down stairs
- Get in and out of bed
- Get in and out of a car
- Get in and out of a bathtub or shower
- Get dressed

You can view these by going to the Daily Activities tab for your specific surgery at [HSS.edu/rehab-guides.asp](https://www.hss.edu/rehab-guides.asp) or by scanning the QR code.



Please confirm with your surgeon which specific exercises you should follow.

Call, Don't Fall!

Always make sure to ring your call bell for staff assistance getting in and out of bed. A staff member must remain within your reach while maintaining your privacy and dignity while you use the toilet.

Looking Ahead

Before leaving the Hospital, your nurse will review your discharge instructions with you. Your physical therapist will also review your home exercise program. **Remember, YOU make the difference!** The earlier you are able to get moving, the quicker you will improve and the more likely you are to have a good outcome.

Getting Into and Out of a Car/Traveling by Car

Your physical therapist will show you how to get in and out of the car before you are discharged.

- Be sure to remind whoever is picking you up to bring two pillows for comfort.
- Sit in the front passenger seat. Make sure the car seat is all the way back and slightly reclined before you sit.
- In a regular car, enter from the street level rather than the curb to avoid bending your joint too much.
- In an SUV, you may need to enter from the curb to make it easier to get into the car.



GUIDELINES FOR RECOVERING AT HOME

Caring for the Surgical Site

Your nurse will review instructions for caring for your surgical wound before you leave the hospital. What you should do will vary depending on how your incision was closed and the dressing used to covering it.

The majority of skin incisions (cuts) are closed with sutures (stitches) that dissolve, with or without a gluelike product or with a thin, white adhesive tape. In most cases, the incision area is covered with a water-resistant adhesive gray bandage for the first week after surgery. You will be able to shower as instructed with the gray dressing in place. Once the dressing is removed, usually one week after surgery, you can continue to shower, making sure that you don't scrub your incision. Pat it dry with a clean towel afterwards.

Some incisions are closed with stitches or staples. You will be able to shower with the gray, adhesive dressing that covers your incision. Once that dressing is removed a week after surgery, the staff will provide specific instructions about showering and care of the incision. Stitches or staples are typically removed two weeks after surgery. After that, you can continue to shower without covering your incision.

Please tell your surgeon if you notice increasing redness or drainage from your incision.

Good hygiene is vital throughout your recovery. The easiest and most effective way to protect against infection is to wash your hands regularly with soap and water. An infection can spread to the joint through the bloodstream from another source in your body. This means that you and anyone who touches your skin should keep their hands clean. As you heal, your incision will feel better. You may experience numbness, tingling, or hyper-sensitivity around the incision for several months after surgery. In some cases, a well-healed incision will remain warm for a few months.

Pain Control

- There are several ways to reduce pain without medication. Use cold therapy and other measures to help reduce discomfort.
- Take your pain medication as prescribed. Expect to use less after the first week or so.
- If you are experiencing unpleasant side effects, call your surgeon's office.
- If you are taking pain medication, do not drink alcohol or use prescription sleep medication.
- It is important to tell your team if you need more pain medication. They will customize your plan to meet your needs. Call your surgeon's office 2 to 3 business days before you are likely to run out of medication. **Medications cannot be refilled over weekends.**

Leg Swelling

After joint replacement surgery, most patients develop swelling in the operated leg. The amount of swelling can vary. The swelling itself is typically in the leg, knee, ankle, or foot. You may also have black-and-blue bruising, which usually goes away over several weeks. Bruising can appear around the operative site and down the back side of the operative leg. If bruising appears to be very bad or feels very painful, please contact your surgeon's office. Once bruising develops, it will travel down your leg and may reach your foot.

For the first 6 weeks after your operation, sitting for a long time with your foot down tends to worsen the swelling. While you are awake, you should not sit for more than 30 to 45 minutes at a time. Periods of walking should be alternated with periods of elevating your leg in bed. When elevating the leg while lying down, the ankle should be above the level of the heart. Lying down for an hour in the late morning or afternoon helps reduce swelling.

To prevent or reduce leg and ankle swelling:

- Elevate your operated leg in bed on one to two pillows while lying flat.
- While you are awake, avoid sitting for longer than 30 to 45 minutes at a time.
- Perform ankle exercises.
- Apply ice to your surgical area for at least 20 minutes a few times a day (especially before and after exercises) or more frequently as recommended by your surgeon.
- Some doctors may recommend the use of support hose.

