Total Joint Replacement Guide

Hoag Orthopedic Institute

Office Information

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At Hoag Orthopedic Institute, We Get You Back to You.

You have selected one of the leading orthopedic care teams for your procedure. Our goal is to restore, improve, and enhance the health and mobility of individuals with musculoskeletal conditions and diseases through excellence in care and outcomes, clinical innovation, research and advocacy.

Hoag Orthopedic Institute (HOI) brings together a comprehensive team of orthopedic surgeons, sports medicine doctors, physiatrists, and other specialists. All our orthopedic surgeons are fellowship-trained in their orthopedic areas of expertise. HOI consistently performs the highest number of joint replacement procedures in the Western Region and ranking in the top 5 nationally on an annual basis.

We are a specialty orthopedic institute, founded in partnership with our premier physicians, and dedicated to our patients with orthopedic conditions and sports-related injuries. We are committed to getting you back to your daily activities by restoring mobility through innovative and evidence-based treatment options. Our team provides excellent patient care with superior outcomes.

To learn more about our world-class outcomes, please visit our Outcomes Report online at hoioutcomes.com or scan the QR code.

This guide contains general information on all aspects of your upcoming care, including pre-admission, admission, surgery, rehabilitation, and follow up care. We ask that you read this guide in its entirety, sign a form that you have done so and understand all the materials.

Frequently Used HOI Numbers

Hoag Orthopedic Institute Hospital Main Line: 949-727-5010
hoagorthopedicinstitute.com

Pre-Admission Screening (PAS): 949-727-5010, option 3
Fax: 949-764-8810

Registration: 949-727-5060

Care Management Department: 949-727-5439

Hoag Orthopedic Institute Billing: 949-764-8404

Financial Assistance: 949-764-5564

Hoag Orthopedic Institute – Nursing Floors:
Second Floor: 949-727-5200
Third Floor: 949-727-5300

Your electronic medical record is available in MyChart at hoagconnect.org/mychart/

Accessing MyChart will provide you with your pre-operative and post-operative information.

You can access your MyChart by visiting: hoagorthopedicinstitute.com and selecting "Patient Portal" on the top navigation.

Hip and Knee Replacement Pre-Operative Online (Zoom) Class

This class is designed for patients who are scheduled for total hip or knee replacement surgery at **Hoag Orthopedic Institute** in Irvine and either planning to return home the same day of surgery or staying overnight in the hospital. Please register for your class, approximately **three to four weeks** before your surgery date.

We highly encourage **ONLY** patients to register for the class to allow enough room for other patients. Caregivers do not need to register – they are welcome to listen alongside and support you during the session. Attending the session will provide valuable information to help prepare you for surgery and recovery.

To register for class, scan the QR code below, or visit the direct link below.

Website to Schedule an Orientation Class:

Online/Zoom Class:
HOIExperts.com/JointClassZoom

QR Code may not work pending the model of your phone. If an issue persists, please enter the URL directly.

Introduction and Philosophy

Introduction and Philosophy

Hoag Orthopedic Institute (HOI) joint replacement surgeons perform more hip, knee and shoulder replacements than any other organization on the West Coast. So, when you've received a diagnosis that your arthritis has progressed to the point of needing a total joint replacement, you can rest assured that you are in the best hands possible at HOI.

In fact, our founding physicians were early adopters of the latest techniques in hip replacement surgery, including the anterior approach. Many of our surgeons are leading the way with robotic technology for joint replacement procedures and are dedicated to educating the next generation of joint replacement surgeons, after completion of their orthopedic residency, through highly sought after fellowship programs led at HOI.

There are three major types of arthritis that are treated with total replacement:

Osteoarthritis, or degenerative arthritis, is the most common type of arthritis and is defined by a loss of cartilage in a joint.

Rheumatoid Arthritis is also known as "inflammatory arthritis" is thought to be a rejection of the body's own tissues (autoimmune disease).

Post-Traumatic Arthritis is the third major type of arthritis caused by an injury to the joint (such as with falls or sports related injuries).

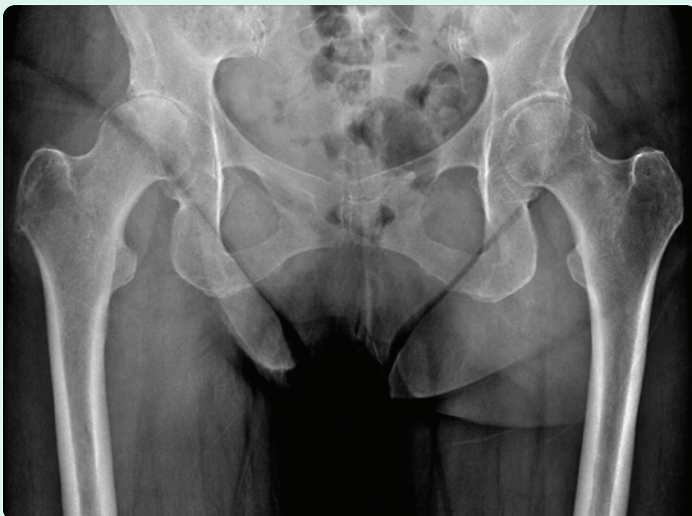


Figure 1a - Arthritic Hip

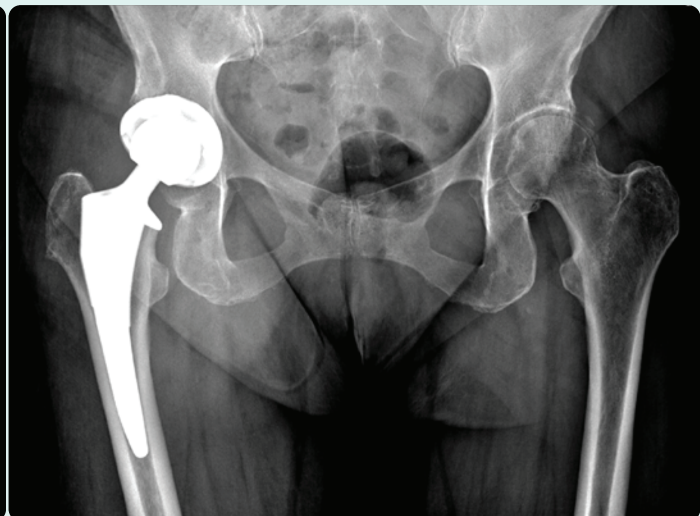


Figure 1b - Hip Prosthesis

Why Joint Replacement?

If you have been diagnosed with end stage arthritis, in which the protective cartilage in your joint(s) has worn away completely, you are likely experiencing significant pain, stiffness, and difficulty performing daily activities. These symptoms – pain, loss of function, and reduced mobility – are the primary reasons joint replacement surgery is recommended.

Setting Expectations With Your Surgeon

You should have an open, honest discussion with your surgeon about setting expectations for pain relief and function after surgery. Your surgeon will base post-surgery expectations on your medical history and overall health. Aligning your goals with your surgeon's helps ensure the best possible outcome and satisfaction.

Informed Consent

An informed consent is a legal document between you and your health care provider that leads to agreement or permission for care, treatment, or services. Signing an informed consent means that you have received all the information about your treatment options from your health care provider; you understand the information and had a chance to ask questions; you used the information explained to you to decide if you want to receive the recommended treatment; and you agree to receive the treatment option.

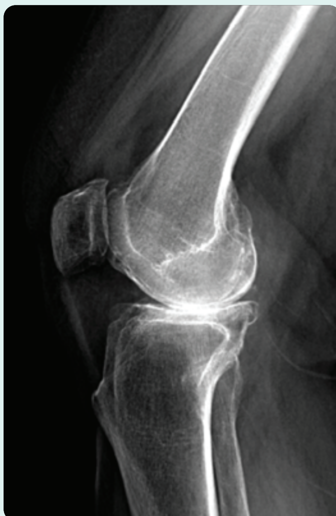


Figure 2a - Arthritic Knee

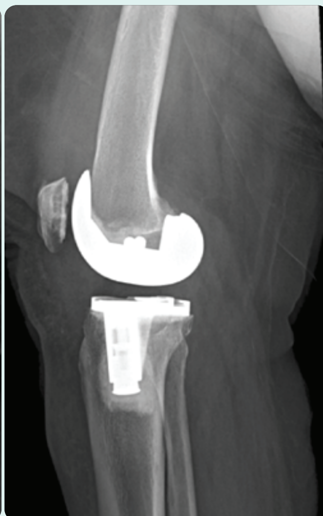


Figure 2b - Knee Prosthesis

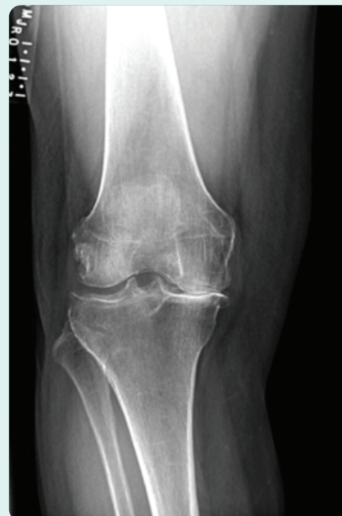


Figure 3a - Arthritic Knee

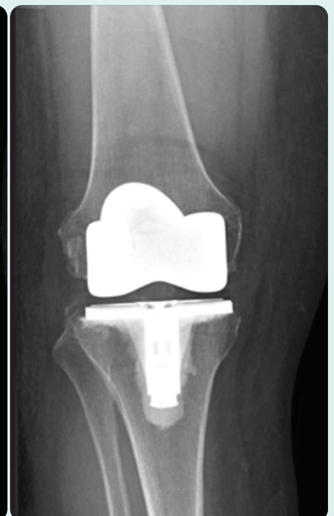
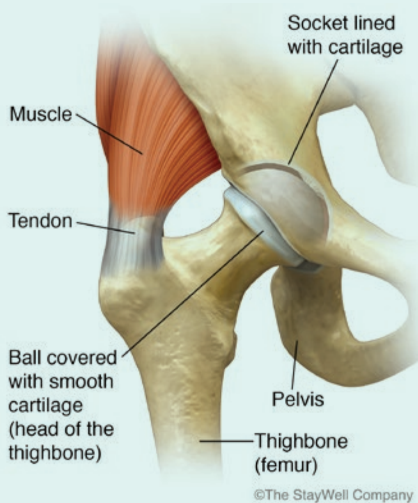
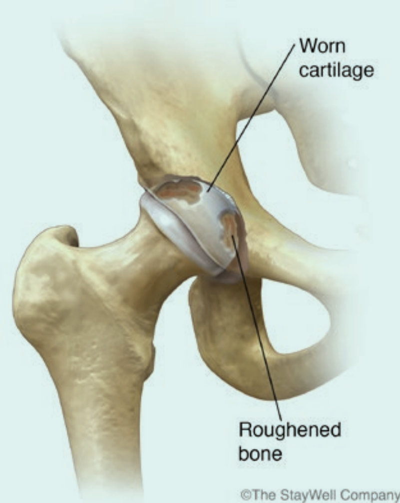


Figure 3b - Knee Prosthesis

Understanding Hip Replacement

The hip joint is one of the body's largest weight-bearing joints. It is a ball-and-socket joint. This helps the hip remain stable even during twisting and extreme ranges of motion. A healthy hip joint allows you to walk, squat, and turn without pain. But when a hip joint is damaged, it is likely to hurt when you move. When a natural hip must be replaced, a prosthesis is used.





Healthy Hip

Smooth cartilage covers the ends of the thighbone (femur), as well as the pelvis where it joins the thighbone. This allows the ball to glide easily inside the socket (acetabulum) with little friction. When the surrounding muscles support your weight and the joint moves smoothly, you can walk painlessly.

Arthritic Hip

The worn cartilage no longer serves as a cushion. As the roughened bones rub together, they become irregular, with a surface like sandpaper. The ball grinds in the socket when you move your leg, causing pain and stiffness (see page 6, figure 1a).

Total Hip Replacement

An artificial socket is placed inside the worn socket. A plastic liner is placed inside the new socket. An implant (stem) is placed inside the femur bone and the ball is attached to it. The plastic liner creates a smooth surface for the ball to move (see page 6, figure 1b).

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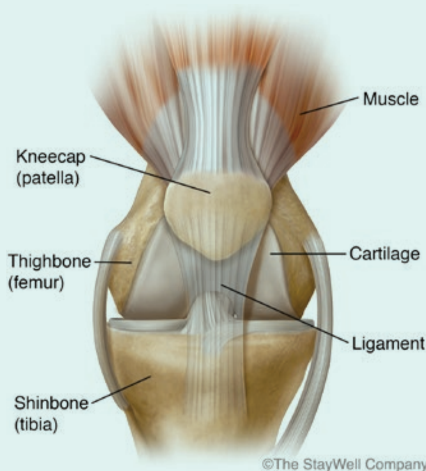
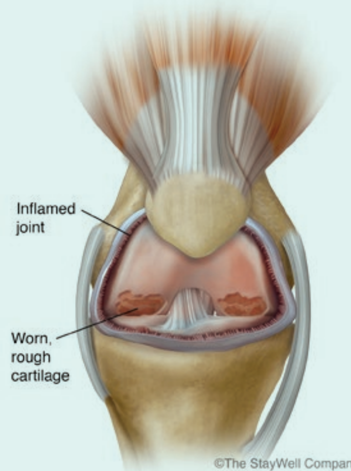
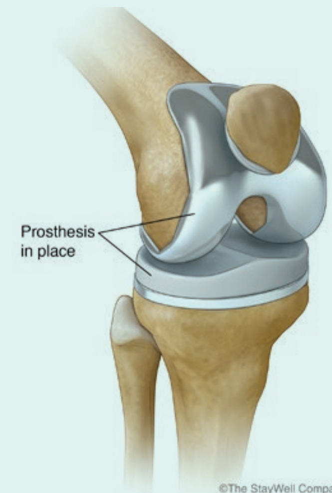
Understanding Knee Replacement

The knee is a hinge-like joint. It is formed where the thighbone (femur), shinbone (tibia), and kneecap (patella) meet. It is supported by muscles, tendons, and ligaments. It is also lined with cushioning cartilage. Over time, cartilage can wear away. As it does, the knee becomes stiff and painful. A knee prosthesis (artificial joint) can replace the painful joint and restore movement.







Healthy Knee

A healthy knee joint bends easily. Cartilage is a smooth tissue. It covers the ends of the thighbone and shinbone and the underside of the kneecap. Healthy cartilage absorbs stress and allows the bones to glide freely over each other. Joint fluid lubricates the cartilage surfaces, making movement even easier. A meniscus sits between two bones and acts like a shock absorber.

Arthritic Knee

An arthritic knee is often stiff and painful. Cartilage cracks or wears away due to usage, inflammation, or injury. Worn, roughened cartilage no longer lets the joint glide freely so, it feels stiff and painful. As more cartilage wears away, exposed bones rub together when the knee bends, causing pain. With time, bone surfaces also become rough, making pain worse (see page 7, figures 2a and 3a).

Total Knee Replacement

A knee prosthesis lets your knee bend easily again. The roughened ends of the thighbone and shinbone and the underside of the kneecap are replaced with metal and strong plastic parts. With new smooth surfaces, the joint can once again glide freely without pain. A knee prosthesis does have limits, but it can let you walk and move with greater comfort (see page 7, figures 2b and 3b).

Risks of Joint Replacement Surgery

Total joint replacement is a major surgical procedure. It is important to understand that, like any major operation, it carries risks and potential complications. Studies also show that early mobility and at-home recovery helps reduce complication rates and promotes healing. Some of the more common potential complications are outlined below.

Infection

Our hospital's exceptionally low infection rate, which is one of the lowest in the nation, is a direct reflection of our focused expertise as an orthopedic center of excellence. By managing the procedure in a more controlled fashion and optimizing our patient's health status before the surgery, we are able to maintain rigorous infection prevention protocols and deliver consistently safe outcomes for our patients. You are given antibiotics before, during, and sometimes after your surgery to minimize the risk of infection. You will also be encouraged to use antiseptic treatments on your skin before surgery to minimize the risk of infection. The procedures are also performed in a highly specialized surgical environment that is optimized to reduce infection concerns.

Infection occurs in less than 1% of all total joint replacements but if it does, it can be devastating. This can take the form of a superficial wound infection requiring antibiotics and/or operative exploration and cleansing. A deep infection down to the implant might require implant removal, placement of an antibiotic spacer, wheelchair and walker use, prolonged intravenous antibiotics, and a period of months until another implant can be placed. On very rare occasions, the joint cannot be revised.

Infection is also possible throughout your life, sometimes many years after total joint replacement. This can occur if bacteria from a distant site travel to the replaced joint. Bladder infections are the most common source of delayed infections, but dental abscesses, infected ingrown toenails, or any other serious bacterial infection can pose a threat. If these infections occur, they should be treated immediately, and the surgeon's office should be notified. Also, simple teeth cleaning can cause bacteria from the mouth to get into the bloodstream. This could pose a threat to the implants and, as a precaution, antibiotics should be taken for these procedures for a period of time after joint replacement surgery.

Notify your dentist or other health care provider that you will have a total joint replacement. If dental surgery, bladder surgery, bowel surgery, rectal surgery, or hemorrhoid surgery is planned after your total joint replacement, the surgeon or dentist might need to provide you with protective antibiotics.

Blood Clots

Blood clots (Deep Vein Thrombosis or a DVT) can form in the veins of your calf, thigh, or pelvis. Clots can break away and travel to your lungs, which is called a pulmonary embolism (PE). A pulmonary embolism can be life threatening. Care is taken to minimize the risk of blood clots with a blood thinning agent. The main risk of blood thinning agents is excessive thinning of the blood, causing bleeding. Early activity has been shown to be the best way to minimize the risk of blood clots. Some blood thinning

agents require daily injections in the hospital and at home, while other agents are taken in pill or tablet form. You and your family will be instructed on the appropriate administration of blood thinners prior to discharge.

Bone Fracture

This is rare and, in most cases, can be addressed at the time of surgery utilizing fixation devices and should not affect your recovery in most instances.

Injury to Blood Vessels

There are major arteries next to the hip and behind the knee. It is extremely rare to injure these vessels during surgery but if they are injured, a repair of the vessels might be required on an emergency basis to save the blood supply to the lower extremity. The risk of vascular damage is 0.09 - 0.13%.

Lack of Pain Relief

A total joint replacement is often done for pain relief. However, the procedure may fail to relieve all of your pain. Based on current medical literature, following a total knee replacement there is approximately a 12-15% chance of lack of complete pain relief. In total hip replacements, 2-5% of patients may have continued pain following surgery.

Reaction to Materials

Total joint replacements are made of materials foreign to your body. These materials have been thoroughly tested, but a small risk of allergic reaction exists. This risk is not high enough to warrant testing, unless you are known to have a significant material allergy. If you are allergic to metals, let a member of the team know.

Your surgeon may implant the following materials at their discretion: cobalt-chrome alloy, titanium metal/alloy, polyethylene plastic, stainless steel, hydroxyapatite (synthetic bone crystals), ceramics, bone cement, and bone graft. Some of these materials may not have final approval by the Food and Drug Administration but are under ongoing investigation. If there is a possibility of bone grafting, this will be discussed with you. Bone grafting is from one of two sources: your body or someone else's. Should the bone come from another person, there is a very rare risk of infection from viral or bacterial sources. These infections are extremely rare. All bone grafts are thoroughly tested and cultured for infectious concerns and donors are screened according to rigorous national standards.