Preventing Blood Clots

Blood clots rarely happen. After joint replacement surgery, clots called deep vein thromboses (DVT) sometimes form in the leg veins. In rare cases, clots can also form in the lungs, where they may cause additional symptoms. To prevent and reduce the chance of blood clots, mechanical devices (foot or calf pumps) are used while you are in the Hospital. These squeeze the leg muscles to keep the blood flowing in the veins. You will also receive a medication to minimize clot formation. For the first 6 weeks after your surgery, we recommend standing and walking briefly every 45 minutes to help reduce the risk of blood clots. If you develop persistent leg swelling with a painful calf that does not improve with elevation and other measures recommended by your team, please call your doctor's office. If you develop difficulty breathing, chest pain and or palpitations, please call your doctor and 911.

Constipation

Constipation, or trouble having a bowel movement, is common after surgery. It can happen for a few reasons: anesthesia, pain medications you're taking, or how much and what you're eating and drinking.

If you have concerns before your surgery about constipation, the best thing to do is to ask your surgeon or care team about it.

Let your team know if you suffer from chronic constipation and have a special medication that works particularly well for you. They can make a note in your chart.

At home, there are a couple of general rules to follow to help prevent or manage constipation:

- **Don't take fiber supplements.** It's true that having enough fiber in your diet helps maintain proper bowel function. But taking bulk fiber supplements after surgery poses a danger of making constipation worse if you don't drink enough water.
- **Focus on a gradual approach.** Start gently with laxatives and then move on to using additional medications as needed. At HSS, we usually start with a combination of a stool softener and a gentle, plant-derived laxative that contains an ingredient called sennosides, which come from the leaves of the senna tree. Additional over-the-counter medications may be used as needed.
- **Be flexible.** Keep in mind that different laxatives work differently, and the effects of each laxative vary among people.

Bloating in the belly after surgery is quite common and could be a result of trapped gas or excess fluids. The fluids will leave your body naturally within a few days. Trapped gas may resolve as you have a bowel movement. There are techniques to relieve this discomfort, including simethicone. Ask your care team about this if you need more help.

Insomnia

Your surgery may temporarily affect your sleeping habits. To return to your normal sleeping habits without using sleep medications, we recommend you follow these guidelines:

- Do not take naps during the day. Reduce your intake of fluids after 8:00 p.m. to avoid waking up because of a full bladder. Do not use alcohol, caffeine, or nicotine in the evening. As your body recovers from surgery, increase daily physical exercise but do not exercise within 3 hours of bedtime. Delay bedtime about 1 hour. Establish a regular wind-down period 1 or 2 hours prior to bedtime. Do not spend more than 7 or 8 hours in bed.
- Use the bedroom for sleep and relaxing activities only. Make sure the temperature of your bedroom is comfortable. In general, a cooler room helps you sleep. Go to bed when drowsy. Read or watch television until very drowsy, then turn the lights off and go to sleep. If not asleep within half an hour, do not try to sleep; instead, engage in a relaxing activity (e.g., reading) and do not attempt to sleep until drowsy again. Repeat this as often as necessary.

- Get up at about the same time every day (including weekends), even if you have had a poor night's sleep. If your sleep does not improve after a few months, an evaluation from a sleep clinic may be helpful.

Low-Grade Fever

A low-grade fever (between 99.5°F and 100.9°F) is relatively common within the first week after surgery. It is usually temporary, lasting less than 24 hours. It is often a normal response to the body's healing process. This type of low-grade fever usually responds well to hydration and the use of acetaminophen (Tylenol). It is important to monitor the fever and tell your surgeon if the temperature continues to rise or if other concerning symptoms appear such as difficulty urinating, calf pain and swelling, cough, chest pain, or redness in your incision. They can help determine whether it is a normal response or if further investigation is needed.

Physical Therapy at Home

Your surgeon may recommend physical therapy at home or near your home for your rehabilitation. Physical therapy typically begins within a few days after surgery. Be sure to follow your surgeon's advice on when to start. Please only follow the exercises given by your surgeon and physical therapist at the Hospital after surgery.

It is very important to do the exercises you are given after your surgery. Follow your physical therapist's instructions for what to do and how often to do it.

Here are a few basic facts and general rules:

- It is normal to feel some discomfort while doing your exercises. Take your pain medication as directed at home. Use ice, guided imagery, relaxation, and deep breathing.
- You may have physical therapy at home if prescribed by your surgeon. The physical therapist will advance your exercises and walking program as it works for you.
- A daily walking program on level surfaces is an essential part of your home exercise program. Avoid hills, steep ramps, and uneven surfaces. Gradually increase your distance each day.
- Once you are moving better, you may consider continuing physical therapy at an outpatient center. The goal is to continue to increase your strength and endurance and improve your function.
- Ask your surgeon or physical therapist about when to stop using your cane, crutches, or walker.