Blood Loss

Since total joint replacement is a major operation, excessive blood loss can occur which would require blood bank transfusion. Blood transfusion is a possibility, although very unlikely. All appropriate blood sparing techniques will be used during your surgery to try and minimize the risk of transfusion.

Wound Complications

On rare occasions, poor wound healing may occur. Poorly controlled diabetes, smoking, excessive alcohol consumption, and obesity increase the risk of wound problems after surgery. This may result in delayed healing of the wound, increase risk of deep infection and may require treatment with local wound care or potentially a return to the operating room.

For Knee Replacements, if you have one or more previous knee surgical incisions, there is a small risk that the skin across the front of the knee may lose its blood supply after surgery. Very rarely, plastic surgery may be required to repair the skin defects.

Implant Wear and Failure

The components of a total joint replacement are mechanical implants which can wear out or break. Only proven technology and durable materials are used. The more high impact activity you engage in, the potentially greater the chance of implant failure. With usual daily and recreational activity, however, your total joint replacement should function well for many years.

Anesthesia Complications

There are risks associated with all anesthetic types. These risks will be discussed with you by your anesthesiologist (see risks of anesthesia on page 14).

Joint Specific Complications

Other Hip Replacement Risks

Dislocation: All hip replacement procedures carry a small risk of dislocation in the post-operative period, more commonly in the first few months after surgery while the tissues are healing. It is important to understand that the ball and the socket are held together by soft tissues and muscle tension and are not locked together in hip replacement surgery. Dislocation may occur when the ball comes out of the socket with injury such as a fall or accident. It can also occur because of inappropriate body positioning. If a dislocation occurs, you will be placed under anesthesia in the emergency department or operating room and the hip relocated. You may then need to wear a brace for 6-8 weeks. If multiple dislocations occur, revision of the total hip replacement might be necessary.

Leg Length Discrepancy: Equal leg lengths post-operatively are very important. Stability of your total hip replacement is even more important and is the number one priority. Measurements are taken prior to surgery and during surgery so that every attempt is made to maintain equal leg lengths. X-ray is also used intra-operatively to assess leg length. In some cases, however, slight lengthening of the leg may be required to reduce the risk of a dislocation, and a leg length difference may be evident after surgery. On rare occasion, this may necessitate the use of a shoe lift on the other leg after surgery.

Nerve Damage: There are major nerves that cross all major joints. There is a small possibility that one of these nerves can be damaged during surgery or afterwards. If so, this would leave you with weakness or numbness of the lower leg and foot, possibly requiring a permanent brace. The overall risk of nerve injury is 0.1 - 0.8%. Often times, the anterior approach for hip replacement surgery can result in temporary or permanent superficial skin numbness along the front of the thigh, with almost always an area of numbness around the incision.

Other Knee Replacement Risks

Tendon Rupture: Although all tissues are protected during surgery, there is a very small risk of ligament or tendon disruption. This may necessitate further surgery or result in weakness of the muscles that straighten the knee. A brace may be required. Also, on rare occasion, the prosthetic knee may irritate tendons or ligaments in the knee and may require further treatment or surgery.

Limited Knee Motion: Although uncommon after full recovery, the knee can remain stiff after surgery and does not regain functional range of motion. Occasionally, manipulation under anesthesia is indicated to regain post-operative joint motion. This can usually be avoided by your cooperation with the outlined physical therapy program.

Complications can be associated with a knee manipulation procedure and can include rupture of ligaments and tendons or fracture of bones. It is always best for you to regain your knee motion without surgical manipulation.

Leg Length Discrepancy: On occasion, deformity of the knee might result in unequal leg lengths after the procedure. This may require a small lift in the shoe post operatively. This will be discussed on an individual basis.

Nerve Damage: There are major nerves that cross major joints. There will always be an area of numbness around the incision. In rare instances, one of these nerves can be damaged during surgery or afterwards during recovery. This can result in permanent damage to the nerve, causing numbness and weakness and possibly requiring permanent use of a foot brace.

Skin Necrosis: If you have one or more previous surgical incisions, there is a small risk that the skin across the front of the knee may not survive after surgery. Although this is very uncommon, if this occurs, plastic surgery may be required to repair the skin defects. If you have an old incision on the front of your knee, please let a member of the joint replacement team know prior to the procedure.

Anesthesia

Most of our procedures are performed with a spinal anesthetic and are supplemented by sedation or general anesthesia. If a general anesthetic is used, you will go to sleep for the surgery and wake up after the surgery is finished. This combination of techniques is commonly used for joint replacement surgery.

A spinal anesthetic numbs you from the waist down so you will not feel pain. Not all patients are candidates for spinal anesthesia. This will be discussed by your anesthesiologist. The spinal does require a needle stick; however, the area will be numbed with local anesthetic prior to the needle stick.

A local (regional) anesthetic block is often used for total and partial knee replacements in addition to your general and spinal anesthetics.

Regional blocks are used for post-operative pain management and are administered prior to surgery in a dedicated "block" room.

This requires a needle stick and also uses ultrasound for correct placement. Once the nerve is located, local anesthetic medication is injected into the area to help decrease the amount of post-operative pain. This block does not take away all of the pain but can assist in pain management and decrease the amount of opioids you need after the surgery.

Common Side Effects & Risks of Anesthesia

You may have a higher or lower risk of side effects based on your health. Your anesthesia team will do everything possible to manage your risks and keep you safe and comfortable during the surgery.

- **Nausea and Vomiting** – This very common side effect can occur within the first few hours or days after surgery and can be triggered by a number of factors such as medications, activity during recovery, and the complexity of the procedure.
- **Sore Throat** – If a tube is placed in your throat to help you breathe while you're unconscious, it can leave you with a sore throat after it's removed.
- **Hiccups** – Some patients may experience hiccups after anesthesia or surgery; they are usually brief and resolve on their own.
- **Postoperative Delirium** – Confusion when regaining consciousness after surgery is common, but for some people – particularly older patients – the confusion can come and go for weeks. HOI anesthesiologists

specifically select agents to minimize the risk of postoperative delirium. However, you may feel disoriented and have problems remembering or focusing. This can worsen if you are staying in the hospital for a few days after the procedure, because you are in an unfamiliar place. Having familiar objects such as a loved one, family photos, your glasses, hearing aids, and a clock in your room may help with reorienting you after surgery.

- **Muscle Aches** – The medications used to relax your muscles can cause soreness.
- **Itching** – This is a common side effect of opioids often used with general anesthesia.
- **Chills and Shivering (hypothermia)** – This occurs in up to half of patients as they regain consciousness after surgery. It can be related to normalization of body temperature after the procedure and usually resolves quickly.
- **Birth Control** – Sugammadex, a medication sometimes used to reverse anesthesia, can reduce the effectiveness of hormonal birth control. If used, a backup method of contraception is needed for 7 days after surgery.

Rarely, general anesthesia can cause more serious complications, including:

- **Cognitive Dysfunction** – In some cases, confusion and memory loss can last longer than a few hours or days. A condition called "postoperative cognitive dysfunction" can result in long-term memory and learning problems in certain patients. It's more common in older people and those who have conditions such as early dementia, Alzheimer's disease, heart disease (especially congestive heart failure), or Parkinson's disease. People who have had a stroke in the past are also more at risk. It's important to tell your physician and anesthesiologist if you have any of these conditions.
- **Malignant Hyperthermia** – Some people inherit this serious, potentially deadly reaction to anesthesia that can occur during surgery, causing a quick fever and muscle contractions. If you or your family member has ever had heat stroke or suffered from malignant hyperthermia during a previous surgery, be sure to tell your surgeon and anesthesiologist.
- **Spinal Headaches** – This concern is rare due to improved procedural techniques. They typically occur within a week of the surgery and are positional, worse when sitting or standing, and better when lying down. While they can be uncomfortable, they are treatable often with rest, hydration and caffeine.

Frequently Asked Questions: Anesthesia

What is anesthesia?

Anesthesia is a medical intervention to keep patients from feeling pain during and after surgery.

What is general anesthesia and what medications are used?

General anesthesia allows for patients to be unconscious and insensitive to pain during surgery. It is administered as either an inhaled gas, through a vein or both. The anesthesia medications used are individualized based upon a patient's medical conditions and the surgical procedure. General anesthetics frequently used include Propofol and Sevoflurane.

What is regional and spinal anesthesia?

Regional anesthesia refers to injection of local anesthetics to interrupt the transmission of stimuli through nerves to minimize pain in a specific area of the body. Spinal anesthesia is a type of regional anesthesia in which medication is injected into the spinal canal. Other peripheral nerves may be selectively targeted or "blocked" based upon the site of surgery. The numbness from the spinal or nerve block may last between 2 to 72 hours based upon the medication which is used.

What is a nerve block and what should I expect?

Nerve blocks affect many types of nerves, including nerves that control pain, movement, and normal sensation. It generally can last for 12-24 hours, though effects may continue for up to 72 hours depending on the medication used. Nerve blocks can temporarily make your extremity feel numbness, tingling, heaviness, weakness or inability to move your leg, a feeling that your leg has "fallen asleep." You will receive sedation before your anesthesiologist administers the nerve block.

Will I receive any sedatives?

You and your anesthesiologist will develop an anesthetic care plan that may include preoperative sedation which will relieve your anxiety and pain before performance of the spinal injection and keep you comfortable during the procedure.

Will I have a breathing tube or be intubated?

You will usually have some sort of breathing device if you are having general anesthesia. The two most common devices used are an endotracheal tube which goes into the windpipe (trachea), or a laryngeal mask airway which sits in the back of the throat just above the windpipe.

Who should I talk to about my medical conditions, such as having a pacemaker, and past side effects after anesthesia?

Your anesthesiologist will review your medical records and test results before talking with you prior to surgery. They will discuss your past experiences and medical conditions with you preoperatively and every effort will be made to minimize your chances of unpleasant side effects. Please convey any history of nausea and vomiting following surgery or a history of motion sickness to your anesthesiologist. Also, provide any information regarding your pacemaker to your surgeon and the anesthesiologist including

the type and the last time it was checked. They will make necessary adjustments to your anesthesia plan to ensure the best approach to keep you comfortable and safe.

Will my sleep apnea have an impact on anesthesia?

Patients with sleep apnea may have an exaggerated response to the medications used for anesthesia and pain relief. Please discuss your concerns with your anesthesiologist.

Will I wake up during surgery?

Awareness under anesthesia is extraordinarily rare during routine elective surgery. Our anesthesiologists use many techniques to prevent this rare event from occurring.

Why do I need to fast the night before my surgery?

Your stomach must be empty of solid food and most liquids due to the rare risk of aspiration.

What are the benefits of hydration before surgery?

If recommended by your care team, drinking carbohydrate rich clear fluids up to 2 hours before surgery helps support your body's ability to handle the physical stress of surgery by maintaining energy levels, stabilizing blood sugar, and reducing postoperative discomfort. Patients with certain medical conditions may be excluded from hydration protocol. These conditions may be hiatal hernia, diabetes, esophageal surgery, acid reflux disease, history of difficult intubation, chronic opioid use, neurological disease, and obesity.

Why am I being asked to stop my GLP-1 agonist medication?

Current recommendations are to hold GLP-1 medications for at least a week pre-operatively, unless otherwise directed by your physician. Medications such as Ozempic and Mounjaro can slow down how quickly food leaves your stomach. Even if you haven't eaten for hours before surgery, your stomach might still have food in it, and this can be dangerous during anesthesia. It may raise the risk of vomiting and aspiration (inhaling stomach contents into your lungs), which can cause serious complications (see pages 28-29).

When should I stop drinking alcohol before surgery?

It is ideal to stop drinking alcohol **at least 4 weeks before surgery to reduce complications and support recovery**. Any time without alcohol before surgery is better than drinking up to surgery – talk with your care team and do not stop suddenly without medical guidance.

Can I use marijuana or nicotine products before surgery?

For your safety during anesthesia and recovery, please stop all marijuana and nicotine use before surgery. Stop smoking or vaping at least 4 weeks before and stop edible products at least 72 hours before your procedure. Marijuana can affect anesthesia and increase risks such as nausea and breathing problems. If you have any questions or use marijuana for medical reasons, please talk with your care team so we can help you plan safely.

Frequently Asked Questions: Surgical Site Infection (SSI)

What is a Surgical Site Infection (SSI)?

A surgical site infection (SSI) can occur after surgery either directly at the site of the incision or in the region of the body where the surgery took place. Microorganisms from your own body, or from the environment, can enter the body through the incision during or after the operation. Most patients who have surgery do not develop an infection. Some of the common symptoms of a surgical site infection are:

- High Fever
- Redness and pain around the area where you had surgery
- Increased swelling that goes past the wound area and does not go away after five days
- Drainage of cloudy fluid from your surgical wound (It is normal to have a small amount of draining from the wound for the first day or two after surgery.)

Can SSIs be treated?

Some surgical site infections can be treated with antibiotics. The antibiotic prescribed depends on the bacteria causing the infection, since different antibiotics are active against different organisms. A patient's health care team will likely take samples from the infected wound to determine what antibiotic should be used. In some cases, the infection may require additional surgery, particularly if deeper tissue is affected by the infection.

What are some of the things that hospitals are doing to prevent SSIs?

To prevent SSIs, physicians and other health care providers:

- Clean their hands and arms up to their elbows with an antiseptic agent directly before starting the surgery.
- Clean their hands with soap and water or an alcohol-based hand rub before and after caring for each patient.
- If it is necessary to remove hair at the surgical site, electric clippers with a disposable head should be used – not a razor.
- Health care professionals must wear special hair covers, masks, gowns and gloves during surgery to keep the surgery area clean. Our operating rooms are also uniquely designed to reduce bacterial counts in the room through the use of high flow air exchange technology, UV light filters, and isolation suits for the surgical team to minimize surgical site contamination.
- Patients are given antibiotics before surgery starts. In most cases, the patient should get antibiotics within 60 minutes before the surgery starts.
- Clean the skin at the site of your surgery with a special soap that kills germs.

What can I do to help prevent an infection?

Before your surgery

- Tell your doctor about other medical problems you may have. Health problems

such as allergies, diabetes and obesity could affect your surgery and your treatment. Bring an up-to-date list of all your medications and talk with your surgeon about why you take each medication.

- **Quitting smoking at least 4 weeks before surgery is one of the most important steps you can take to improve your recovery.** Smoking significantly increases the risk of poor wound healing, surgical site infections, and complications with anesthesia and lung function. Talk to your doctor about safe and effective ways to quit smoking.
- If possible, any existing infections should be treated prior to undergoing surgery.
- Do not shave near where you will have surgery. Shaving with a razor can irritate your skin and make it easier to develop an infection.

At the time of your surgery:

- Ask if you will get antibiotics before surgery.

After your surgery

- Keep incision dressing clean, dry and intact as instructed.
- Continue post-hospital instructions for skin and nasal decolonization as instructed (see pages 26-27).
- Wash hands regularly especially before touching the wound dressing or incision area.
- Your surgeon may prescribe oral antibiotics after surgery if you have preexisting medical conditions that require them.
- Bathe or shower as instructed.
- Keep away from people that are ill or sick as long as possible.

Important precautions:

- It is essential to keep pets away from the incision area for at least 6 weeks after surgery. Pets can carry bacteria on their fur, paws, and saliva that may contaminate healing wounds. In addition, create a clean, pet free recovery space where you can rest and sleep, wash hands after pet contact, and avoid letting pets lick your skin especially near dressing or incision.
- Make sure that your health care providers clean their hands before and after examining you, with either soap and water or an alcohol-based hand sanitizer.
- Health care providers must take extra precautions when changing and cleaning the wound dressing.
- Family and friends should clean their hands with soap and water or an alcohol-based hand sanitizer before and after visiting you. If you do not see them clean their hands, ask them to clean their hands.
- Family and friends who visit you should not touch the surgical wound or dressings.
- Before you go home, your doctor or nurse should explain how to take care of your wound. Make sure you understand how to care for your wound before you leave the hospital.
- If you have any symptoms of an infection, such as redness and pain at the surgery site, drainage or fever, **call your doctor immediately.**

Getting Ready for Your Procedure

Preparing for Surgery Checklist

Your surgeon's office will provide you with a very important itemized checklist of instructions which include your surgery date, surgery time and arrival time (both subject to change), a preoperative appointment with the nurse practitioner or physician assistant, preoperative internal medicine provider for medical clearance, and information regarding the hip or knee replacement class at the hospital.

There are specific, time sensitive guidelines for preoperative testing that must be followed closely. Your physician will determine which diagnostic tests are necessary and advise you on when to STOP certain medications.

To help you through this process, your surgeon's office, the hospital's pre-admission coordinator, or a nurse navigator will provide detailed instructions. It's essential to follow these guidelines exactly as directed and failure to do so could result in your surgery being postponed or canceled.

Your care team hopes this checklist will assist you in completing your pre-surgery preparations.

- ☐ **Bring this guide to my preoperative appointment and to the hospital.**
- ☐ Attend the **HOI Hospital Patients: Knee and Hip Replacement – Zoom** class preferably **3-4 weeks** prior to my surgery (go to hoagorthopedicinstitute.com/preop-joint)
- ☐ Make arrangements for caregiver support. **Name of caregiver:** ____________________
- ☐ Make my appointment(s) with other physicians as requested.
- ☐ Start my **Pre-Surgery Exercises**, pages 38-41.
- ☐ Review **Fuel Your Recovery With Nutrition** on page 31.
- ☐ If I take opioids, I will attempt to reduce amount **six weeks** prior to my surgery.
- ☐ Stop smoking cigarettes and nicotine products **six weeks** prior to my surgery.
- ☐ Complete my Pre-admission Screening **four weeks** prior to my surgery.
- ☐ Complete an Advance Health Care Directive, if needed, two weeks prior to my surgery.
- ☐ My doctor has advised me to STOP taking blood thinners (pages 28-29). Date to stop: __________
  (PLEASE SPECIFY MEDICATIONS) ____
- ☐ My doctor has advised me to STOP taking anti-inflammatory medications (pages 28-29). Date to stop: __________
  (PLEASE SPECIFY MEDICATIONS) ____
- ☐ Perform decolonization process as instructed 5 days **BEFORE** surgery. Start date: __________
- ☐ Brush my teeth/oral care before coming to the hospital/prior to surgery.
- ☐ Do NOT eat anything after (DATE) ______________ and (TIME) ______________ prior to surgery.
- ☐ Do NOT drink anything after (DATE) ______________ and (TIME) ______________ prior to surgery.
- ☐ Follow **Hydration Instructions** if recommended by my surgeon (page 30).

Orientation Class

You should attend Hoag Orthopedic Institute's orientation class three to four weeks in advance of your surgery date. A list of class dates can be viewed at:
HOIExperts.com/JointClassZoom
During this important Q&A orientation session, a patient educator nurse will review your pre-admission preparations, hospital stay and plans for your return home. (See registration QR code on page 4).

Preliminary Tests

You will need to have preliminary tests before your surgery such as:

- Blood tests
- Possible electrocardiogram (EKG)
- Possible chest X-ray
- Possible urine analysis
- Possible nasal swab for MRSA and MSSA

It is important that these tests be completed prior to surgery and as soon as possible.

Pre-Admission Screening (PAS) Process at Hoag Orthopedic Institute

- Pre-admission coordinator will call you within 3-4 weeks of your scheduled surgery to confirm your information and review your testing dates.
- You can reach PAS at 949-727-5010, option 3.
- They will assist you in planning appropriate dates for any required medical clearances.
- Schedule with your physician or specialist ASAP, as appointments may be limited.
- Complete any requested medical clearances early to avoid surgery cancellation.
- Before the call ends, you will schedule a time to speak with a nurse navigator, usually about a week before surgery. Be ready to discuss your medications and medical history.

  Date: __________ Time: __________

Patient Reported Outcomes

The Total Joint Team is committed to supporting every part of your care journey - not just your surgery, but the preparation beforehand and your recovery afterward. Patient Reported Outcome (PRO) surveys are Federally-mandated questionnaires that you complete about your own health. They help us understand how you're feeling, how well you're able to do daily activities, and how treatment is affecting your quality of life.

Completing these surveys before surgery, and again at 1 year and 2 years after surgery, is essential. Your responses help us monitor your progress, improve outcomes, and ensure the highest quality of care. Please complete your surveys through MyChart, or contact your surgeon's office if you need further assistance. To ensure completion, our team may follow up with you through email or phone.

MRSA/MSSA Screening Patient Information

What is Staphylococcus aureus?

Staphylococcus (Staph) is a bacteria commonly found on the skin and in the nose. It usually lives on the skin without causing problems. Sometimes staph can cause infections.

- Staph may cause infections after surgery.
- This happens when the staph germ from patient's skin or the hospital surroundings enters the surgery wound.

Some types of staph are hard to treat with antibiotics. This type of staph germ is called Methicillin-RESISTANT Staph aureus or **M-R-S-A** or ("mersa").

Why is Staph Testing Done Before Surgery?

Testing for Staphylococcus aureus before surgery helps identify if you are a carrier of the resistant strain of Staph aureus (MRSA) bacteria. This is important because carriers are at a higher risk of developing infections post-surgery. Identifying carriers allows for preventive measures to be taken to reduce the risk of infection.

How is the Test Performed?

- Sample Collection: A clean cotton swab is used to collect a sample from the inside of your nose.
- Duration: The test takes only a few seconds.
- Results: Results are typically available within a few days.

Preparation for the Test

- No special preparation is needed.
- Inform your doctor if you have recently taken antibiotics or have had a staph infection in the past.

What Happens if You Test Positive?

If you test positive for Methicillin-SENSITIVE S. aureus (MSSA):

- The surgeon may or may not treat the positive result. You will complete routine decolonization protocols and may be prescribed a nasal ointment.

If you test positive for Methicillin-RESISTANT S. aureus (MRSA):

- You will get a call saying you are positive for MRSA.
- You will be able to see your test results in MyChart.
- Your doctor will prescribe an ointment to apply inside your nose, AND
- You will use an antiseptic solution to clean your skin.
- You will be re-tested to confirm the treatment was effective. If effective, you will then continue to complete routine decolonization protocols before surgery and may also receive extra antibiotics around your surgery.

When you are in the hospital

- Wash your hands when using the bathroom, before eating, and before leaving your room.
- Do not touch any wounds or tubes sticking out of your body.
- Your guests should wash their hands each time they enter and leave your room.

Am I contagious?

MRSA can be found on your hands. It can get there from your nose, a wound, urine or blood. This can be spread by anything you touch, if you do not properly clean your hands. Hands must be washed for 15 seconds with soap and water or alcohol hand sanitizer, rubbing hands together until dry. It is important to clean your hands before eating, after using the toilet, after blowing your nose or covering a cough.

What will happen when I go home?

To prevent the spread of MRSA to others:

- Clean your hands often, especially before and after changing your wound dressing or bandage.
- People who live with you should clean their hands often as well.
- Keep taking any antibiotics prescribed by your doctor. Don't take half-doses or stop before you complete your prescribed course.
- Keep any wounds clean and change bandages as instructed until healed or as instructed.
- Avoid sharing personal items such as towels or razors.
- Wash and dry your clothes and bed linens using the warmest temperatures recommended on the labels.
- Tell your health care providers that you have MRSA. This includes home health nurses and aides, therapists, and personnel in doctors' offices.

Where can I get more information about MRSA?

For additional information on MRSA, visit the Centers for Disease Control (CDC) and Prevention web site at www.cdc.gov/mrsa

Universal Decolonization

Universal Decolonization is a strategy used to help prevent health care-associated infections (MRSA/MSSA). The goal of decolonization is to lower bacterial counts on body sites (skin & nose) to reduce the risk of infection.

Your surgeon's office will provide products and instructions on how to perform the decolonization process. If you have any questions or are unable to tolerate or perform the process, please notify the surgeon's office (see Universal Decolonization on pages 26-27).

Universal Decolonization

Cleaning Your Skin Before Your Surgery

Our skin has many types of germs or bacteria on it. Washing with soap and water helps remove them. Before surgery, it is important that you take an extra step to help get rid of germs. This lowers the risk of infection at the site of your surgery. Please follow these steps to make sure your skin is as germ-free as possible.

Step 1: Facts and Warnings about CHG Product

- Read the "Drug Facts" on the bottle but follow the skin cleaning directions on this sheet.
- Do not use the shower product if you are allergic to chlorhexidine gluconate or any other ingredients in it.
- If you are allergic, or cannot wash with it for any other reason, use an anti-bacterial soap like Dial® instead.
- Do not take a bath with the CHG product.
- Do not use CHG product on the head or face. Keep it out of your eyes, ears, and mouth.
- Do not use CHG product in the genital area or deep cuts, scrapes or open wounds.
- Do not swallow the CHG product.

Step 2: Before Using CHG Product

Wash in the shower daily for 5 days using these instructions:

- You may take a shower with regular soap before using CHG product.
- Wash your hair with your normal shampoo and rinse it well. Rinse any leftover shampoo from your skin.
- Wash your face and genital (private) areas with regular soap and water only.
- Rinse your body very well with warm water.
- Turn off the water so you won't rinse the CHG product off too soon.

Step 3: How to Use CHG Product

Remember: Follow these washing instructions each day for **5 days** before your surgery.

1. Apply CHG product directly on the shower mitten and wash gently from the neck down (do not use on eyes, ears, mouth, or genitals).
2. Apply the minimum amount of product necessary to cover the skin area and wash gently, using the sand timer, leave the CHG product on body for **2 minutes**.
3. Turn the water back on and rinse very well with warm water.
4. Do not use your regular soap after using and rinsing CHG product.
5. Pat yourself dry with a clean towel.
6. Use only compatible moisturizers or lotions. List of CHG-compatible moisturizers can be found on the QR code here.

7. Put on clean clothes.
8. Use clean bed linens after the first night's shower and the night before surgery.
9. If time allows, use the CHG shower product on the morning of surgery.

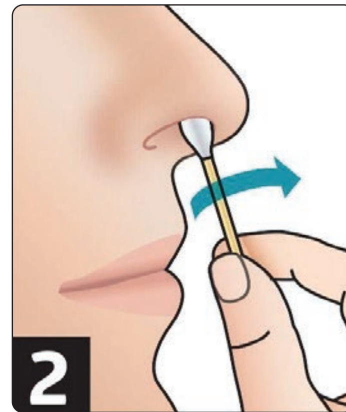
You can resume use of the CHG product after your surgery, when your surgeon allows you to shower, until it is finished.

Cleaning Your Nose Before Your Surgery

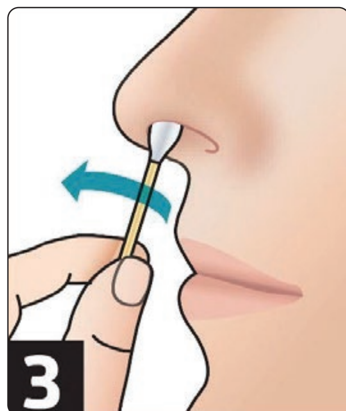
Our noses can carry a bacteria called Staphylococcus aureus. Studies show that ~30-40% of the population carry these bacteria. Using an alcohol-based nasal swab helps remove them. Before surgery, it is important that you take an extra step to help get rid of germs. This lowers the risk of infection at the site of your surgery. Please follow these steps to make sure your nose is as germ-free as possible.

Use the nasal swab **twice a day for 5 days** before your surgery.

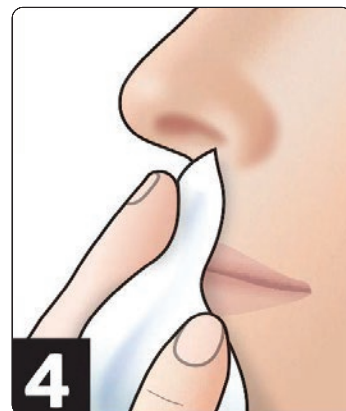
Use a tissue to clean the inside of both nostrils, including the inside tip of nostril. Discard.



Insert swab comfortably into tip of right nostril and rotate for 30 seconds, covering all surfaces.



Using same swab, repeat step 2 with tip of left nostril.



Do not blow nose. If solution drips, gently wipe with a tissue.

Medications and Supplements

Daily Prescription Medications

Review your medications with your internist/ family doctor and surgeon's team. Some medications may need to be changed or stopped before surgery. Your doctor may adjust medications before surgery such as:

- Blood Pressure Medications
- Anti-inflammatory medications (meloxicam, celecoxib, etc.)
- Diabetic medications (insulin, metformin, Januvia, glipizide, etc.)
- Pain medications (oxycodone, hydrocodone, norco, tramadol)
- Medications that affect your immune system (methotrexate, Arava, Remicade, CellCept, etc.)
- Hormone Replacement Therapy (HRT) or birth control
- GLP-1 medications for weight loss: Ozempic (semaglutide), Mounjaro (tirzepatide), Byetta (exenatide), Trulicity (dulaglutide)
- Blood thinners
- SGLT2 inhibitors (Farxiga, Steglatro, Jardiance, etc.)
- Please notify the medical team if you are on oral steroid medications, as dosing may need to be adjusted around surgery.

Your doctor will decide which medications are appropriate for you and give you specific instructions.

The nurse navigator who conducts your pre-procedure phone assessment will review your medications with you and explain what to take the morning of your surgery AND which specific medications (if any) to bring with you to the hospital.

BLOOD THINNERS

IMPORTANT: Discuss with your surgeon when to stop taking your blood thinner prior to surgery.

Fill any prescriptions before your surgery.

Over-the-Counter Medication

- Acetaminophen (e.g., Tylenol) is OK to take until surgery. 3,000 to 4,000 milligrams per day is the maximum amount of acetaminophen you are able to take per day from all sources.

Medications to Stop

PRESCRIPTION
Blood Thinners

Consult your prescribing physician & surgeon for when to stop. Your surgeon will tell you when it can be resumed.

Prescription Blood Thinner Examples:

- Warfarin (Coumadin)
- Apixaban (Eliquis)
- Enoxaparin (Lovenox)
- Clopidogrel (Plavix)
- Dabigatran (Pradaxa)
- Rivaroxaban (Xarelto)
- Aspirin (aspirin can sometimes be prescribed to "thin" the blood)

NSAIDs

Stop 7-14 days prior to surgery. You may not restart them until your surgeon gives approval.

NSAID Examples:

- Aspirin (Bufferin, Ecotrin)
- Aspirin containing drugs (ex – Excedrin)
- Ibuprofen (Advil, Motrin, Nuprin)
- Naproxen (Aleve)
- Diclofenac (Voltaren)
- Meloxicam (Mobic)
- Celecoxib (Celebrex)
- Indomethacin

Hormone Replacement and Birth Control

Consult your surgeon for when to stop and restart.

GLP-1 agonist Medications

Stop at least a week preoperatively unless otherwise directed by your physician.

Examples:

- Dulaglutide (Trulicity)
- Liraglutide (Victoza, Saxenda)
- Semaglutide injection (Ozempic)
- Semaglutide tablets (Rybelsus)
- Tirzepatide (Mounjaro)

SGLT2 inhibitors

Stop 3-4 days preoperatively unless otherwise directed by your prescribing physician & surgeon.

Examples:

- Canagliflozin (Invokana)
- Dapagliflozin (Farxiga)
- Empagliflozin (Jardiance)
- Ertugliflozin (Steglatro)

Stop taking herbal and dietary supplements 14 days before surgery

Herbal supplements are derived from different parts of plant.

Examples of supplements:

CBD, echinacea, ephedra, feverfew, fish oil, flaxseed, garlic, ginkgo biloba, ginseng, ginger, golden seal, green tea, kava, licorice, Omega-3, Saint John's wort, saw palmetto, turmeric, valeria root, vitamin E

**Note, this is not a complete list of each example medication type.*

Hydration Instructions Before Surgery

Guidelines should be followed, **unless otherwise instructed by your surgeon or hospital staff.**

Why should I drink carbohydrates (carbs) before surgery according to research?

- Drinking **CLEAR LIQUID** drinks with carbohydrates (carbs) and stopping 2 hours before surgery can help your body handle stress from the surgery. This is called carb loading. Do not choose sugar-free drinks. Carbs give your body energy, help keep blood sugar steady, and may help you feel less hungry, thirsty, and anxious. Carb loading may also help you recover faster.
- Patients with certain medical conditions **may be EXCLUDED** from hydration protocol. These conditions may be **hiatal hernia, diabetes, esophageal surgery, acid reflux disease, history of difficult intubation, chronic opioid use, neurologic disease, and obesity**.

The Night Before Surgery

Drink one of these options before your surgery:

☐ 2 Bottles Ensure® Pre-Surgery Carbohydrate Clear Nutrition Drink

OR

☐ 16 fluid ounces (2 cups) Gatorade or equivalent carb containing sports drink

- Do NOT eat any solid food after midnight unless otherwise instructed by your surgeon or hospital staff.

The Day of Surgery

Drink one of these prior to leaving the house to go to the hospital (approximately 2-3 hours before your surgery):

☐ 1 Bottle Ensure® Pre-Surgery Carbohydrate Clear Nutrition Drink

OR

☐ 16 fluid ounces (2 cups) Gatorade or equivalent carb containing sports drink

What other allowed CLEAR FLUIDS can I drink the day of surgery?

Please follow instructions carefully or your surgery may be canceled.
All clear liquids must be stopped 2 hours prior to surgery.

ALLOWED	DO NOT CONSUME
Ensure® Pre-Surgery Carbohydrate Clear Nutrition Drink	Milk or Dairy Products
Gatorade or equivalent carb containing sports drink	Citrus Juices
Water	Prune Juice
Apple or Cranberry Juice (no pulp)	Juices with Pulp
Plain Coffee or Tea. No milk or creamer.	Alcoholic Beverages

Fuel Your Recovery with Nutrition

Surgery stresses the body, increasing your need for good nutrition to heal.

Your pre and post-surgery diet should include a variety of nutrients from healthy food.

- **Eat a variety of protein.**
- **Consume whole fruit and vegetables.**
- **Include whole grains in your diet.**
- **Include dairy or alternatives in your diet.**
- **Avoid crash dieting.**
- **Cut back on junk food!**
- **Plan ahead:**
  - Prepare food ahead of time and place in the freezer to be reheated later.
  - Make sure you have plenty of water, juice, milk or other types of healthy drinks.
  - Stock up on healthy, low preparation foods such as fruit, nuts, cheese, pudding, yogurt, low-fat and low-sodium frozen dinners, and low-sodium canned foods.
  - Have a variety of take-out menus that offer healthy menu choices if you plan to have food delivered to your home.

Reach and Maintain Your Desirable Weight

Potential risks associated with obesity and joint replacement surgery exists. Obesity or a Body Mass Index (BMI) greater than 40 has been linked to surgical complications such as:

- Increase risk of surgical site infections and non-healing wounds
- Pain
- Hardware loosening
- Medical complications such as post-operative pneumonia, heart attacks, strokes, peripheral swelling, blood clots and pulmonary embolism
- Lengthy recovery periods and poor progress in rehabilitation

Your physician may recommend weight loss before and after surgery. Weight loss can be sustained over time through healthy diet, physical activity, and lifestyle behavior modifications. Check with your doctor before starting a new weight management and exercise program. Aim for a weight-loss goal of 1-2 pounds per week until reaching your desired weight. Weight loss may be recommended to reduce your risk from the surgery. A goal of 5-10% weight loss in 6 months also has shown to improve reductions in triglycerides, blood glucose, and risk of developing Type 2 diabetes.

Dietary Supplements

Be sure to inform your physician and nurse if you are taking any herbs, vitamins, minerals or other supplements.

Many of these contain blood thinners and may interfere with medications causing adverse side effects; therefore, your physician may want you to **STOP** taking supplements **2 weeks prior to the surgery** as instructed.

You may also view additional information on nutrition education at this link.

Review Insurance and Financial Planning

Thoroughly review your insurance benefits and/or alternative plans for payment. It may be helpful to find out what your insurance plan covers for durable medical equipment (such as walkers), home health services (home physical therapy), Inpatient vs. outpatient deductibles and copayments as well as stays at an inpatient rehab facility.

If you have any questions about your health insurance benefits, please contact the customer service number located on the back of your insurance card.

Health Care Decisions

An Advance Directive or Advance Health Care Directive is a printed and written document that communicates your wishes about medical treatments if you are no longer able to make decisions for yourself. You may also complete the Advance Directive to name another individual as an agent to act for you now even though you are still capable. If you already have an Advance Directive or a Living Will, please have a copy available for your pre-admission screening appointment or bring a copy to the hospital on the day of your surgery. If you do not have one and wish to complete one, please do so prior to admission date. Hospital staff are unable to serve as witnesses to the document.

Discharge Planning

Our Hoag Orthopedic Institute team will work carefully with you to plan for your discharge. Prior to your discharge from the hospital, the care manager will obtain information from your physician and therapist on your discharge therapy needs. The following are general guidelines. They are helpful suggestions to make your recovery safe and comfortable.

Plan for Help

You may need some assistance during the first few weeks with cooking, bathing, housekeeping, and shopping. Plan for a caregiver, spouse, friend, or family member who can stay with you for at least 3 days. If you do not have any support members available, consider hiring a caregiver privately to assist with these needs. Caregivers are typically not a covered benefit under insurance. For those who live alone, we understand the challenges that come with limited support after surgery. Please contact our department to connect with possible community resources or our website for further resources.

Advantages of Discharge to Home

Studies have found that patients who discharge home following their hospitalization do better when they return to their own environment to heal. They face lower risks of infection, medical complications, and hospital re-admissions. You will be able to rest comfortably and get back into your daily routine quicker.

Inpatient Rehabilitation

After your surgery, our goal is to help you recover safely and return home whenever possible. While some patients may need to qualify for inpatient rehabilitation services, like an Acute Rehabilitation Unit (ARU) or a Skilled Nursing Facility (SNF), insurance approval has become more limited in recent years. Social factors, such as lack of a caregiver or other non-medical issues, are not considered clinical criteria for authorization under Medicare and health insurance guidelines. Approval is based on clinical criteria which include significant physical/cognitive impairment requiring assistance with daily activities, such as getting out of bed, transferring, or eating, and needing 24-hour support.