HSS@Home Virtual Physical Therapy

HSS@Home offers virtual physical therapy for HSS patients after surgery. This program allows you to receive post-discharge care from an HSS physical therapist from the comfort of your home. Your first video session will take place within one to two days of your return home. Your therapist will follow up one to two times per week over the course of the next two to three weeks. These sessions allow our team to stay connected with you in real time. Your PT will monitor your progress, help you transition to the next stage of your recovery, and route any questions or concerns to your HSS healthcare team. To participate in HSS@Home, you will need an active MyHSS account, access to the internet, and a device with microphone and video camera. You will also need to be recovering in the NY/NJ/CT area. Participation is dependent on staffing and your insurance benefits. The HSS@Home program is in lieu of in-person home based services.

Stairs

Your physical therapist will teach you how to properly go up and down stairs before you are discharged. It is helpful to have a handrail to hold onto when going up and down the stairs for safety after surgery. Think about your stairs at home and make sure they are safe prior to surgery so that proper arrangements can be made.

One Total Joint Replacement

Upstairs:

1. The non-operated leg goes first.
2. Operated leg goes second.
3. The cane or crutches go last.

Downstairs:

1. The cane or crutches go first.
2. The operated leg goes second.
3. The non-operated leg goes last.

Bilateral (Left and Right) Joint Replacements

Upstairs:

1. The stronger leg goes first.
2. The weaker leg goes second.
3. The cane or crutches go last.

Downstairs:

1. The cane or crutches go first.
2. The weaker leg goes second.
3. The stronger leg goes last.

OUTPATIENT PHYSICAL THERAPY

Our physical therapists are specialists in arthritis and joint replacement. Services provided include preoperative and postoperative care and one-time follow-up appointments.

Locations:

Orthopedic Physical Therapy Center

(Main Hospital - NYC)

2nd floor of main hospital

Tel: 212.606.1213

HSS Paramus – Midland Ave

15 East Midland Ave, Suite 1A

Paramus, NJ 07652

Tel: 201.599.8000

HSS Westchester

1133 Westchester Avenue

White Plains, NY 10605

Tel: 914.821.9300

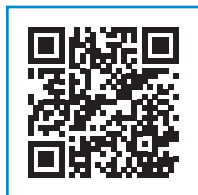
HSS Rehabilitation Network

Available in various locations throughout the tristate area.

Tel: 212.606.1317 or 1.800.493.0039

hss.edu/rehabilitation-network-map.asp

To find a provider recommended by HSS, visit
HSS.edu/rehab-network.asp or scan the QR code below.





THE WEEKS AFTER SURGERY

Remember that your new joint is different. Recovery from surgery takes time. You will likely feel tired and fatigued for several weeks, which is normal. It is important to plan periods of rest throughout the day. You may experience skin numbness around your incision and joint stiffness. This is also normal. At times, you may notice clicking. This is common and is due to the implant surfaces rubbing together. These symptoms will gradually improve over several weeks and months. The benefits of joint replacement usually become fully evident 6 to 8 months after surgery.

Return to Driving

The timeline for returning to driving after hip or knee replacement surgery can vary based on several factors. These include the type of surgery, your recovery progress, and the specific guidelines from your surgeon.

Most patients can expect to return to driving within 4 to 6 weeks after surgery. Review with your physical therapist the safe way to get in and out of your vehicle while following the precautions that you may have been given. It's crucial to ensure that you are strong and mobile enough before driving, particularly in the leg that was operated on. The ability to react to different driving situations and to perform a safe stop are also important. You should not drive if you are still taking prescription pain medication. If you drive a commercial vehicle, you may need to demonstrate your ability to drive safely before you are cleared to operate it. You can discuss your specific situation with your doctor for the most accurate advice.

Routine Follow Up

Your surgeon may ask you to come for routine visits after surgery. Often times, x-rays are taken at the same time. These visits are important. Please comply with them, even if your replaced joint feels great.

PREVENTING INFECTION (ANTIBIOTIC PROPHYLAXIS)

It is very important that you protect your new joint from infection. An infection can spread to the joint through the bloodstream from another source in your body. Please tell all your health providers that you have an artificial joint, as they may need to prescribe antibiotics before treatment. This is known as antibiotic prophylaxis. It is especially important for some people before dental procedures and invasive urinary procedures. If you are not sure whether a procedure you are having is invasive, play it safe and tell your surgeon. They will provide additional instructions.