Physical Therapy

A care manager will visit you during your hospital stay to review and confirm your physical therapy plan. Physical therapy may be ordered for your home or at an outpatient facility. Your care manager will coordinate services with an in-network provider whenever possible. In some situations, your surgeon may set up physical therapy in advance, and the therapy provider will reach out to schedule directly with you. Outpatient physical therapy may be required. If so, you will obtain a prescription from the surgeon's office and schedule your visits when you are ready to transition.

Transportation

Please plan for a ride home from a friend or loved one. Patients will be trained for car transfer by our physical therapists. Alternatively, private non-emergency transportation options, such as wheelchair van or gurney transport, can be arranged at a private cost. Out-of-pocket costs will vary based on service type and mileage.

Need Additional Assistance with Discharge Planning?

Care Management can be contacted by voicemail at 949-727-5439. Please leave your full name, phone number, and surgery information. We will get back to you within one business day. We look forward to speaking with you to ensure you feel confident about your discharge.

Adaptive and Durable Medical Equipment (DME)

Insurance only covers DME under certain criteria based on medical necessity, and copayments may apply. Front wheel walkers may not be covered if you were provided with one through your insurance in recent years. Care managers will assist with checking eligibility and ordering basic medical equipment, such as a walker, prior to discharge. Equipment such as raised toilet seats, ice machines, commodes, and hospital beds are not readily dispensed upon discharge and may be subject to insurance authorization if needed. Depending on the type of equipment, you may have the option of renting or buying from a store. A medical equipment resource list can be found on the HOI website under Discharge Planning Resources.

Front Wheel Walker

- If your recovery requires you to use a walker, our Care Management team will assist you in obtaining one.
- Walkers are the one piece of equipment most often covered by insurance.

Obtaining a raised toilet seat or 3 in-1 commode is highly recommended if your toilet is not already elevated. These can often be purchased online.

FRONT WHEEL WALKER

REACHER

SOCK AID

3:1 COMMODE

SHOWER CHAIR

TUB TRANSFER BENCH

LONG-HANDLED SPONGE

BATHROOM TONGS

TOILET AIDE

Guidelines For a Support Person

As a caregiver, your role is important, as you will be helping your family member or friend recover from joint replacement surgery. When at home, it is important for you to review information regarding the patient's safety, recovery, and comfort. This information will help answer some of the many questions and concerns as you prepare to care for your joint replacement patient.

- View important education material with your family member/friend prior to their surgery.
- Read your family member/friend's discharge instructions to help them follow their recovery guidelines and know when to notify the surgeon.
- Observe physical therapy sessions, be able to safely assist the patient, and support the home exercise program.
- Help to organize medications to control pain and inflammation.
- Offer gentle reminders of post-operative precautions.
- Assist with transportation to get to the doctor's office or to physical therapy.
- Prepare meals and help with pet care or other household chores.
- Keep your family member/friend on a strong routine of icing, elevation, light activity, and rest.
- Help them to elevate their surgical leg for periods of time throughout the day by lying down and raising the leg above heart level.
- Help with managing an assistive device such as a walker.
- Offer encouragement and motivation to stay focused on the long-term goals and ensure a positive outcome.
- Ensure you are taking care of yourself too. Have other family members or friends stop by, spend time with the patient, or drop off food to give you time to rest.

Preparing Your Home for After Surgery

It is important that your house be free from hazards that could cause you to fall or lose your balance as a fall can greatly set back your recovery. Use the following guidelines to ensure your home is safe for you.

Flooring

- Be aware of uneven surfaces both inside and outside your home.
- Remove rugs that can be easily tripped on, especially at top and bottom of stairways.
- Make sure rugs have non-skid backings or use double-sided tape so they won't slip.
- Make sure rugs and carpets are free of curled edges, worn spots and rips.
- Eliminate obstacles from pathways both outside and inside the home.
- Have mats at doorways for people to dry their feet on to prevent slipping.

Kitchen

- Move frequently used items to shelves and counters that are within arm's reach. This can minimize unnecessary and unsafe reaching.
- Use adaptive equipment (grabbers) for easier reach.
- Prepare simple meals using stovetop or counter-level appliances to avoid bending.
- Make food ahead of time, store in small containers, and place in the freezer for heating later.

Pet Care

- Keep pets contained in a designated area/ crate during physical therapy sessions or when you are moving around the house to avoid tripping hazards.
- Arrange help to assist with daily tasks like feeding, walking, or cleaning.
- Keep your pets away from the surgical site for at least 6 weeks and do not let them on your bed during this time.

Bathroom

- Ensure tubs and showers have non-skid surfaces or safety mats inside and outside.
- Use a non-skid rug on the bathroom floor.
- Be cautious of wet floors.
- Safety rails and/or a shower chair may be helpful in the tub/shower.
- Make sure grab bars or safety rails are securely anchored over the tub, in the shower and near the toilet.
- Keep toiletries in an easy to reach receptacle.

Lighting

- Maintain adequate lighting in all areas.
- Use night lights in bathrooms or in the hallways.
- Check to make sure light switches are within easy reach.

Furniture

- Sit in chairs with arm rests to help you get in and out of the chair.
- Place a firm cushion or pillow on the seat of the chair or couch if necessary. (It is easiest to stand from a seat that is higher than the back of your knees).
- Do not use a step stool to reach items in high cupboards – get help if necessary.
- Coil or tape cords and wires next to the wall so you can't trip over them.
- If your bed is particularly low or high, explore options to make it easier to get in and out.

Stairs

- Make sure handrails are securely fastened.
- If you have a large flight of stairs separated by a landing, place a chair with arm rests on the landing.

Assistive Devices

- Make sure the equipment is in proper working condition.
- Be sure there is room for a walker in the areas you frequently use in your home.
- Make sure the rubber tips of the canes and walkers are in good condition.
- Consider the use of a walker bag attached to the front of your walker. Do not try to carry anything in your hands while you are using a walker.

Footwear

- Select closed-toed footwear that stays securely on your feet and use non-skid soles.

Personal Precautions

- Be alert for unexpected hazards like out-of-place furniture, pets, children, and toys.
- Provide a place for your pets to be kept while you are walking around the house.
- Avoid rushing to answer the phone or doorbell. Make sure your phone is kept on you.
- Make sure your vision is not obstructed when carrying objects.
- Take time to regain your balance when you change positions, i.e., going from lying down to sitting or sitting to standing.
- Allow yourself extra time to get ready each day.
- Take several rest breaks during each day and sit down more often than usual.
- Keep your eyeglass prescription up to date.
- If you live alone, have daily contact with family, friends or neighbors.
- Consider water bottles to avoid spills that could be a slip hazard

Exercises: Pre-surgery Hip and Knee Patients

Pre-Operative Exercises: Prior to surgery, initiate upper extremity exercises as tolerated to prepare for surgery. Practicing exercises prior to surgery will prepare you mentally and physically for the exercises to be done post-surgery. Also, maintain an active lifestyle.

SEATED SCAPULAR RETRACTION

Sets: **3** | Reps: **10** | Hold: **5sec**
Daily: **1** | Weekly: **7**

Setup: Begin sitting in an upright position

Movement: Gently squeeze your shoulder blades together, relax, and then repeat.

Tip: Make sure to maintain good posture during this exercise.

SEATED CHAIR PUSH UPS

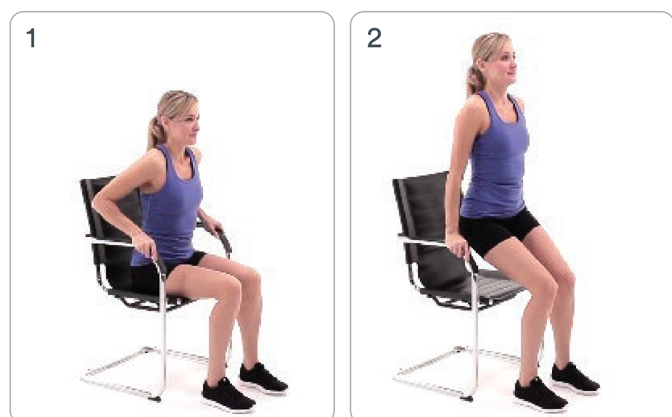
Sets: **1** | Reps: **10** | Hold: **5sec**
Daily: **1** | Weekly: **7**

Start with one set of 10 reps, increase hold and number of sets as tolerated.

Setup: Begin sitting upright with your hands resting on the armrests of the chair.

Movement: Straighten your arms, lifting your body off of the chair. Hold briefly, then lower back down and repeat.

Tip: Make sure to use a sturdy chair and use your legs to balance as needed. Do not shrug your shoulders during this exercise.



WALL PUSH UP

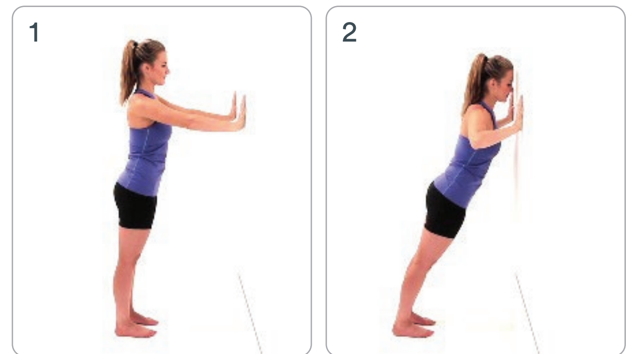
Sets: **1** | Reps: **10** | Daily: **1** | Weekly: **7**

Start with one set of 10 reps, increase number of sets as tolerated.

Setup: Begin in a standing upright position with your arms straight and your hands resting on a wall at shoulder height.

Movement: Bend your elbows, lean your body toward the wall, then push yourself back into the starting position and repeat.

Tip: Make sure to bend only at the elbows and keep the rest of your body straight during the exercise.



SEATED SHOULDER OVERHEAD PRESS WITH DUMBBELLS WITH PURSED LIP BREATHING

Sets: **1** | Reps: **10** | Daily: **1** | Weekly: **7**

Start with one set of 10 reps, increase hold and number of sets as tolerated.

Setup: Begin sitting upright in a chair with your elbows bent, holding a dumbbell in each hand and your feet resting on the ground. Breathe in through your nose.

Movement: Lift the dumbbells to your shoulders with your elbows at a 90-degree angle, then slowly press them overhead, while blowing out through pursed lips, as if you are blowing out a candle. Lower your arms to starting position, while breathing in through your nose. Repeat.

Tip: Make sure the exhalation is about twice as long as the inhalation. Make sure to keep your back straight during the exercise.

SUPINE HIP ABDUCTION

Sets: **1** | Reps: **10** | Daily: **1** | Weekly: **7**

Start with one set of 10 reps, increase hold and number of sets as tolerated.

Setup: Begin lying on your back with your legs straight.

Movement: Move one leg out to the side as far as you can without bending at your side.

Tip: Make sure to keep your back on the bed and do not move your upper body during this exercise.

SUPINE HEEL SLIDE

Sets: **1** | Reps: **10** | Hold: **5sec**
Daily: **3** | Weekly: **7**

Setup: Begin lying on your back with your legs straight.

Movement: Slowly slide one heel on the bed/ flat surface toward your buttocks until you feel a stretch, then slide it back down and repeat.

1

2

SUPINE QUADRICEPS SETS

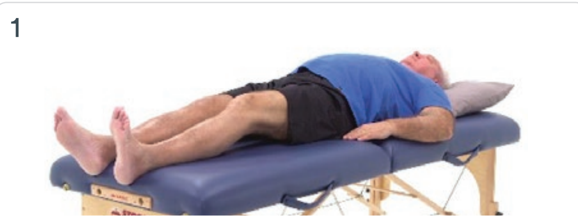
Sets: **1** | Reps: **10** | Hold: **5sec**
Daily: **3** | Weekly: **7**

Setup: Begin lying on your back on a bed or flat surface with your legs straight.

Movement: Tighten the muscles in the thigh of your surgical leg as you straighten your knee. Hold, then relax and repeat.

Tip: Make sure to keep your toes pointing toward the ceiling during the exercise. Try to flatten the back of your knee towards the bed.

1



2

SUPINE ANKLE PUMPS

Sets: **1** | Reps: **10** | Daily: **3** | Weekly: **7**

Setup: Begin lying on your back with your legs straight.

Movement: Slowly pump your ankles by bending and straightening them.

Tip: Try to keep the rest of your legs relaxed while you move your ankles.

1

2

SUPINE GLUTEAL SETS

Sets: **1** | Reps: **10** | Hold: **5sec**
Daily: **3** | Weekly: **7**

Setup: Begin lying on your back with your hands resting comfortably.

Movement: Tighten your buttock muscles, then release and repeat.

Tip: Make sure not to arch your low back during the exercise or hold your breath as you tighten your muscles.

1

What to Bring to the Hospital on Day of Surgery

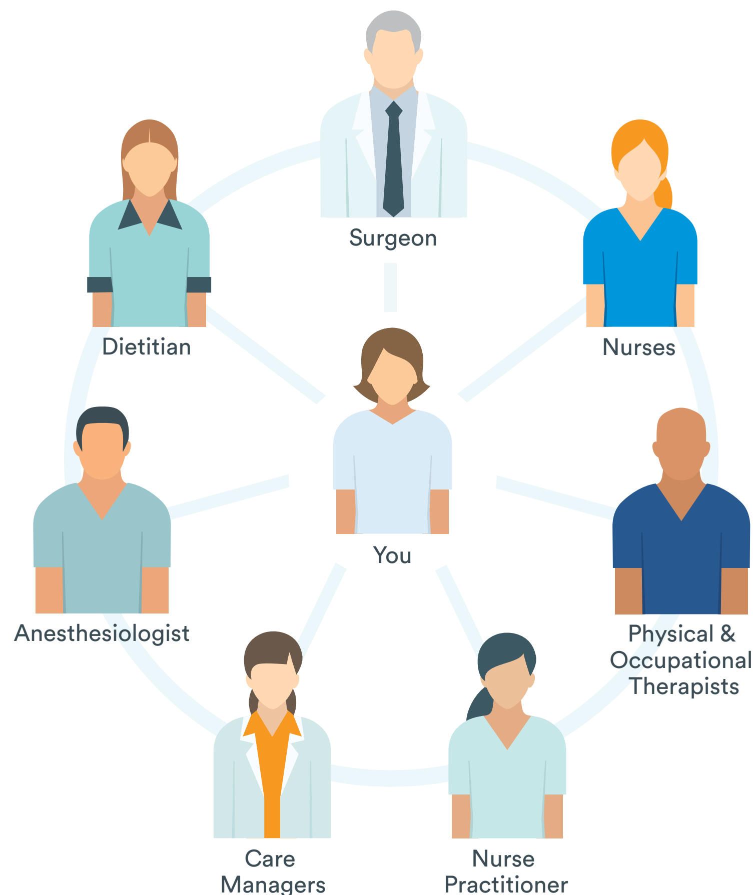
- ☐ **Bring THIS BOOK!**
- ☐ Photo ID and your insurance card
- ☐ Copayment for surgery/hospitalization, if needed
- ☐ Loose fitting clothes, including socks and undergarments
- ☐ Closed-toe shoes and orthotic (if using)
- ☐ Toiletries
- ☐ Medications as directed by the Nurse Navigator to bring into the hospital in their original packaging
- ☐ CPAP machine, mask, and tubing, if applicable
- ☐ Walker (especially if borrowed) to allow for proper fitting
- ☐ Bring a picture of your discharge medications (may be on the phone).

LEAVE jewelry and valuables at home.

Your Care in the Hospital

Patient Centric Care: Medical and Professional Staff Who May Be Caring for You

You are now part of our team of professionals working together to meet your goals.



Anesthesiologist

A physician that is responsible for your anesthesia (putting you to sleep) throughout your surgery.

Orthopedic Surgeon

A physician/surgeon that performs your orthopedic surgery and directs your care. This doctor guides your rehabilitation and follows you through office visits.

Advanced Practice Providers (APPs)

APPs include **Nurse Practitioners (NPs)** and **Physician Assistants (PAs)**. They are highly trained professionals who work closely with your surgeon to provide care before, during, and after surgery.

In the Office and Operating Room

NPs and PAs work with your surgeon before surgery to help with diagnosis, treatment planning, and prescriptions. They assist in the operating room during your procedure. After discharge, they continue to support your recovery by answering questions, managing medications, and coordinating follow-up care.

In the Hospital (HOI NPs)

Once you are admitted, HOI Nurse Practitioners join your care team. They act as an extension of your surgeon, focusing on your recovery during your hospital stay. They monitor your progress, prescribe medications, order and interpret tests, and make sure you receive the highest quality care.

Registered Nurses (RNs)

Professional nurses that are responsible for managing your care throughout your time at HOI. RNs use the surgeon's instructions to guide your care. RNs provide education to you and your family about your health and safety needs. This includes information before and after surgery and helps you plan for your discharge from the hospital. RNs also provide care and education in your surgeon's office.

Nurse Navigator

A registered nurse that follows prescriptive guidelines to transition the patient through the continuum of care, providing education, care coordination, and pre-optimization to prepare the patient and improve patient outcomes.

Physical Therapist (PT)

A therapist that plans your physical rehabilitation after your joint surgery. This therapist will help you learn to move properly and walk safely. You will learn how to use assistive devices such as a walker or cane, if necessary, which will be needed temporarily after your surgery. Sometimes patients will attend physical therapy after surgery to learn exercises to build strength and flexibility.

Occupational Therapist (OT)

A healthcare professional that is responsible for planning safe ways for you to complete your daily activities, such as bathroom hygiene. The OT may partner with the physical therapist (PT) to complete your exercise routine. The OT offers ideas to assist you in creating a safe home environment. Adaptive equipment is used to simplify self-care tasks and protect your joint while conserving energy.

Care Manager/ Discharge Planner

A registered nurse or social worker who works closely with your surgeon and the other team members to help you make decisions about your discharge plan. This may include home health physical therapy, outpatient therapy, home equipment, and/or any skilled nursing care or Acute Rehabilitation Unit placement if needed. The care manager/discharge planner can also answer your questions about insurance coverage for services and equipment.

Registered Dietitian (RD)

Dietitians are credentialed health professionals who are food and nutrition experts and administer evidence-based medical nutrition therapy. The RD works with the multidisciplinary care team to help patients meet their nutritional goals. Specialized nutrition considerations may be needed for surgery to optimize healing, and the RD is available to provide recommendations and nutrition education after surgery.

What to Expect on the Day of Surgery

Hospital Experience

Pre-op	• Patient registration • IV inserted for fluids during surgery • Speak with anesthesiologist and surgeon
Operating Room	• Continuous monitoring of your blood pressure, heart rate and breathing status. • Surgery performed
PACU/Recovery Room	• Continuously monitor the effects of anesthesia, blood pressure, heart rate, breathing and pain
Post Surgery Care	• Bed exercises and up with staff • Oral pain medications • Physical therapy evaluation for safety • Transition to healthy meals as tolerated • Able to urinate on own • Arrangement of home equipment/ care needs
Discharge	• Verbal and written instructions for discharge

The Day of Surgery

The anesthesiologist should be calling you the night before your surgery to discuss your medical condition(s) and the type of anesthesia available to you. They will discuss the different types of anesthesia with you along with the risks and benefits of each. You will meet with them prior to your surgery upon admission to the pre-op surgical unit.