People at potential higher risk of joint infection include those who:

- Are immunocompromised or immunosuppressed, which includes people with inflammatory joint arthritis, rheumatoid arthritis, and systemic lupus erythematosus (lupus)
- Have disease-, drug-, or radiation-induced immunosuppression
- Have insulin-dependent (type 1) diabetes
- Have had previous prosthetic joint infections
- Are malnourished
- Have hemophilia

Dental Procedures

It is believed that there is a higher incidence of infection with certain dental procedures. Your surgeon may recommend pre-medicating with antibiotics before any dental cleaning or dental procedure. Tell your dentist that you have an artificial joint so that they can prescribe the antibiotics.

Immunocompromised patients or those with any other major medical problems should follow this antibiotic routine before dental cleanings and dental procedures indefinitely. If you have any questions or concerns, please call your surgeon's office.

The suggested antibiotic regimen is as follows:

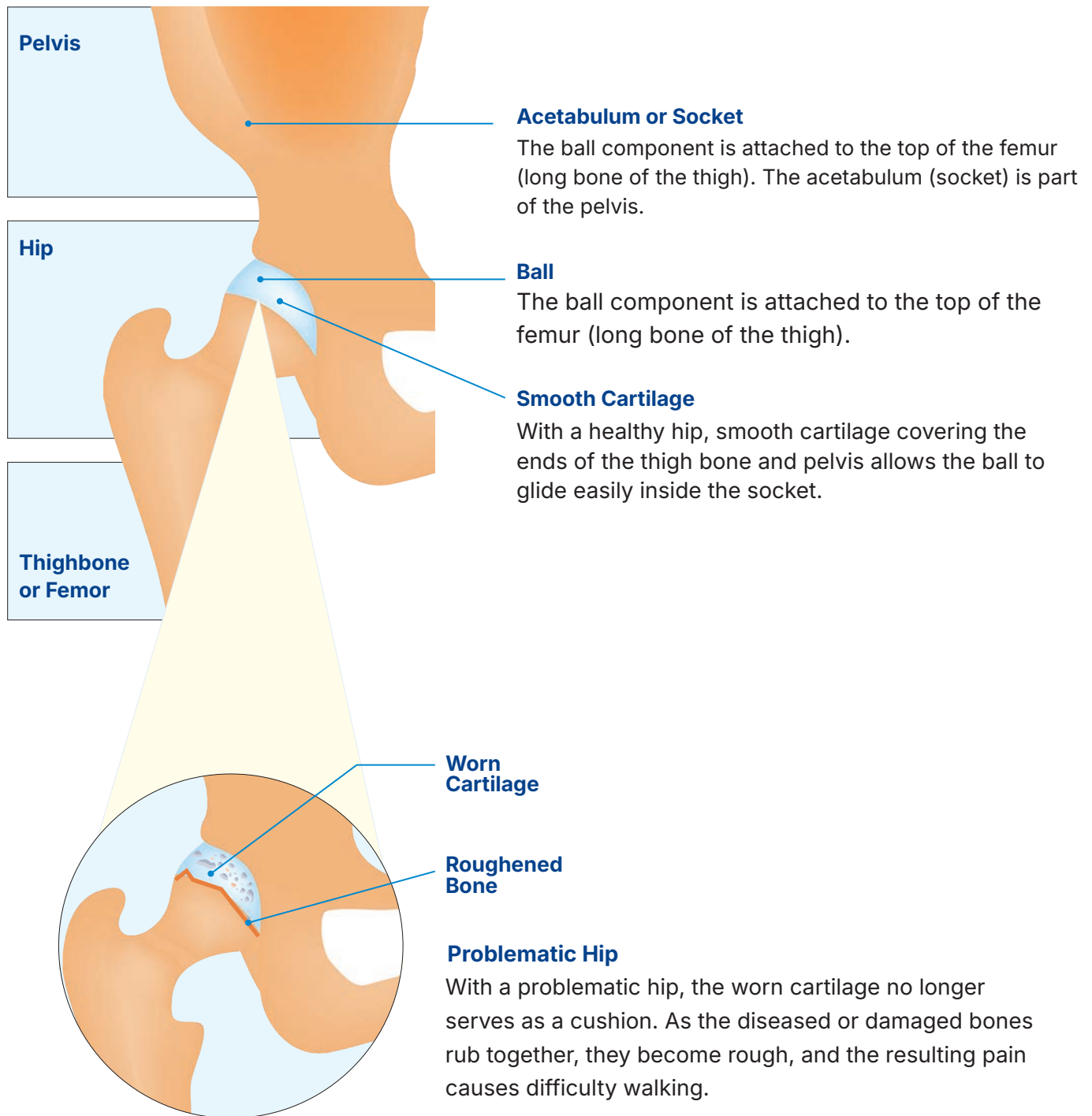
- **For patients not allergic to Penicillin:** Amoxicillin, 2 grams orally 1 hour prior to the dental procedure
- **For patients allergic to Penicillin:** Clindamycin, 600 mg orally 1 hour prior to the dental procedure