Pre-operative Admission Area

- It is important that you arrive at the requested time and report to the main lobby on the first floor of the hospital.
- After checking in at the registration desk you will be escorted to the pre-operative unit.
- Your family will wait in the surgical waiting area until you have completed the necessary pre-op steps before surgery.
- Once you are prepared for surgery, a family member may join you until you are taken to the operating room.
- Registration will verify your support person's contact information so your surgeon may call on completion of your surgery.
- Please leave your belongings and valuables with a family member or friend while you're in surgery. They can deliver them to you after surgery.
- Do not take any medications on the day of surgery, unless instructed to do so by your surgeon or anesthesiologist. Please take them with a small sip of water.
- If your nurse navigator instructs you to bring any medications from home, please bring them in the original pharmacy bottle.
- Leave valuables and jewelry at home.
- Bring your dentures, hearing aids and/or eyeglasses but note they will likely be removed prior to surgery.
- Remove contact lenses and wear eyeglasses if needed.

Pre-operative Area

- Preparations for your surgery are completed in the pre-op unit.
- The nurses will perform a brief history and physical examination, start an intravenous line, administer medications, make you comfortable, and answer any questions.
- Your anesthesiologist will meet you for a discussion of the types of anesthesia. For most patients, the joint replacement team usually recommends the use of spinal anesthesia. This is not always possible in every patient and your anesthesiologist will help decide what is best prior to surgery.
- You will be given intravenous antibiotics.
- You will sign surgical and anesthetic consent forms.
- Your surgeon will see you to mark the correct surgical site and side.
- You will meet an operating room registered nurse.
- You may receive some sedation and once the operating room is ready, you will be transferred there by an OR nurse.

Operating Room

- You will be asked to move from the gurney to the operating table once you are in the surgery area.
- **For Hip Patients:** A special table called the **Hana table** may be used for the direct anterior hip approach.

Hana Table

- You may notice a flurry of activity around you. While the anesthesiologist hangs IVs, places monitors on you, and prepares for the type of anesthetic you will receive, the nurses will be preparing the room for surgery.
- **For Knee Patients:** An **adductor canal block** is recommended for total and partial knee replacements. It is used for post operative pain management. It is done before your surgery by the anesthesiologist prior to the spinal or general anesthetic. This requires a needle stick in the upper thigh and the use of an ultrasound and/or a nerve stimulator. Once the nerve is located, local anesthetic medication is injected into the area to help decrease the amount of post-operative pain.
- A spinal (regional) anesthetic or a general anesthetic will be used for your surgery. A spinal anesthetic numbs you from the waist down so you will not feel pain. If you are not a candidate for a spinal anesthetic, a general anesthetic will be used.
- Once the spinal is working well, you will be sedated with medications through the IV so you are not aware of the actual surgery.
- When the surgery is completed, you will be transported to the Post Anesthesia Care Unit (PACU) or Recovery Room.

Post Anesthesia Care Unit (PACU)

- You will be closely monitored by highly trained nurses.
- Your pain should be under control. If it is not, bring this to the attention of your nurse. You will be given pain medication as needed.
- Most likely, you will be breathing additional oxygen through a mask or nasal canula
- You may shiver or feel cool when you first wake up from surgery. This is very normal and you may be medicated for the shivering and warm blankets will be provided.
- X-rays will be taken as necessary.
- If you have a drain, the blood output will be followed closely.
- Your surgeon will notify your family of your condition and how your surgery went.
- No visitors are allowed in the Recovery Room such that the nurses can provide the best and safest environment for all patients recovering from surgery.
- You will be transported to the Orthopedic Nursing Unit or Day of Surgery Lounge when you are medically stable.

If you are participating in the Day of Surgery Discharge program you will be transported to a designated area of the hospital called Day of Surgery Lounge to recover. Once transported to this location your "buddy" can be with you. A physical therapist will meet with you to get you up and ambulating. Once you are safe to go home you will be discharged from the hospital.

Role of the Buddy:

- Please have the whole day clear.
- After surgery, you will need to be present for PT family training shortly after surgery. You should be present within 1 hour after the RN's text to you for the PT session.
- **Only 1 buddy per patient** is allowed in the recovery area. Additional visitor policy information may be found on the hospital website.
- If the patient has any assistive devices, please bring them to the hospital after surgery for the PT or RN to adjust to the patient's height. If they do not have one, the appropriate assistive device will be provided to the patient prior to discharge.
- The patient cannot go home alone. The buddy should be available 24 hours per day for the first 2-3 days.

To ensure patient privacy and promote a healing environment:

- No photography or videotaping is allowed.
- Please stay within assigned bay.
- Please silence your cell phone.

There is a visitor lounge for your use located outside the Day of Surgery Lounge.

Nursing Floor

You will be cared for by experienced orthopedic registered nurses, nurse's aides, physical therapists, and physical therapy aides.

A team approach to total joint patients has been established and is headed by your surgeon, the Nurse Practitioner, Physician Assistant, and the care managers. Your care will follow protocol designed to maximize your recovery.

- When you arrive to the nursing unit, the nursing staff will measure your vital signs (blood pressure, temperature, pulse, and respirations). These will be monitored until you are discharged from the hospital.
- Your nurse will check your extremities for numbness or tingling.

The circulation in your extremities will also be monitored, and you will be instructed to exercise your ankles and feet 10 times every hour while awake. These exercises are very important to help increase circulation and reduce the risk of blood clot formation in your legs. Your physician may also recommend "pump-activated" stockings to help improve your circulation.

- The nurse will check your surgical dressing during your stay in the hospital.
- Your nurse will instruct you to use an Incentive Spirometer which is a tool that measures how well you are filling your lungs with each breath. Learning to take long, deep breaths using this tool can help you keep your lungs clear and active and may help to lessen your chance of developing breathing problems.

Incentive Spirometer Deep Breathing Exercises

An incentive spirometer (IS) is a device used to encourage patients to take deep breaths after surgery, when mobility may be limited. These deep breathing exercises help to prevent lung complication like pneumonia or fevers by expanding the lungs, promoting proper lung function.

Using an Incentive Spirometer

1. Sit up straight and tall and hold the spirometer in your hands.
2. Take a deep breath in and let it out.
3. Place mouthpiece in your mouth. Make sure your lips completely cover the mouthpiece.
4. Breath in slowly through the mouthpiece (like sucking through a straw).
5. Keep the range indicator (little marker on the side chamber) in the target zone.
6. Breath in until the piston gets to your mark.
7. Hold your breath in for 3-5 seconds and then let it out.
8. Repeat as prescribed, about 10 breaths every hour, but not 10 times in a row.

* If feeling lightheaded or dizzy, stop using IS and rest. Breathing to quickly may cause these symptoms.

Pain Management

Pain is expected with any surgery, especially joint replacement surgery, as it is part of the healing process. Our goal is to minimize your pain as best as possible, within established goals for your comfort.

Safe pain control involves the use of medication and other therapies to control pain with the least amount of side effects. Your surgical team will work with you to:

- Screen for current opioid use and risk for overuse.
- Use alternatives to opioids whenever possible.
- Educate you about using the lowest dose of opioids for the shortest amount of time and safely getting rid of unused opioids.

How does pain affect my recovery?

Severe, persistent pain can delay your recovery process. Our goal is to provide balanced pain control so that you can participate in physical therapy and activities that help return you to your best level of function and keep you moving.

What should I tell my doctor and nurse about my pain?

They may ask you to describe how bad your pain is on a scale of 0 (zero) to 10 with 0 being no pain and 10 being the most severe pain you have ever had. They may use a scale, faces or descriptors when asking. If your pain becomes more severe than expected, please inform the health care team.

Why is it important to be asked about my pain level so frequently?

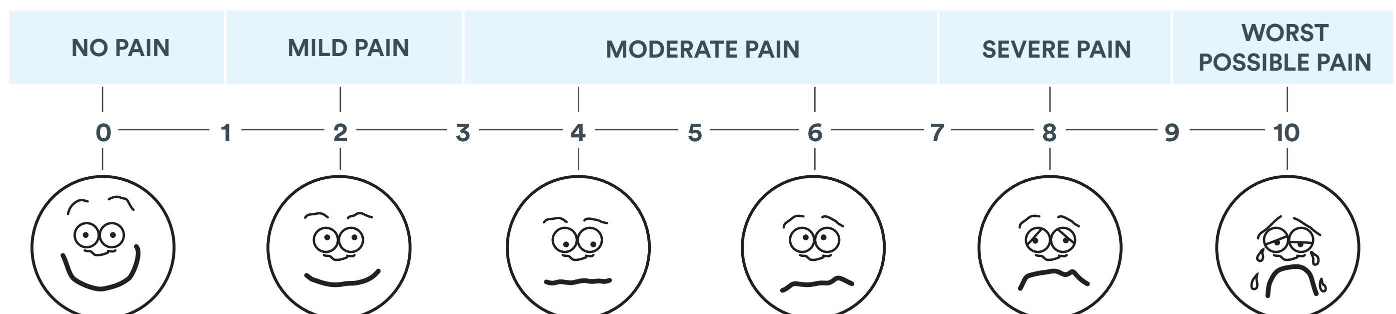
As you progress your activity, pain levels may change over time. Also, by following your progress with activity, tests, and procedures, we may learn that your pain medication may not be working effectively. It is important to report what makes your pain better or worse. The health care team will also be monitoring any adverse side effects of the pain medication to make sure you do not get overly sedated.

How can my pain be controlled?

Pain relief options are numerous and include a combination of therapies and medications such as non-opioid medications, anti-spasmodics, anti-inflammatories, or opioids. This technique is known as multi-modal pain management. Commonly administered opioids are oxycodone or hydrocodone-acetaminophen (Norco). There are also pain control methods that don't involve medicine, such as distraction, relaxation, repositioning, cold therapy, and massage.

What if my pain is still not controlled?

Some amount of pain or discomfort is expected after surgery. The health care team needs your help to evaluate how the medicine is working for you. Inform them if you have pain that is not tolerable and/or in any location other than what you expected. There may be another modality or medication that may work better for you.



Fall Prevention Guidelines

Each year, one out of three older adults in the United States experiences a fall. Hoag Orthopedic Institute (HOI) would like to partner with you to keep you safe during your recovery here and at home.

Unfortunately, many falls result in a serious injury, such as a hip fracture that may require surgery. Even if additional surgery is not required, your recovery time may be significantly increased if you suffer a fall.

The risk of falls can be increased due to a number of reasons, including but not limited to:

- New medications
- Decreased mobility
- Weakness
- Dizziness
- Confusion that was not expected

While hospitalized and during your recovery, the risk of a slip or fall increases.

Remember: HOI staff members are here to assist you and keep you safe. Let us be of service to you. Please call to have staff assist you to the restroom. If you are deemed unsafe to be left alone in the bathroom, a staff member will stay with you. Your safety is important.

For more information on Fall Prevention, please see page 70.

Most falls happen in or on the way to or from the bathroom.

Because most hospital falls are related to toileting, please call staff to assist you when using the restroom, reaching for a urinal, wiping yourself after voiding or using the commode.

We request that even patients who have been released for walking by the physical therapist please use the call button. Let the nursing staff know that you want to get up and allow us to be of assistance to you.

Also, if you have a recommended assistive device such as a walker, cane, or crutches, you should use the device each time you get out of bed, walk in the room or hallway, or transfer to and from a chair or commode and toilet. This will help support you and improve your balance.

Call, Don't Fall Program at HOI

During your recovery, the risk of a slip or fall increases due to the recent surgery and pain medication. We encourage you and your family to watch the educational video on your in-room television to learn more about how to prevent a fall. If you have any questions or comments, please let us know.

Day of Discharge: Patient Discharge Checklist

Please review all items below before discharge.

☐ I have my prescriptions for my new home medications.

☐ I understand what my medications are, possible side effects and how to use them safely.

☐ I understand the reason for my anticoagulation (blood thinning) medication.

- Aspirin
- Eliquis
- Coumadin, if taking prior to hospitalization
- Lovenox
- Xarelto
- Other: ____

☐ I understand the signs and symptoms of blood clots and pulmonary embolus.

☐ I understand when I should notify my doctor.

☐ I know when to see the doctor for a follow-up appointment. Date:_______________________

☐ I know when I can shower.

☐ I know when I can drive.

☐ I know the arrangements for my home equipment.

☐ I know my physical therapy arrangements if needed.

☐ I know how to care for my incision and dressings.

☐ I know my home exercises and level of activity.

☐ I know my hip precautions if needed.

☐ I have collected all of my belongings (Phone chargers, phone, iPad, equipment, home medications).

☐ I have watched the discharge video.

☐ I understand when to resume my regular home medications.

☐ **Complete my Patient Reported Outcomes (PRO) Survey.**

What to Expect During Your Recovery

Post-Operative Medications

MEDICATION NAME Generic (Brand)	PURPOSE This medication is used...	SIDE EFFECTS Watch for these possible side effects...
PAIN MEDICATIONS		
○ Tramadol (Ultram)* ○ Hydrocodone/Acetaminophen (Norco)* ○ Hydromorphone (Dilaudid)* ○ Morphine (Duramorph, Kadian)* ○ Oxycodone (OxyIR, Roxicodone)* ○ Oxycodone/Acetaminophen (Percocet)* ○ Oxycontin*	For moderate to severe pain	• Drowsiness • Constipation • Nausea/Vomiting • Itching • Confusion
○ Ketorolac (Toradol) ○ Ibuprofen (Motrin, Advil) ○ Meloxicam (Mobic) ○ Celebrex (Celecoxib)	For mild to moderate pain and to decrease swelling	• Stomach upset • Impaired kidney function
○ Cyclobenzaprine (Flexeril) ○ Baclofen (Lioresal) ○ Methocarbamol (Robaxin) ○ Soma (Carisoprodol) ○ Zanaflex (Tizanidine)	For muscle relaxation and pain	• Dizziness • Fatigue • Drowsiness • Headache
ANTICOAGULANTS		
○ Apixaban (Eliquis) ○ Aspirin (Bayer Aspirin) ○ Clopidogrel (Plavix) ○ Enoxaparin (Lovenox) ○ Rivaroxoban (Xarelto) ○ Warfarin (Coumadin)	To thin blood and prevent blood clots	• Risk for bleeding • Bruising • Stomach upset
GASTROINTESTINAL		
○ Bisacodyl (Biscolax, Dulcolax) ○ Docusate sodium (Colace) ○ Magnesium hydroxide (Milk of Magnesia) ○ Polyethylene Glycol 3350 (Miralax) ○ Sennoside (Senna)	For constipation	• Nausea • Cramping • Gas • Diarrhea
○ Famotidine (Pepcid) ○ Pantoprazole (Protonix) ○ Omeprazole (Prilosec)	For heartburn or reflux	• Nausea • Cramping • Diarrhea • Gas
○ Metoclopramide (Reglan) ○ Ondansetron (Zofran) ○ Prochlorperazine (Compazine) ○ Scopalamine Patch	For nausea	• Drowsiness • Dizziness • Headache

* Indicates opioid pain medication

Note: Before Surgery, your nurse and anesthesiologist will review your pre-operative medication's side effects with you, but because of side effects, you may not remember. Your nurse will review these side effects again at the time of your discharge.

How to Manage Your Pain

It is common for people to worry about taking pain medication after surgery due to concerns about side effects or addiction. However, avoiding pain medication entirely may lead to increased discomfort and slower recovery. Research shows that patients who use pain medication appropriately to manage post-surgical pain often end up needing less medication overall than those who delay or avoid it. Follow the guide below. This multi-modal approach is intended as a flexible guide. Always communicate openly with your care team about your pain levels and any side effects so your plan can be personalized to your needs.

1. Select your pain level

2. Under the level selected, take only prescribed medications as instructed

3. Re-evaluate your pain and adjust the medications as needed

MILD	MODERATE	SEVERE
TYLENOL (acetaminophen)	TYLENOL (acetaminophen)	TYLENOL (acetaminophen)
+	+	+
CELEBREX (celecoxib) **or** TORADOL (ketorolac) **or** MOBIC (meloxicam) **or** ______________	CELEBREX (celecoxib) **or** TORADOL (ketorolac) **or** MOBIC (meloxicam) **or** ______________	CELEBREX (celecoxib) **or** TORADOL (ketorolac) **or** MOBIC (meloxicam) **or** ______________
+	+	+
Comfort Measures	LIORESAL (baclofen) **or** FLEXERIL (cyclobenzaprine hydrochloride) **or** ZANAFLEX (tizanidine) **or** SOMA (carisoprodol) **or** ROBAXIN (methocarbamol)	LIORESAL (baclofen) **or** FLEXERIL (cyclobenzaprine hydrochloride) **or** ZANAFLEX (tizanidine) **or** SOMA (carisoprodol) **or** ROBAXIN (methocarbamol)
	+	+
	ULTRAM (tramadol)*	ULTRAM (tramadol)* **or** ROXICODONE (oxycodone)* **or** PERCOCET (oxycodone with acetaminophen)* **or** NORCO (acetaminophen and hydrocodone)*
	+	+
	Comfort Measures	Comfort Measures

Comfort Measures:
To support healing and pain management, use these comfort measures to help you explore various ways you can manage your pain.

- Rest
- Ice
- Elevation
- Relaxing Music
- Pray/Meditate
- Walk

Non-Opioid Pain Medications

Depending on your pain level, use these regularly around the clock, and/or all together.

Opioid Pain Medications*

- Opioids are effective for treating pain but also have a risk for addiction and abuse.
- A few side effects of opioid use include constipation, over-sedation and nausea/vomiting.
- Use these for moderate to severe pain OR prior to physical therapy.
- Minimize use and stop as soon as you are able.

CAUTION: Over sedation may occur if pain medication, sleep aids and muscle relaxants are taken together. In addition, do not consume alcohol while taking these medications.

Opioids and Pain Management

Why is there a limit to the number of opioid pain pills that my doctor can prescribe?

Due to the potential for opioid abuse, prescribers, such as surgeons, are required to adopt a safe prescribing practice for opioids. The number of opioid tablets or pills a physician may prescribe to a patient at one time is limited.

How long will I need to take opioids?

A clinical research study performed at Hoag Orthopedic Institute has provided us with insight regarding pain medication use after hip and knee replacement surgery.

Following total hip replacement surgery, the typical patient takes opioid pain medication for 5-7 days. The majority discontinue opioid use by two weeks postoperatively. 10% of patients do not take ANY opioid medication after discharge from the hospital.

Following total knee replacement surgery, the typical patient takes opioid pain medication for 17 days and the majority discontinue opioid use by 3 weeks postoperatively. 3% of patients do not take ANY opioid medication after discharge from the hospital.

Why use a Multimodal approach?

Multimodal pain management involves using a combination of medications and techniques like acetaminophen, NSAIDs, nerve blocks, and relaxation strategies to target pain from multiple angles. This approach can improve comfort, reduce the need for opioids, and support a smoother recovery.

How do I store opioids?

For the safe storage of opioids:

- Keep out of reach of children or pets
- Hide or lock up medications
- Keep your medication in its original container so you do not take it by mistake
- Keep track of the location and number of pills in the bottle

How do I get rid of my leftover opioid medications?

You may receive a drug disposal packet at the time of your discharge. These packets allow patients and caregivers to dispose of opioid medications at home when they are no longer needed to reduce the risk of an adverse drug event. You may also speak to your pharmacist about how to discard your unused opioids or find more information at http://usdoj.gov.

How does cold therapy help?

After your surgery, swelling is expected which can cause increased pain and limit your range of motion. Cold therapy can effectively reduce pain and inflammation. By applying cold to the affected area, it numbs the pain, reduces swelling, and decreases muscle spasms.

Make sure you continue to use cold therapy throughout your recovery. You may find it especially helpful after working with physical therapy or exercising.

Always apply with a barrier (towel/pillowcase cover/single layer of clothing) under the cold therapy device or ice pack to protect the skin.

You may also view additional information on pain management at this link.

How to Manage Nausea and Vomiting

Nausea is the feeling of being queasy or sick to your stomach. It may happen with or without vomiting. Nausea may be caused by your anesthesia or may be a side effect of medication. 30% of patients may still experience symptoms that can last up to 48 hours after surgery.

Treatment Options

The best treatment for nausea or vomiting will depend on what is causing the problem.

- If you have nausea due to anesthesia, you may need to take prescription anti-nausea medication on a certain schedule to control your symptoms and better tolerate meals and specific foods.
- If your nausea is a side effect of medications or supplements, you may feel better when you take it with food instead of on an empty stomach, or when you make other changes to your eating or medication plan.
- If one anti-nausea treatment does not work for you, another one might. Your health care team can help you find a treatment that makes you feel better.

CAUTION: Seek immediate medical care if you cannot take care of yourself, cannot stop vomiting, see blood in your vomit or cannot keep liquids down.

Tips for Managing Nausea and Vomiting

- Having food in your stomach will help lesson stomach irritations. Eat before taking medication!
- Eat small meals throughout the day instead of 3 large meals and stay hydrated.
- Try eating dry, starchy, salty, or bland foods. Avoid fatty, greasy, or spicy foods.
- Suck on hard, tart candies (like sugar-free lemon drops) to relieve nausea and freshen your mouth. Try ginger candies or ginger root tea, which may help to decrease nausea.

Food Choices for Periods of Nausea and Vomiting

Use the list below to choose foods for times when you have nausea and vomiting. This is only a guide.

FOODS	LIQUIDS
Dry toast	Clear, high-calorie, high-protein nutritional drinks
Saltine or soda crackers	Apple, cranberry or grape juice
White rice, potatoes, noodles	Ginger ale
Pretzels	Non-carbonated drinks, such as fruit punch or sports drinks
Bread	Ginger tea or chamomile tea
Bananas	Ice pops, popsicles, or sherbert
Applesauce	Bouillon or broth

Constipation Prevention

Purpose: Constipation and decreased mobility of colon and surrounding structures can not only be uncomfortable, but painful. Research shows that constipation post-surgery may be due to pain, anesthesia, medication, etc. Below are some helpful tips to improve and maximize colon mobility, manage bloating, and produce stool regularly. Please consult with your doctor if you have any questions.

General Tips:

- Maintain adequate water consumption throughout the day.
- Bowels/colon like routine – so attempting to eat around the same time with the same amount of food is best. Breakfast is especially important.
- Daily walks of at least 20 minutes most days of the week can improve peristaltic action of intestines and optimize blood flow to abdomen. You can start 5 min intervals to improve your endurance once cleared by your MD.
- Limit stress as much possible... Yes, this influences bowel health! The brain and the gut are intimately linked. When we are under a lot of stress, the brain activates the fight, flight, and freeze response, releasing hormones such as cortisol and epinephrine that directly affect digestion and gut function. The result can be a slowing down or postponing digestion to tend to the perceived threat/stressor.
- Usually, the best time of day for a bowel movement is 30 mins – 1 hour after a meal. These times are best because the body uses the gastrocolic reflex, a stimulation of bowel motion that occurs after eating, to help produce a bowel movement.
- Chew your food completely.
- A warm beverage in the morning can help to stimulate a bowel movement.

Bloating:

- Lying on the left side with hips and knees bent allows for full relaxation to the end of colon. You can use a pillow between the knees for support. This can help ease gas discomfort.
- Chewing gum can help with discomfort.
- Gentle belly breathing (see next page) can help with discomfort.

Diet Considerations:

- Maintain adequate daily fiber intake. Some great options are vegetables (spinach, raw carrots, celery), beans, flaxseed, oatmeal, fruit (berries, banana, raisins, coconut, grapes), whole grains, nuts, high fiber cereals, etc. Prunes are a great snack because of the high fiber sorbitol, which helps soften stool. Gradually increase to 25-35 grams per day.
- Foods that thicken Stools (BRAT diet): Bananas, rice, apples, tea, and toast.
- Foods that loosen stool: alcohol, caffeine, spicy foods, sugar and artificial sweeteners, fried foods, carbonated beverages, dried and fresh fruit (except banana, peeled apples, and fruit juices)
- Special recipe: 1 cup apple sauce, 1/4 cup oat bran, 1/4 cup prune juice
- Foods that cause gas: apple juice, beans, cabbage, onions, beer, wine, broccoli, vinegar, carbonated beverages
- 2-3 dried prunes or 1/4 to 1/3 of a cup of prune juice can be used at night to stimulate morning bowel movement.

Proper Toileting Posture

It is best to have knees above hips, with hips open unless you have specific hip precautions. Can use large books or stool under feet.

- Leaning slightly forward on legs which is best for optimal elimination.
- Focusing on deep breathing and pelvic floor muscle relaxation.
- Self-colon massage can be performed on toilet if necessary.
- Always avoid straining. Instead use diaphragmatic/belly breathing.

Belly Breathing: Start all movement with diaphragmatic breathing for a few minutes to quiet nervous system and encourage full body awareness. Start lying on your back with knees bent. Place one hand on chest and one hand on abdomen to feel belly rise and fall.

During inhale "belly hand" should rise and during exhale "belly hand" should fall. This should be gentle – do not push your belly out as this can injure your incisions.

Repeat for at least 2x10 breaths.

Colon Massage: DO NOT try/rub over any healing incisions.

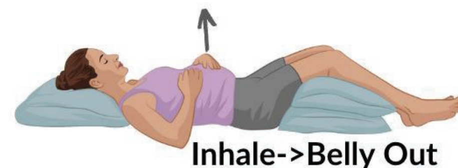
Position: Lying on your back with your knees bent or supported.

Apply sweeping "C" motions or circular motions to abdomen with hand, beginning at the lower right corner of abdomen (near hip bone), then move your way up to the top right corner (under rib cage), across to the top left corner then down to the bottom left corner (near the hip bone), and under the belly button.

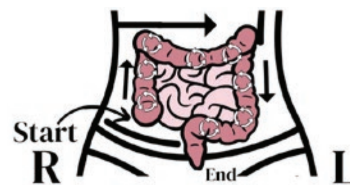
Repeat 5-10x/2-5 mins

***Please note if you were instructed on posterior hip precautions, then DO NOT bend past 90 degrees.**

Inhale: Belly rises **gently**



Exhale: Belly gently falls



Caring for Your Incision

Before you leave the hospital, your nurse will explain how to care for your incision at home. Care may vary depending on how your surgeon closed the wound and the type of dressing used. The following guidelines can help you know what to expect:

- Most incisions are closed with dissolvable stitches and may be reinforced with a special wound care device or adhesive strips.
- A water-resistant bandage is typically kept in place for the first week after surgery.
- You may shower with the dressing in place as instructed but do not submerge the dressing under water (i.e., bathtub).
- When the water-resistant bandage is removed (usually around one week), you may continue showering, gently patting the incision dry with a clean towel.
- If your incision was closed with staples or non-dissolvable stitches, these are usually removed about two weeks after surgery.
- Your care team will provide specific instructions once the bandage is taken off, based on how your incision is healing.
- Contact your surgeon if you notice increasing redness, worsening or persistent drainage, or any change that concerns you.

Routine Follow-Up Appointments

Your follow-up visits are a key part of your recovery, even if your new joint feels great. These appointments help your surgeon track healing, confirm your progress, and make sure your implant is functioning as expected.

- At discharge, you will receive both verbal and written instructions explaining when to return for your first follow-up appointment. This may have been provided previously by your surgeon's office.
- These visits allow your surgeon to assess your recovery and adjust your care plan if needed. X-rays are often taken to evaluate implant position, stability, and healing.
- Attend all scheduled appointments – even if you feel well – because early identification of any concerns leads to better long-term outcomes.

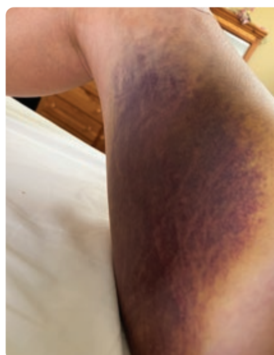
Keeping your hands clean is an important part of staying healthy while you recover. Washing your hands often with soap and water is one of the best ways to prevent infection. Because an infection in another part of your body can sometimes travel through your bloodstream to your new joint, it's important that both you and anyone helping care for you wash their hands before touching your skin.

Recovery Timeline After a Joint Replacement Surgery

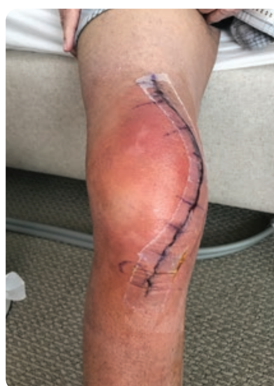
TIMELINE	GOAL	WHAT TO EXPECT AT THIS STAGE
Day 1	Most patients are discharged home on the same day as their surgery. Some patients may stay overnight in the hospital if necessary.	• Rehabilitation may begin shortly after you wake up from surgery. • A physical therapist will provide education on standing/walking with an assistive device, getting in/out of bed and a car, navigating stairs, home exercises, and activity restrictions. • An occupational therapist may help you with tasks such as dressing, bathing, and toileting if appropriate. • Taking pain medications as directed. • Using ice packs and elevating your leg regularly. • May experience loss of appetite. Eat frequent small portions and drink plenty of fluids.
Week 1	Your daily routine will include exercises at home focusing on restoring normal walking patterns, range of motion, and strength of operative leg(s).	• Gait training to restore your walking pattern. • Progression to a cane or no assistive device. • Increasing your range of motion. • Starting to regain strength. • Navigating stairs. • Increase activity level with periods of rest. • Taking pain medications as directed. • Using ice packs and elevating your leg regularly. • Showering and dressing with minimal to no assistance. • Supplement your diet with oral nutritional supplements if you experience a loss of appetite and drinking plenty of fluids. • Strictly following your bowel regimen (stool softeners) to avoid constipation.
Weeks 2-3	You will continue doing exercises to improve your mobility and range of motion.	• Progress frequency and duration of walking/activity. • Progression to cane or no assistive device. • Showering and dressing without assistance. • Reduction of pain medication. • May stop stool softener if no longer taking opioids.
Weeks 4-6	You will continue regaining your independence and returning to daily activities.	• Continuing rehab to increase strength, improve mobility, and progress endurance training. • Progress duration of walks. • Return to daily activities like work, driving, travel, and household tasks. • Notice diminished swelling and inflammation. • Continue taking acetaminophen as directed. • May stop taking stool softeners.

Common Issues After Surgery

- **Constipation:** Constipation after surgery is common and can be managed with simple steps. For more information on Constipation Prevention, see pages 60-61. See QR code on page 70 for additional resources on taking over the counter laxatives to prevent constipation while taking opioids.
- **Low grade temperature:** It is common to have a mild fever after surgery, with temperatures ranging from 99.0-101F and it affects over half of patients in the days following their procedure.
  - **When to seek help:**
    - Fever over 102°F
    - Fever with symptoms such as:
      - Chills or body aches
      - Sudden nausea or vomiting
      - Unexplained increase in pain
      - Disorientation or shortness of breath
      - Drainage or angry redness around incision
      - Any sign your recovery is not going as planned
  - **Important:**
    - Notify your surgeon of any high fever with symptoms.
  - **Ways to help prevent or reduce fever:**
    - **Breathing Exercises:** Deep-breathing exercises help expand your lungs and prevent pneumonia and high fevers.
    - Perform deep breaths every hour in the immediate post-op period.
    - Use your incentive spirometer as instructed – typically 10 times per hour while awake (see page 50).
- **Bruising:** It is common for bruising to appear 3-5 days after surgery and may extend throughout the entire extremity, including the foot and toes. This occurs due to slow oozing of blood from the surgical site, which gradually moves towards the surface of the skin. It is part of the body's natural healing process and is typically reabsorbed within two weeks.



- **Swelling:** Swelling in your surgical leg is common and expected up to 3 months. However, controlling swelling is important because it can improve pain management, enhance circulation and reduce the risk of blood clots. The most effective ways to manage swelling include ice therapy to reduce inflammation, light compression, and elevation of your surgical leg above heart level. Please speak with your surgeon about the use of sequential stockings if you have history of edema.



  - **Cold Therapy:**
    - Your surgeon will order cold therapy and may recommend a cooling device machine.
    - Active Wrap gel packs will be sent home with you at time of discharge.

  - Use cold therapy continuously for 1-2 weeks, as tolerated, even while sleeping.
  - Always have a light barrier between your skin and the cold.
  - Cold therapy is helpful after working with physical therapy or exercising.
- **Elevation:**
  - As much as possible, elevate the surgical extremity above the heart level in 30-minute increments, repeating this at least 4-5 times a day.
  - If increased swelling is noted in ankle or foot, it is time to spend more time with the surgical leg elevated – toes above the nose.
  - Limit sitting with legs in a dependent (feet on the ground) position, and/or chair for meals to less than one hour at a time.

- **Frequent urination/difficulty urinating:** You may experience frequent urination after you are discharged home. This is common and is just the way your body removes the extra fluids you have accumulated during and after surgery. Male patients are more likely to experience difficulty urinating. If this becomes problematic, contact your physician.
- **Drainage:** If you have a drain after your joint replacement surgery, you may experience some drainage after the drain is removed in the hospital. The site may ooze or drain some bloody discharge for up to 72 hours after the drain is discontinued. Reinforce or replace the dressing to the drain site after washing your hands, as instructed.
- **Emotional letdown:** It is common to feel a little "down" a few days after surgery. This may last for a few hours or a few days.
- **Sleep disturbance:** Some patients experience disrupted sleep patterns for several weeks after surgery. Pain may seem more intense at night and disturb your sleep. Taking a pain pill before bedtime may help. If you are resting or napping during the daytime hours, you may have a lower sleep requirement at night.
- **Endurance:** A loss of endurance and stamina occurs in almost every patient to some degree. It may take several weeks or even a month or two for you to feel stronger as you increase your activities and walk further distances.
- **Lack of concentration:** You may have difficulty concentrating for up to several weeks after surgery. This may be caused by the anesthesia, medications, or from pain. It is a common occurrence that will subside in time.

Frequently Asked Post-Operative Questions

How long will my joint replacement last?

Most total knee replacements last about 20 years in more than 85% of patients. Most total hip replacements last longer than 20 years in more than 95% of patients.

How long is the recovery period?

It takes most patients three to five months to regain their strength and energy after total joint replacement surgery. You should see continued improvement throughout this period. Refer to your exercise plan and perform the exercises as often as your physician and physical therapist recommend. Your physician may also recommend outpatient physical therapy.

While you're encouraged to get around as much as you're able after surgery, walking or other activities are not a substitute for your exercises.

The sooner you become active, the sooner you will get back to normal. You also need to protect your new joint so it can heal. Plan rest periods frequently throughout the day.

REMEMBER: DO NOT overdo your activities.

How long should I take pain medication?

Pain medication and pain control are an integral part of your recovery from surgery. You should use the pain medication prescribed by your doctor until you are able to function well without it. The duration of pain medication usage can vary widely between individuals after surgery, but in general, most people are able to decrease the use of pain medication over the first few weeks and rarely require opioid medication for longer than 3 months after surgery. Opioid medications can be addictive. Therefore, your surgeon would like you to utilize non-opioid pain medications (Tylenol and NSAIDS) when appropriate.

When can I return to my dentist's office, and do I need to take antibiotics before dental cleaning or other procedures?

Always follow your surgeon's guidance and refrain from undergoing dental cleaning or other non-urgent procedures for three months after your joint replacement surgery. Additionally, orthopedic surgeons have traditionally advised taking a single dose of oral antibiotics one hour before any dental work. This precaution is believed to reduce the risk of serious complications from prosthetic joint infections, while offering the benefit of protection with minimal risk.

Is it normal to feel depressed?

It is not uncommon to have feelings of depression after joint replacement surgery. This may be due to a variety of factors, such as limited mobility, discomfort, increased dependency on others, and medication side effects. Feelings of depression will typically fade as you begin to return to regular activities. If your feelings of depression persist, consult your primary care physician.

When can I drive?

If you had surgery on your right joint, you should not drive for at least 2 weeks. After this time, you may return to driving as soon as you feel comfortable and safe to do so. If you had surgery on your left joint, you may return to driving automatic transmission vehicles as soon as 1 week, if you feel comfortable and safe to do so. Do not drive if you are taking your prescribed pain medications (i.e. opioids, muscle relaxers).

Is it ok to get my incision wet?

You will be instructed on when you can shower after surgery and remove the dressing. Please do not submerge the area in water by taking baths, swimming, or sitting in a jacuzzi or hot tub for six (6) weeks.

What can I use on my incision to minimize scarring?

Many patients have an interest in using scar creams after surgery. Creams with high Vitamin E content are most effective. For raised scars, you can consider Mederma or Preparation H, both of which are available over the counter. Avoid using scar cream until the incision is completely healed, usually about 6 weeks after surgery.

When will my incision line become less red?

All incisions fade at different rates. This varies according to your own skin tone. It is advisable to keep the incision out of direct sunlight, as this will prolong the process. Most incisions fade by 6-12 months.

When will the swelling go down?

Swelling around the incision area varies post-operatively from patient to patient. For most patients, this area will stay perceptively swollen for 3-9 months after surgery. Don't worry. Most of the swelling will subside with time. However, if the swelling of the entire leg occurs that does not go down with elevation (foot above the level of your heart) or after resting overnight, this may be a sign of a blood clot. Contact your surgeon's office immediately if this should occur.

How long will I have numbness?

Typically, after joint replacement surgery, the outside portion of the incision will have an area of numbness roughly the size of your palm or even larger. The numbness is a normal consequence of surgery and generally resolves in 12-18 months. Occasionally there will be a small area, which varies in size by patient, with some residual numbness over the outside portion of your incision after both hip and knee replacement procedures.

When can I go back to work?

This depends on your profession. Typically, if your work is sedentary, you may return when comfortable. If your work is more rigorous you may require up to 3 months before you can return to full duty. In some cases, more or less time is necessary. Be sure to maintain elevation as recommended, even if you are at work.