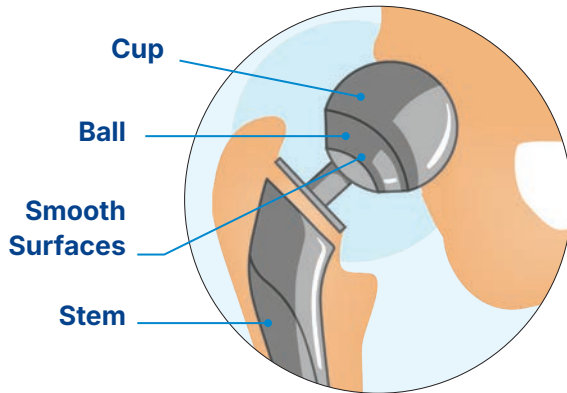
Antibiotics may reduce the risk of infection but cannot eliminate it. Preventing infection is something that you and all the healthcare professionals who treat you need to be aware of.

Please note that these are suggested guidelines. Your surgeon may advise you to take antibiotics in other situations for procedures that may create significant bleeding.

A CLOSER LOOK AT HIP REPLACEMENT

To understand hip replacement surgery, you should be familiar with the structure of the hip joint, a ball-and-socket joint.





Hip Replacement

In a hip replacement, the worn-out socket is replaced with a cup made of titanium and polyethylene (a very durable plastic-like material). The femoral head (top of the femur) is replaced with a ball made of ceramic or metal that is attached to a metal stem.

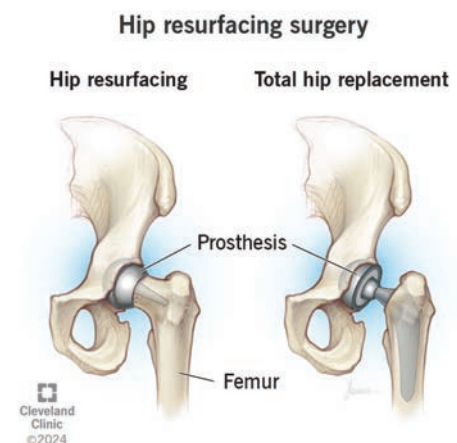
There are several ways to secure the implant to the bone. With a cemented hip replacement, the prosthesis is held in place by acrylic bone cement. In a non-cemented hip replacement, the bone grows on and into the implant surface, securing it. The best option for you will be decided when you see your surgeon for a consultation.

Years of research have led to steady improvements in how hip replacements are designed and implanted in your body.

A CLOSER LOOK AT HIP RESURFACING

A hip resurfacing is a different type of artificial hip implant, designed to preserve bone for younger patients. In a hip resurfacing procedure, the worn surfaces of the joint are replaced with an implant made of cobalt/chrome metal alloy.

There are several ways to secure the implant to the bone. With a cemented fixation, the prosthesis is held in place by acrylic bone cement. With non-cemented fixation, the bone grows on and into the implant surface, securing it. The best option for you will be decided when you see your surgeon for a consultation.



PHYSICAL THERAPY FOR HIP REPLACEMENT

The following exercises should be performed only if instructed by your physical therapist.

1) Ankle Pumps:

Purpose: To promote blood circulation in the lower legs

- Lie on your back with both legs straight.
- Bring your feet upwards, "toes to your nose," moving them from the ankle.
- Now point both feet downwards, like pressing on a gas pedal.
- Make sure to move the feet and ankles up and down through the full range of motion.
- Perform _____ repetitions, _____ times daily.



2) Gluteal Set

Purpose: To help improve the strength of the buttock (gluteal) muscles

- Lie on your back with both legs straight.
- Gently squeeze your buttocks together so that your pelvis rises slightly.
- Hold this contraction for 5 seconds then slowly release.
- Rest between each contraction.
- Perform _____ repetitions, _____ times daily.



NOTE: You do not need to use your hands to complete this exercise. Use only your buttocks muscles to complete the exercise.

3) Quadriceps Set

Purpose: To help strengthen the front thigh muscles (quadriceps)

- Lie on your back with a small towel under the knee on the operated side. (Towel under the knee is optional, and may improve comfort.)
- Slowly tighten your thigh muscle (quadriceps) by pushing the back of your knee down into the bed.
- Do not let your heel come off the bed
- Hold this contraction for 5 seconds, and then slowly release.
- Rest between each contraction.
- Perform _____ repetitions, _____ times daily.



4) Heel Slides

Purpose: To help strengthen the hip/thigh muscles and encourage movement of the entire lower extremity

- Lie on your back with both legs straight.
- Slowly slide your heel toward your buttock.
- Bend the hip and knee of your operated leg to a 45° angle.
- Maintain your hip precautions by making sure the head of the bed is not elevated and that you do not bend the hip more than 45°.
- Perform _____ repetitions, _____ times daily.



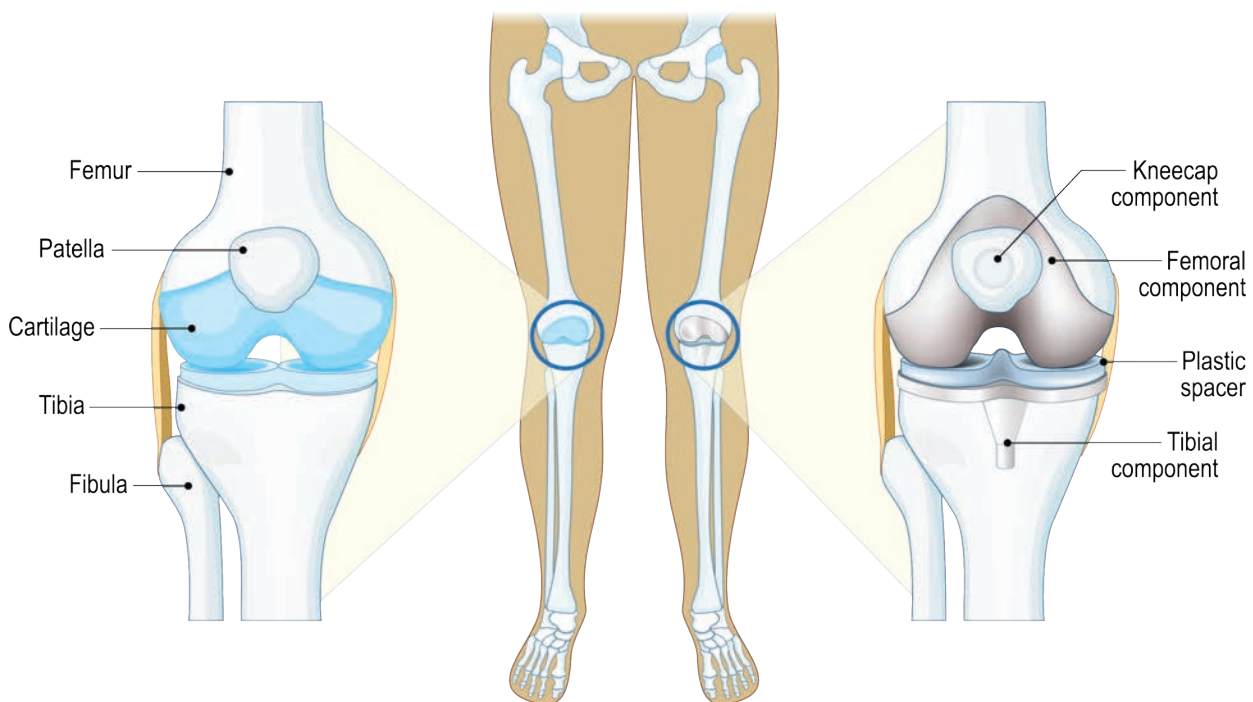
NOTE: *This is one of the harder exercises that you will perform.*

Do not be discouraged if you are unable to immediately bend your hip and knee all the way to a 45° angle. This exercise will become easier as you practice.

A CLOSER LOOK AT PARTIAL AND TOTAL KNEE REPLACEMENT

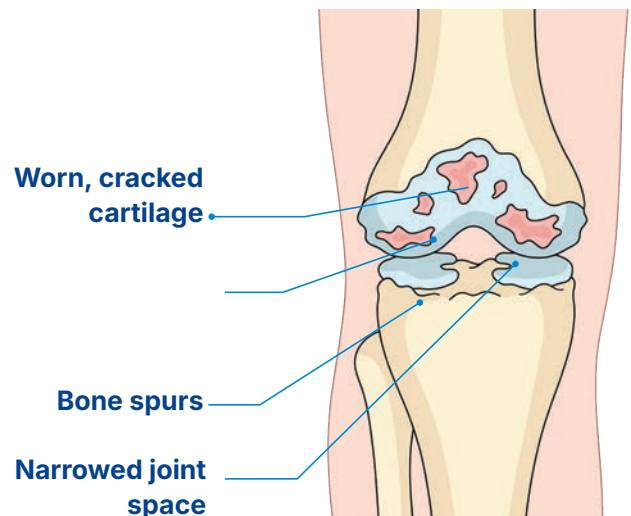
To understand knee replacement surgery, you should be familiar with the structure of the knee. It is a complex joint consisting of three bones: the femur (thigh bone), tibia (shin bone), and patella (kneecap).