How long do I need to go to physical therapy?

Patients will receive in-hospital physical therapy prior to being discharged home. Some patients will also receive 1-2 weeks of in-home physical therapy upon discharge. Some patients may require outpatient physical therapy following total knee or hip replacement surgery. Patients can start outpatient physical therapy when they are done with in-home physical therapy.

Will I set off the security monitors at the airport?

Yes, you will probably set off the alarms as you progress through the security checkpoint. Be proactive and inform security personnel that you have had a joint replacement and will most likely set off the alarm. Wear clothing that will allow you to show them your incision without difficulty. TSA no longer recognizes or accepts joint replacement implant cards for security purposes.

Can I sleep on my side after surgery?

It is important to follow your surgeon's instructions regarding sleeping positions to promote healing and minimize discomfort. You may sleep on your non-operated side with a firm pillow between your knees to keep pressure off the new joint, keep your legs aligned, and prevent crossing and twisting.

How can I get a good night's sleep after my hip or knee replacement?

Pain and stiffness are the leading causes of sleep disruption after joint replacement. Sleep can be difficult, no matter how many modalities are used to help with sleep patterns. Fortunately, sleep issues can often be managed with proper pain management, occasional use of over-the-counter sleep aids, and adjustments to daily activities. If these strategies aren't enough, reach out to your medical care team to help you manage it during the postoperative period. See Tips for Healthy Sleep Habits on the Pain Management link on page 58.

How long will I be on a blood thinner?

Various options including pills and injections are available to thin your blood and help prevent phlebitis and blood clots and should be taken for at least 4 weeks after surgery, sometimes longer if prescribed by your surgeon.

Should I apply ice or heat?

Initially, ice is most helpful to keep down swelling and diminish pain. Heat should be avoided for 6 weeks following surgery.

When can I have a pedicure?

Please avoid any pedicures for at least 6 weeks after surgery.

Why does my hip or knee click?

Your hip or knee replacement is made from metal, ceramic, and plastic implants, and they all click at times. The click you hear, or feel, occurs when the bearing surfaces contacting each other during activity. Normal joint surfaces separate and re-contact in normal activity. However, the normal joint surface is covered with a soft substance called cartilage that does

not make any perceivable noise. It is normal to hear or feel this clicking sensation after joint replacement surgery, especially early in the recovery, due to the hard surfaces that contact each other.

How long will it take to maximize my range of motion?

It is important to work hard on your range of motion after surgery. For some patients, it can take up to 18 months to 2 years to maximize your range of motion. The amount of motion that you get after knee replacement is dependent on several factors including how much motion you had prior to surgery. It is important to work closely with your physical therapist and your surgeon to ensure that you are meeting all of your range of motion goals.

I think my leg feels longer now. Is this possible?

In the majority of cases, your leg will essentially be unchanged in length as compared to your opposite extremity. In some cases, patients perceive that their leg is lengthened. This is usually the result of straightening out a knee that had a significant deformity before surgery or restoring normal length to a hip replacement. In some instances, it is necessary to lengthen the extremity for the purpose of providing stability to the joint and to avoid dislocation.

Can I kneel on my knee incision?

Yes, you can kneel on your knee incision once it has healed. You should not kneel on a knee replacement for at least 4 months.

In general, kneeling does not damage the knee replacement but can always be a bit uncomfortable. The incision is usually very sensitive for the first 12 months after surgery and may be painful to kneel on. It is always a good idea to use a pillow, cushion, or volleyball knee pad for comfort during prolonged kneeling activities.

How long will my hip or knee stay warm?

Your joint will stay warmer than the non-operative joint for 6-9 months. This is a normal part of the healing process.

Where can I find credible joint care information?

There are several sources of substantiated, peer-reviewed information on hip and knee replacements. The American Association of Hip and Knee Surgeons (www.aahks.org), The American Academy of Orthopedic Surgeons, the National Association for Orthopedic Nurses, and the American College of Rheumatology and the Arthritis Foundation offer a comprehensive, yet patient-friendly review of treatment option. After reviewing information from a credible site, you should discuss it with your physician and develop a treatment plan that best suits your own individual needs.

Additional Resources

For more information about items addressed in this book, please scan the QR codes below.

- Anesthesia Education
- Constipation Education
- Fall Prevention Education
- Infection Prevention
- Nutrition Education
- Opioid Safety Education
- Preventing Blood Clots

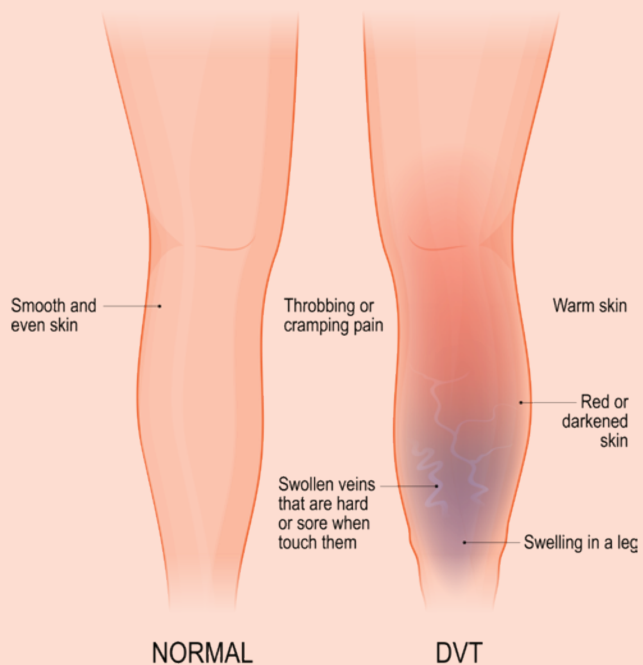
- Pain Management Resources

QR Code may not work pending the model of your phone. If an issue persists, please enter the URL directly.

When to Call Your Surgeon's Office

- **Signs of Infection**
  - Temperature Greater than 102 degrees F
  - Redness, warmth around the incision
  - Increased or persistent drainage
  - Vomiting, unable to keep food down
- **Signs of a Blood Clot**
  - New swelling in one leg (not from an injury) that does not go down when you rest and keep your leg elevated.
  - Your calf (back of lower leg) is tender or painful when you push on it, or
  - Your calf feels warm or hot to touch compared to the other leg
- **Sudden or persistent pain that does not improve despite following your pain management plan**
- **Call 911 right away if you have chest pain or shortness of breath.**

Deep vein thrombosis
(signs and symptoms)



Exercises and Activities

Post-surgical Precautions

Whether you've had hip or knee replacement surgery, the following precautions may be necessary.

Mobility

- You may need to use a walker, cane or crutches for the first 2-12 weeks following surgery.
- For three months after your surgery, be careful about leg movements and how you position your leg. Your physician or therapist will give you guidance about what you can and cannot do.
- When going up stairs, raise the unaffected leg, then the affected leg, and then your crutches/cane. (Remember: UP WITH THE GOOD!)
- When going down the stairs, lower the device (crutches/cane) first, then the affected leg, and then the unaffected leg. (Remember: DOWN WITH THE BAD!)
- When traveling by car, have the car seat pushed back before getting in. Use a firm cushion to raise the seat height. Follow the instructions given by your therapist when entering and exiting a car.
- We recommend that you consult with your physician before driving yourself.

Sitting and Lying Down

- Do not sit on low chairs, low stools or low toilet seats. Use a firm cushion as necessary to raise the height of the chair seat.
- Only sit in chairs that have arms. When you get up from a chair, move to the edge and use the chair arms to help you stand up. Place your affected leg in front. Then push up from behind with the good leg, still keeping the affected leg in front as you stand.

In the Bathroom

- **A high-rise toilet is suggested for your use.**
- A walk-in shower with a rubber non-slip mat and safety-grab bar is highly suggested. Do NOT sit in the tub.
- Use a long-handled sponge and a handheld shower hose to wash and rinse those hard-to-reach places!
- To dry off your feet, use a towel wrapped around a reacher or long handled shoe horn.

Other

- You may participate in sports activities ONLY after your physician has given approval to do so. Avoid any activity that involves start-stop, twisting or impact stress, excessive bending, lifting or pushing heavy objects.

Exercises: Post-surgery and Early Stage of Rehab for Hip and Knee Replacements

SUPINE ANKLE PUMPS (START DAY OF SURGERY)

Sets: **1** | Reps: **10** | Daily: **3** | Weekly: **7**

Setup: Begin lying on a bed or flat surface with your legs straight.

Movement: Slowly pump your ankles by bending and straightening them.

Tip: Try to keep the rest of your legs relaxed while you move your ankles.

SUPINE GLUTEAL SETS (START DAY OF SURGERY)

Sets: **1** | Reps: **10** | Hold: **5sec**
Daily: **3** | Weekly: **7**

Setup: Begin lying on a bed or flat surface with your hands resting comfortably.

Movement: Tighten your buttock muscles, then release and repeat.

Tip: Make sure not to arch your low back during the exercise or hold your breath as you tighten your muscles.

SUPINE HEEL SLIDE (START DAY OF SURGERY)

Sets: **1** | Reps: **10** | Hold: **5sec**
Daily: **3** | Weekly: **7**

Setup: Begin lying on your back with your legs straight.

Movement: Slowly slide one heel on the bed/flat surface toward your buttocks until you feel a stretch, then slide it back down and repeat. (For the 1st two weeks after total knee replacement, try not to bend the knee past 90 degrees to allow for wound/incisional healing.)

Tip: Make sure not to arch your low back or twist your body as you move your leg.

1

2

SUPINE QUADRICEPS SETS (START DAY OF SURGERY)

Sets: **1** | Reps: **10** | Hold: **5sec**
Daily: **3** | Weekly: **7**

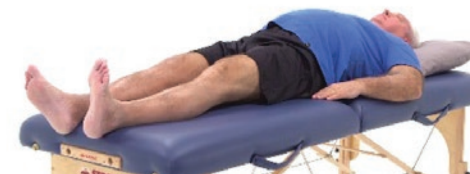
Setup: Begin lying on your back on a bed or flat surface with your legs straight.

Movement: Tighten the muscles in the thigh of your surgical leg as you straighten your knee. Hold, then relax and repeat.

Tip: Make sure to keep your toes pointing toward the ceiling during the exercise. Try to flatten the back of your knee towards the bed.

1

2



Exercises: Additional Progression for Total Knee Replacement

Goal: to increase range of motion and improve muscle control through the entire range of the joint.

A home exercise program is beneficial after total knee replacement when pain is managed and activities do not cause prolonged increased pain or swelling from baseline (i.e., use pain and swelling as your guide).

SEATED LONG ARC QUAD

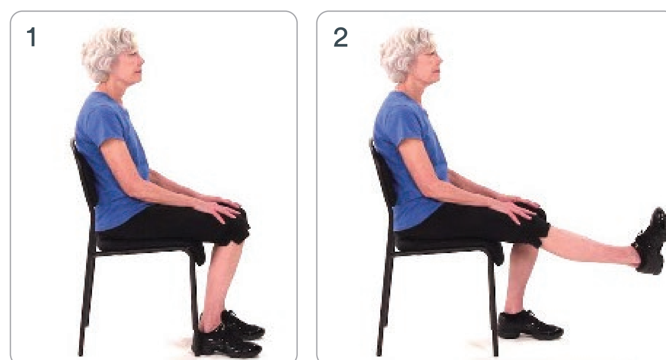
Sets: **1** | Reps: **10** | Daily: **3** | Weekly: **7**

Start after Day 3 or when Home Health PT instructs you to perform this exercise.

Setup: Begin sitting upright.

Movement: Slowly straighten one knee so that your leg is straight out in front of you. Hold, then lower it back to the starting position and repeat.

Tip: Make sure to keep your back straight during the exercise.



SEATED KNEE FLEXION AAROM

Sets: **1** | Reps: **10** | Hold: **5sec**
Daily: **3** | Weekly: **7**

Start after Day 3 or when Home Health PT instructs you to begin this exercise.

Setup: Begin sitting upright with both feet flat on the floor.

Movement: Cross one foot over the other then use it to slowly slide your foot backward under the chair until you feel a stretch. Hold this position. Return to the starting position and repeat.

Tip: Make sure to keep your back straight during the exercise.

SEATED PASSIVE KNEE EXTENSION

Sets: **1** | Reps: **10** | Hold: **10-30sec**
Daily: **3** | Weekly: **7**

Start after Day 3 or when Home Health PT instructs you to begin this exercise.

Setup: Begin sitting upright in a chair with another chair or sturdy surface in front of you.

Movement: Slowly place the heel of your foot of your surgical leg on the chair in front of you so that your leg is as straight as possible and hold this position.

Tip: Make sure to keep your toes pointing toward the ceiling and keep your leg as relaxed as possible during the stretch.

STANDING MARCH WITH COUNTER SUPPORT

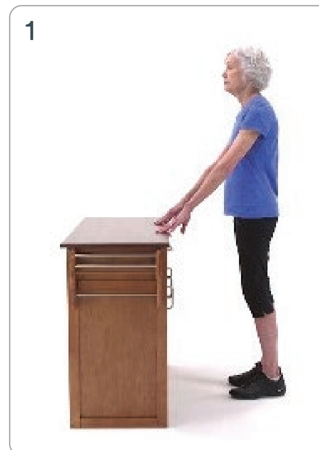
Sets: **1** | Reps: **10** | Daily: **3** | Weekly: **7**

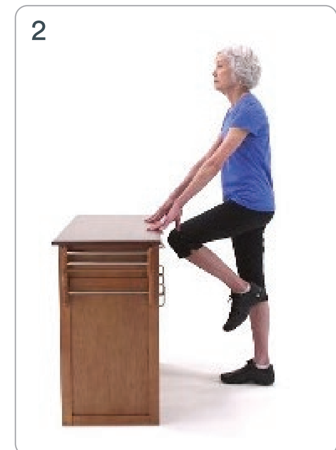
Start after Day 3 or when Home Health PT instructs you to begin this exercise.

Setup: Begin in a standing upright position with your hands resting on a counter.

Movement: Slowly lift one knee to waist height, then lower it back down and repeat.

Tip: Make sure to maintain an upright posture and use the counter to help you balance as needed.





STANDING PARTIAL SQUAT

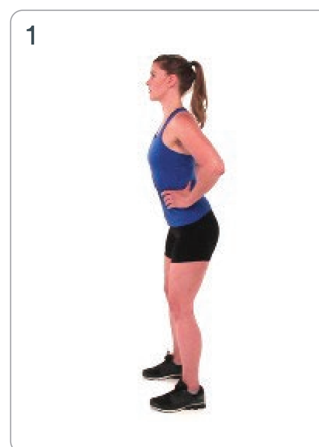
Sets: **1** | Reps: **10** | Daily: **3** | Weekly: **7**

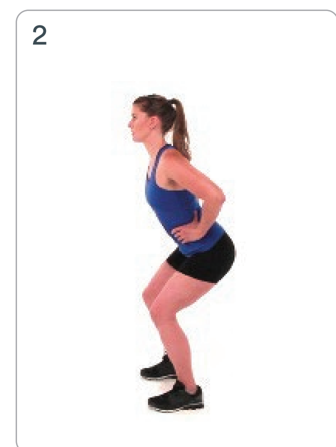
Start after Day 3 or when Home Health PT instructs you to begin this exercise.

Setup: Begin in a standing upright position with your feet slightly wider than shoulder width apart. Hold onto counter or stable object for support if needed.

Movement: Bend your knees and hips into a mini squat position, then straighten your legs and repeat. Do not bend too far down.

Tip: Make sure to keep your back straight and do not let your knees bend forward past your toes.





STANDING HIP ABDUCTION WITH COUNTER SUPPORT

Sets: **1** | Reps: **10** | Daily: **3** | Weekly: **7**

Start after Day 3 or when Home Health PT instructs you to begin this exercise.

Setup: Begin in a standing upright position with your hands resting on a counter.

Movement: Lift your leg out to your side, then return to the starting position and repeat.

Tip: Make sure to keep your moving leg straight and do not bend or rotate your trunk during the exercise. Use the counter to help you balance as needed.

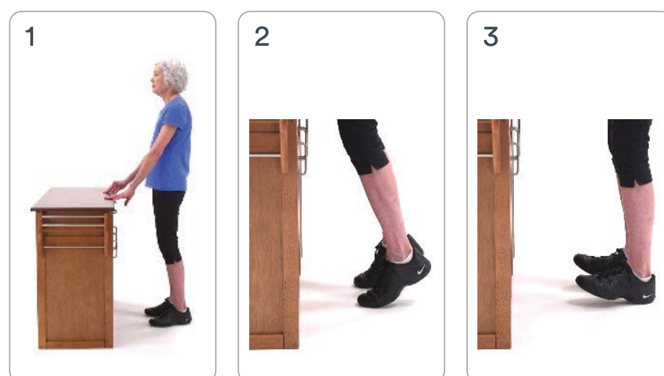
HEEL TOE RAISES WITH COUNTER SUPPORT

Sets: **3** | Reps: **10** | Daily: **1** | Weekly: **7**

Setup: Begin in a standing upright position with your hands resting on a counter in front of you.

Movement: Rise up onto your toes, hold briefly, then lower back on heels and lift toes.

Tip: Make sure to keep your upper body upright and your weight over your big toes during the exercise.



STANDING KNEE FLEXION STRENGTHENING AT CHAIR

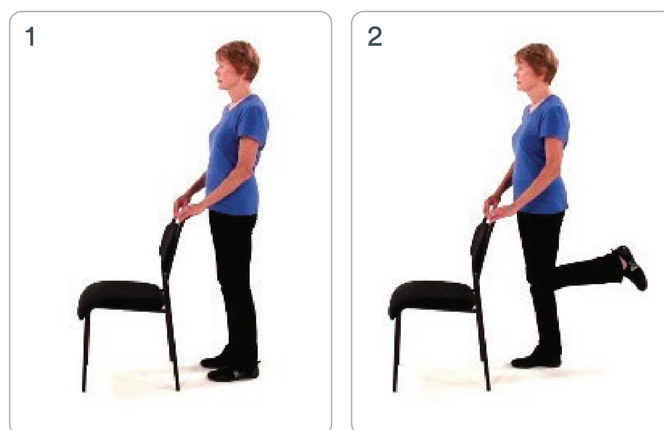
Sets: **1** | Reps: **10** | Daily: **3** | Weekly: **7**

Start after Day 3 or when Home Health PT instructs you to begin this exercise.

Setup: Begin in a standing upright position, holding onto a stable surface in front of you for support.

Movement: Slowly bend your knee, lifting your foot as far as possible, then lower it back to the floor and repeat.

Tip: Make sure to maintain your balance, keep your hips level, and back straight during the exercise.



Exercises: Additional Progression for Total Hip Replacement

Goal: to increase range of motion and improve muscle control through the entire range of the joint.

A home exercise program is beneficial after total hip replacement when pain is managed and activities do not cause prolonged increased pain or swelling from baseline (i.e., use pain and swelling as your guide).

SUPINE HIP ABDUCTION AROM

Start after Day 3 as tolerated.

Sets: **1** | Reps: **10** | Daily: **3** | Weekly: **7**

Setup: Begin lying on your back on a bed or flat surface with your feet slightly apart.