When you bend or straighten your knee, the end of the femur rolls against the end of the tibia and the patella glides in front of the femur. With a healthy knee, smooth surfaces bear weight and allow for painless movement. Muscles and ligaments provide side-to-side stability. A membrane lines the joint. Cartilage acts as a cushion between the femur and tibia and is lubricated by synovial fluid.

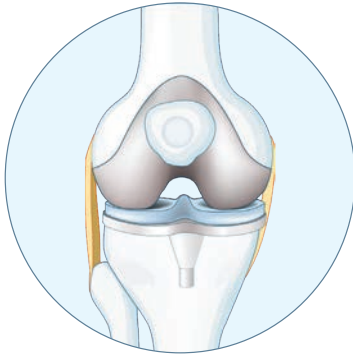


Arthritic Knee

With an arthritic knee, the cartilage wears out. The bones rub together and become rough. The resulting inflammation and pain cause reduced motion and difficulty walking.



A CLOSER LOOK AT PARTIAL AND TOTAL KNEE REPLACEMENT



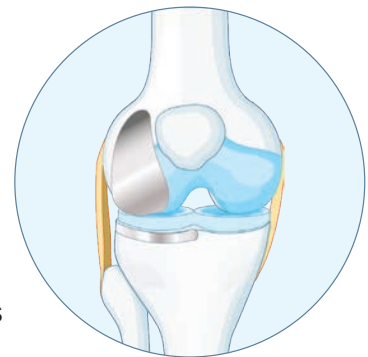
Total Knee Replacement

The weight bearing surfaces of a total knee replacement are smooth, as in a normal knee. A femoral component made of metal covers the end of the thigh bone. A tibial component covers the top of the shin bone. The patellar component covers the underside of the kneecap. The components are made of metal or metal-ceramic alloys and polyethylene, which is a plastic-like material.

Partial Knee Replacement

Sometimes only one of the three compartments of the knee is affected by arthritis. This can be the inner (medial), the outer (lateral), or the front (anterior) compartment. Under those circumstances, your surgeon may recommend a partial knee replacement.

Years of research have led to steady improvements in how knee replacements are designed and done. How long the prosthesis lasts varies by patient, as each individual person's body places slightly different stresses on the new knee. However, the average person can expect to obtain greater mobility and freedom from pain, which will, in turn, improve your ability to walk.



Physical Therapy for Knee Replacement

The following exercises should be performed **ONLY IF INSTRUCTED** by your physical therapist.

1) Ankle Pumps:

Purpose: To promote blood circulation in the lower legs

- Lie on your back with both legs straight.
- Bring your feet upwards, "toes to your nose," moving them from the ankle.
- Now point both feet downwards, like pressing on a gas pedal.
- Make sure to move the feet and ankles up and down through the full range of motion.
- Perform _____ repetitions, _____ times daily.



2) Gluteal Set

Purpose: To help improve the strength of the buttock (gluteal) muscles

- Lie on your back with both legs straight.
- Gently squeeze your buttocks together so that your pelvis rises slightly.
- Hold this contraction for 5 seconds then slowly release.
- Rest between each contraction.
- Perform _____ repetitions, _____ times daily.



NOTE: You do not need to use your hands to complete this exercise. Use only your buttocks muscles to complete the exercise.

Total Knee Information and Physical Therapy

The following exercises should be performed **ONLY IF INSTRUCTED** by your physical therapist.

3) Quadriceps Set

Purpose: To help strengthen the front thigh muscles (quadriceps)

- Lie on your back with a small towel under the knee on the operated side. (Towel under the knee is optional, and may improve comfort.)
- Slowly tighten your thigh muscle (quadriceps) by pushing the back of your knee down into the bed.
- Do not let your heel come off the bed
- Hold this contraction for 5 seconds, and then slowly release.
- Rest between each contraction.
- Perform _____ repetitions, _____ times daily.



4) Active Range of Motion (AROM)

Sit in a chair, resting your foot on the floor on a paper towel or pillowcase to allow your foot to slide more easily.