Movement: Slowly slide your surgical leg out to your side as tolerated, then return to the starting position and repeat.

Tip: Make sure to keep your toes pointing straight toward the ceiling and do not bring your feet together during the exercise.

1

2

STANDING HIP ABDUCTION WITH COUNTER SUPPORT

Start after Day 3 as tolerated.

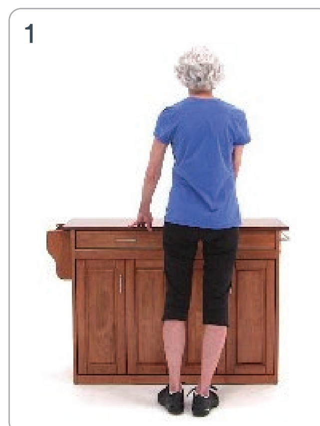
Sets: **1** | Reps: **10** | Daily: **3** | Weekly: **7**

Setup: Begin in a standing upright position with your hands resting on a counter.

Movement: Lift your leg out to your side as tolerated, then return to the starting position and repeat.

Tip: Make sure to keep your moving leg straight and do not bend or rotate your trunk during the exercise. Use the counter to help you balance as needed.

1



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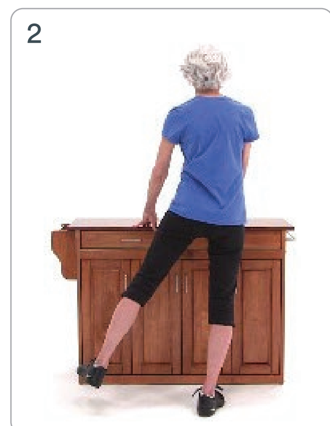


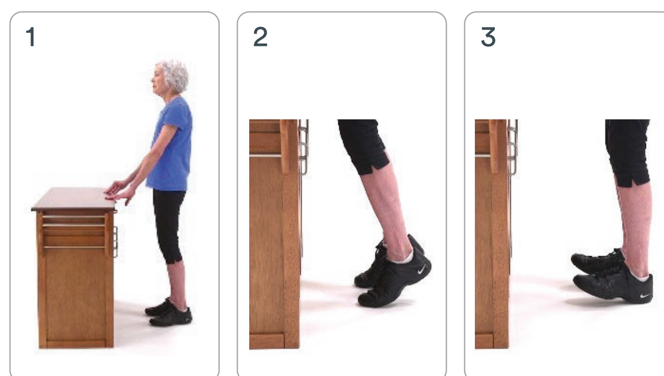
HEEL TOE RAISES WITH COUNTER SUPPORT

Sets: **3** | Reps: **10** | Daily: **1** | Weekly: **7**

Setup: Begin in a standing upright position with your hands resting on a counter in front of you.

Movement: Rise up onto your toes, hold briefly, then lower back on heels and lift toes.

Tip: Make sure to keep your upper body upright and your weight over your big toes during the exercise.



MINI SQUAT WITH COUNTER SUPPORT

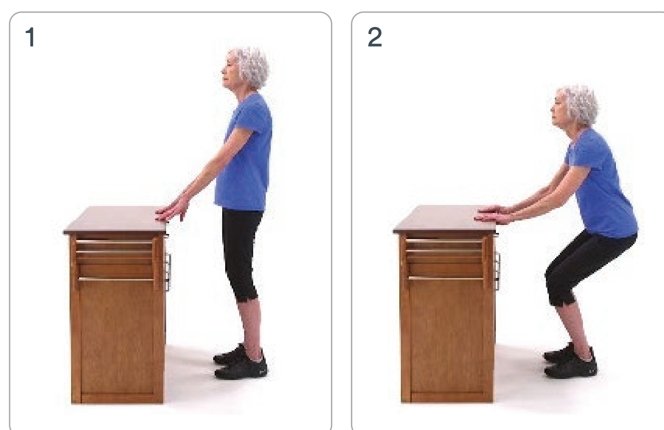
Start after Day 3 as tolerated. Do not go too deeply to squat.

Sets: **1** | Reps: **10** | Daily: **3** | Weekly: **7**

Setup: Begin in a standing upright position with your feet shoulder width apart and your hands resting on a counter.

Movement: Slowly bend your knees to lower into a mini squat position (Do not bend down too low). Hold briefly, then press into your feet to return to a standing upright position and repeat.

Tip: Make sure to keep your heels on the ground and use the counter to help you balance as needed. Do not let your knees bend forward past your toes or collapse inward.



STANDING MARCH WITH COUNTER SUPPORT

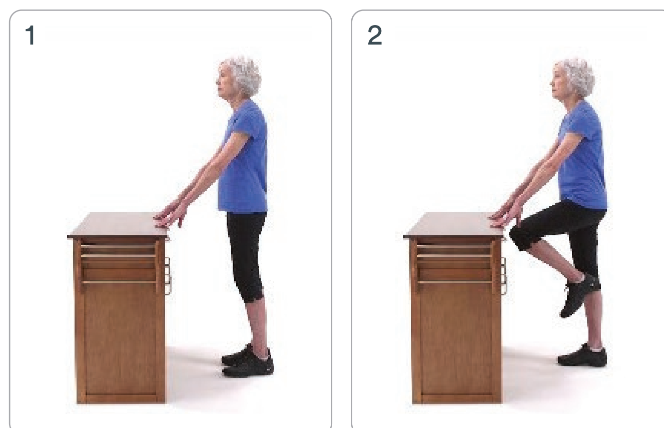
Start after 2 weeks as tolerated.

Sets: **1** | Reps: **10** | Daily: **3** | Weekly: **7**

Setup: Begin in a standing upright position with your hands resting on a counter.

Movement: Slowly lift one knee up (keeping it below waist height as tolerated), then lower it back down and repeat.

Tip: Make sure to maintain an upright posture and use the counter to help you balance as needed.



WALKING WITH A FRONT WHEEL WALKER – WEIGHT BEARING AS TOLERATED

If your doctor has instructed you to be **Weight Bearing as Tolerated**: When you stand or walk, place as much weight on your affected leg as is comfortable. Use pain as a guide for how much weight to put. If it feels painful, place less weight on your affected leg.

Using a walker can help you stay balanced and keep weight off of your affected leg. Be sure to follow any specific instructions from your healthcare provider.

- Begin standing with your walker in front of you, holding onto the handles of the walker.
- Push your walker forward at arms length, so the back legs of the walker are even with your toes.
- Step forward with your affected leg. Your foot should land in the frame of the walker. Only put as much weight as is comfortable on your affected leg and use your arms to support the rest of your body weight.
- Lastly, step through with your unaffected leg.
- Repeat this pattern as you walk, stepping one foot in front of the other.

Tips:

- Make sure all four legs of the walker are level on the ground before you take a step.
- Look forward as you walk. Do not look down at your feet.

Step 1: Move your walker forward.

Step 2: Step forward with your affected leg.

Only put a comfortable amount of weight on your affected leg.

Step 3: Step through with your unaffected leg.

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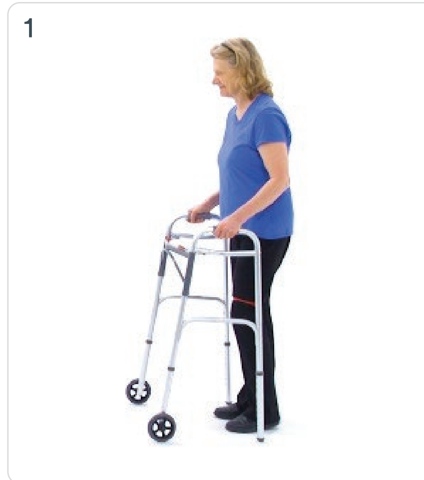


2

3

Home Activities

The following information helps you understand how to change your clothing and get in and out of chairs, showers and commodes safely while your hip or knee is painful or less able to bend.

Pants and Underwear

Keep clothing loose and comfortable. It may be easier to use slip on shoes. Dress the surgical leg first. If you can't reach – a reacher may make it easier. Stand with walker and pull pants over the foot with the reacher and up to the hip.

When undressing, stand with the walker in front of you and pull down the pants and underwear. Sit in a chair and use a reacher to remove pants from legs if needed. Remove non-surgical leg first.

For Posterior Hip Precautions Only: Keep legs apart and do not bend past 90 degrees.

Socks

To help you reach your feet to put on socks, you may use a sock aid. Most patients use this for up to 4 weeks. Slide the sock on the sock aid. Make sure the heel is at the bottom of the device and the toe is tight up against the end. The top of the sock should not come over the top of the plastic piece. Holding onto the cords, swing the sock aid out in front of the foot of the operative leg. Slip your foot into the sock aid, pull up on the cord, sliding sock onto foot. You may put the sock on your non-surgical leg in your usual manner. To take the socks off, use the pin at the end of the reacher to hook the back of the heel and push the sock off you.

Shoes

Wear closed-toed slip-on shoes or use elastic shoelaces so you won't have to bend over to put the shoes on or tie the laces. Use a long-handled shoehorn to put on your shoes if needed.

Sitting on Chair/Toilet

When sitting down, slowly back up to the chair or toilet until you feel the back of your legs against it. Slide your surgical leg forward, then reach back for the chair one hand at a time. Slowly lower yourself onto the chair while looking in front of you and keeping the surgical leg outstretched in front of you. Do not hold onto the walker while lowering yourself.

For Posterior Hip Precautions Only: Keep legs apart and do not bend past 90 degrees.

Home/Work Management

Slide objects along the countertop rather than carrying them. Use a reacher to grasp objects on the floor. If you cannot use adaptive aids (long reachers, long-handled mop, long-handled dustpan, etc.) have someone else complete the chores for you. Consider using a walker bag/tray attached to the handle to carry items with a front wheel walker safely.

For patients with posterior hip precautions: You must always maintain the 90-degree forward bend precaution. Do not bend down to pick up objects.

Shower Transfer

If you cannot safely stand in a shower or have to climb into a tub in order to shower, please consult your therapist. Sidestep into shower, holding onto wall for support. Be sure you are stepping onto a non-slip surface (i.e., bathmat, non-slip strips, etc.). Reach back with one hand for the back of the shower chair. Sit down on the shower chair. Use a long-handled sponge and a shower hose to wash. You may bathe or shower as soon as your physician gives you permission.

Sex After Joint Replacement

By having joint replacement surgery, you're one step closer to a life with less pain and more freedom. Many activities will be easier – including sex. With your new hip or knee, sex may be more comfortable and enjoyable. But until your new joint has fully healed, you need to protect it.

After joint replacement surgery, certain positions will be more comfortable and safer than others. If you had a hip replaced, you may need to take special care not to dislocate (pop out) your new joint. Your surgeon may have given you movement precautions. If so, follow these during sex. Share this information with your partner.

Don't have sex until your surgeon says it's okay. Many people are told to wait at least 4 to 6 weeks after surgery. When the time comes, sex may take a bit more planning than before. Here are some tips:

- Choose a time when neither of you are tired nor stressed. Try to stay relaxed and keep a sense of humor if things don't go exactly as planned.
- Don't be embarrassed to tell your partner if a certain position doesn't feel good. As your body heals, sex will get easier.
- Keep in mind that there is more to sex than intercourse. If intercourse isn't working right away, explore other ways to be close to your partner.
- Bring extra pillows or rolled-up towels into the room. You can use these for your body support as you try different positions.
- Do a few easy stretches to help your muscles be ready. (You can ask your partner to help). If your surgeon has given you movement guidelines to follow, only do stretches that meet these restrictions.
- Remember that your body is still healing from major surgery. Don't push yourself to do anything you don't feel ready for. Always let your partner take the active role at first.

Protect Your New Joint

Until fully healed, and with permission from your surgeon, people who had joint replacement should follow these general safety precautions during sex:

- Resume sexual intercourse initially with YOU on your back.
- Initially you should assume a more passive role.
- Avoid extremes of motion or positions.

If you have a new knee

Any position where you lie on your back or stand up should be safe. Listen to your body and avoid painful movements. Also:

- When lying on your side, put a pillow between your legs to support your new knee joint.
- Avoid kneeling or squatting positions.
- Try not to twist your operated knee.

If you have a new hip (posterior approach)

Unless your surgeon says otherwise, use these precautions:

- Don't turn your operated leg inward or let it cross the center of your body.
- Don't bend at the waist more than 90 degrees. Also, don't raise your knee past hip level.
- Don't turn your knees inward. Prevent this by putting pillows between your legs when kneeling or side lying.
- Don't plant your foot and twist your upper body outward over the hip.

If you have a new hip (anterior approach)

Unless your surgeon indicates otherwise, use these precautions:

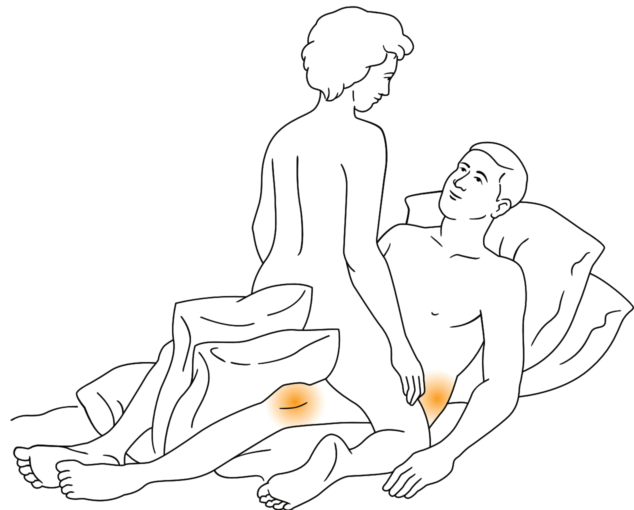
- Don't extend your leg backwards and rotate your toes out.

Safe Positions

Men and women can try these positions after either hip or knee surgery. The shaded areas indicate that the position is safe for that joint.

FACE-TO-FACE

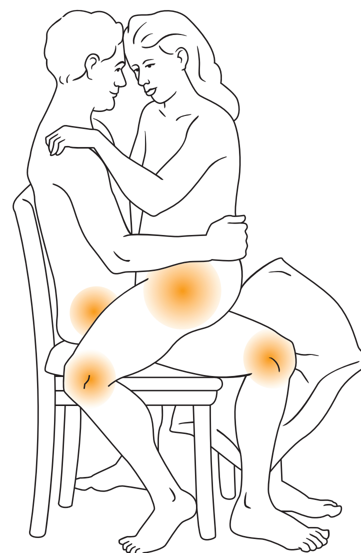
- You should be on the bottom. (The picture shows a man, but this position works with a woman on the bottom, too.)
- Keep your legs apart and turned out slightly. Place pillows outside and inside your legs as support.
- You can prop up your back with pillows or lie flat. Do what is most comfortable.



SITTING IN A CHAIR

Whether you're a man or a woman, this position works after either hip or knee surgery:

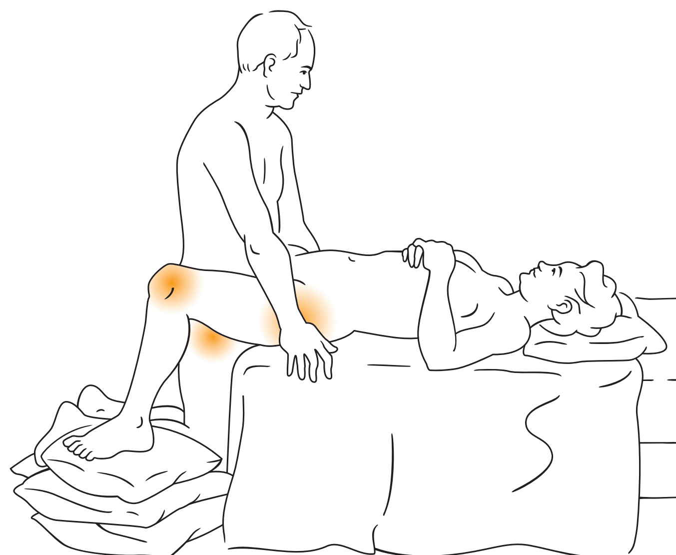
- The man sits on a straight chair with his feet supported or flat on the floor. Use pillows for support.
- The woman sits on his lap, facing him.



WOMAN LYING AND MAN KNEELING

This works for a woman with a new knee or hip, or for a man with a new hip:

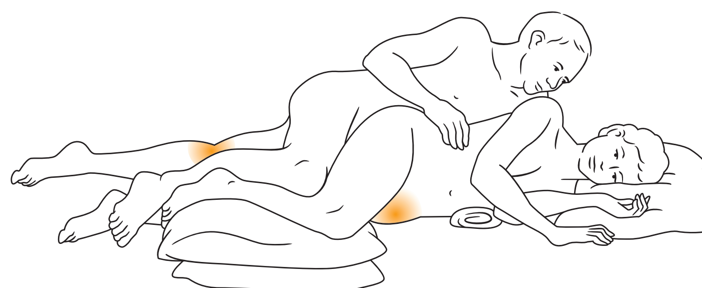
- The woman lies on her back with her buttocks near the edge of the bed. Both feet should be supported or flat on the floor.
- The man kneels in front of the bed and places his hands on either side of his partner's body.



SIDE-LYING POSITION

This works for a woman with a new knee or hip, or for a man with a new knee:

- Both people lie on their sides, with the man behind the woman. The new joint should be on the bottom.
- Use pillows for support.



Appendix

Weekly Medication Schedule

Patient Name: ______________________

Sunday		TIME OF DAY												
NAME	DOSE													

Monday		TIME OF DAY												
NAME	DOSE													

Tuesday		TIME OF DAY												
NAME	DOSE													

Wednesday		TIME OF DAY												
NAME	DOSE													

Thursday		TIME OF DAY												
NAME	DOSE													

Friday		TIME OF DAY												
NAME	DOSE													

Saturday		TIME OF DAY												
NAME	DOSE													

Weekly Medication Schedule

Patient Name: ____________________

Sunday		TIME OF DAY												
NAME	DOSE													

Monday		TIME OF DAY												
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NAME	DOSE													

Wednesday		TIME OF DAY												
NAME	DOSE													

Thursday		TIME OF DAY												
NAME	DOSE													

Friday		TIME OF DAY												
NAME	DOSE													

Saturday		TIME OF DAY												
NAME	DOSE													

Acknowledgment of Understanding

The Total Joint Team feels it is of utmost importance that YOU, the patient, be well informed before the surgery. This has been shown to improve your results after the surgery. Therefore, we hold you responsible for the information in Hoag Orthopedic Institute's Total Joint Replacement Guide that has been issued and ask that you sign the statement below. Team members are available to answer your questions.

I have read Hoag Orthopedic Institute's Total Joint Replacement Guide and understand its contents as well as the potential risks and benefits associated with my upcoming surgery. All of my questions have been answered.

Patient Signature: ______________________________

Date: ________________

Printed Patient Name: ______________________________

Hoag
Orthopedic
Institute

Hospital Information

Hoag Orthopedic Institute.

We Get You Back To You

16250 Sand Canyon Avenue, Irvine, CA 92618
hoagorthopedicinstitute.com

Proudly founded by our premier physicians in partnership with Hoag.

04/26-LAD15812-1M-AB