Bend operated knee as far back as you can using your muscles.

- Hold for _____ seconds.
- Perform _____ repetitions, _____ times daily.



5) Active Assisted Range of Motion (AAROM)

- Sit in chair and allow operated leg to dangle, or sit with your foot on floor as described in exercise #3.
- Bend operated knee as far back as you can using your muscles.
- Then cross your non-operated leg on top and give it a gentle stretch back.
- Keep your pelvis level and do not lift your hip off the surface you are sitting on.
- Hold for ____ seconds
- Perform ____ repetitions ____ times daily.



6) Active Knee Extension

- Sit on chair or bed with your thighs supported on the surface.
- Extend your operated leg up by tightening your thigh and pulling your toes up. Try to fully straighten your operated knee.
- Your thigh should maintain contact with the surface you are sitting on.
- Hold for ____ seconds and slowly relax your leg.
- Perform ____ repetitions ____ times daily.



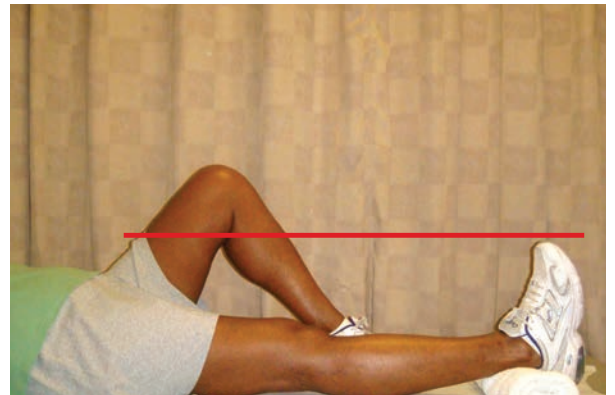
7) Stair Stretch

- Place your operated leg on the second step of your stairs. If you cannot reach the second step use the first.
- Hold onto the hand rails or wall.
- Lean forward while bending your operated knee. Do not bounce.
- Hold for ____ seconds and slowly relax your leg.
- Perform ____ repetitions ____ times daily.



8) Passive Extension

- Lie down with a towel roll under your ankle. Allow your knee to stretch into full extension.
- Place an ice pack on your knee.
- Stay in this position for ____ minutes as tolerated.
- Repeat times ____ per day.



To see videos with the most important exercises and precautions after your surgery, visit [HSS.edu/rehab-guides.asp](https://www.hss.edu/rehab-guides.asp) or scan the QR code.





CONCLUSION

The Patient Education staff and members of the ARJR Service at HSS hope that you find this booklet helpful on your journey to recovery. The process of a joint replacement is indeed a journey. Its endpoint—improved health and mobility—is well worth the effort. We stand ready to assist you every step of the way. If you have any questions, please feel free to ask any member of our staff. Your well-being is our first concern. We encourage you to seek out additional information that is located on the HSS website at [HSS.edu](https://www.hss.edu) and in your patient portal (MyHSS).

There will be many opportunities to review the material provided in this booklet. Staff will reinforce the information and will likely provide additional and more specific instructions during your visits. In addition, our Patient Education staff will review the information during the preoperative education class and can answer any questions that you may have.

Can We Help Someone Else?

Now or later, you may have family members or friends who may need the services of an orthopedist (in any specialty area) or a rheumatologist. An easy way for them to get in touch with HSS is to call the HSS Physician Referral Service at 1.800.854.0071.

Providing Feedback to HSS

We want to hear from you!

Hospital for Special Surgery has achieved a national reputation for excellence in orthopedics, rheumatology and patient-centered care. All of us on the HSS team strive to provide you with the care you need to achieve the best health outcomes.

Feedback from our patients has been a critical component in achieving this excellence. We listen. And we respond—especially when we learn of new opportunities for improvement.

Another important part of achieving excellence is to know when things go right! We also want to know when our staff members provide outstanding care.

When you have a moment to reflect, we would appreciate your feedback. You can, of course, send a letter or note to any HSS staff person, or to your doctor. You already know your doctor's address. He or she appreciates hearing from you.

To address an HSS staff person whom you know, you can write to that person at the address below. Or you can contact us through the HSS website. Otherwise, please feel free to address your feedback to:

Bryan T. Kelly, MD, MBA
President & Chief Executive Officer
Hospital for Special Surgery
535 East 70th Street
New York, NY 10021

Thank you for choosing Hospital for Special Surgery.

HSS

535 East 70th Street
New York, NY 10021
TEL 212.606.1000
[HSS.edu](https://www.hss.edu)

