Total Joint Replacement Guide

Hoag Orthopedic Institute

SURGERY CENTER

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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. The majority of 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.

This guide contains general information on all aspects of your upcoming care, including pre-admission, surgery, rehabilitation, and follow up care.

Hoag Orthopedic Institute Surgery Centers

Hoag Orthopedic Institute Surgery Center Aliso Viejo
15 Mareblu, Suite 100
Aliso Viejo, CA 92656
949-658-0100

Hoag Orthopedic Institute Surgery Center Orange
280 S. Main Street, Suite 100
Orange, CA 92868
714-704-1900

California Specialty Surgery Center
26371 Crown Valley Parkway
Mission Viejo, CA 92691
949-348-0544

Preparing for Surgery Checklist

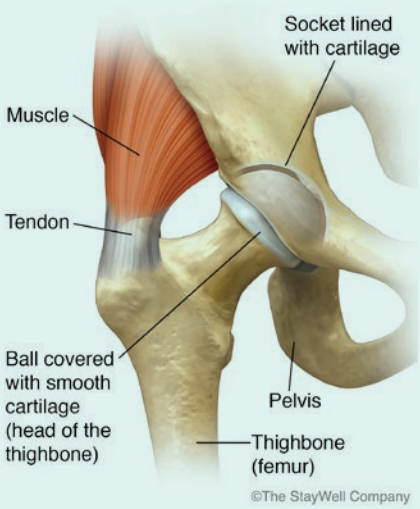
- ☐ Register for HOI's virtual Surgery Center Patients – Hip and Knee Replacement Class.
- ☐ After class, review HOI's online resources to help prepare for surgery.
- ☐ Make arrangements for caregiver support for three days after surgery.
  - ○ If you live alone, have daily contact with family, friends or neighbors when your caregiver leaves.
- ☐ Complete laboratory and EKG orders.
- ☐ Make appointment(s) with other physicians as required by your surgeon.
- ☐ Discuss with your surgeon:
  - ○ Reducing opioids prior to surgery (if applicable).
  - ○ When to stop drinking alcohol (if applicable).
- ☐ Follow the directions for the bowel regimen your surgeon has given you.
- ☐ Four weeks prior to surgery: STOP smoking or vaping marijuana or nicotine (if applicable).
- ☐ Two weeks prior to surgery: STOP taking supplements.
- ☐ Two weeks prior to surgery: Complete an Advance Health Care Directive, if needed.
- ☐ One week prior to surgery: STOP taking anti-inflammatory medications.
- ☐ Five days before surgery: Start nasal decolonization and showering with chlorhexidine gluconate soap.
- ☐ STOP taking blood thinner(s). Date to stop: _____
- ☐ Do NOT eat anything after (DATE) _____ at midnight prior to surgery.
- ☐ Do NOT drink anything after (DATE) _____ and (TIME) _____ prior to surgery.
- ☐ Pick up prescriptions before your surgery.

Register for your virtual pre-op class now at **HOIExperts.com/ASCclass or scan the QR code**.

Introduction

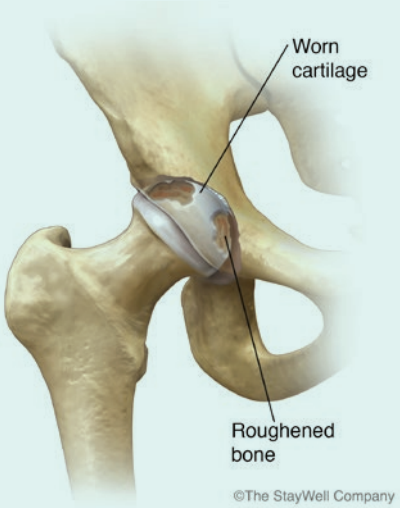
Understanding Hip Replacement

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.



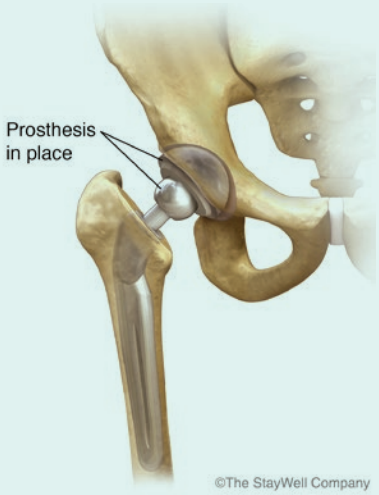
Healthy Hip

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.

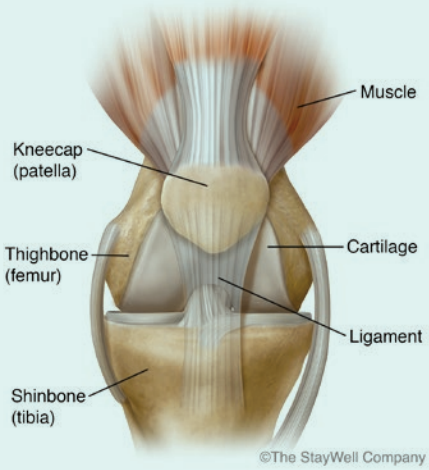


Total Hip Replacement

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.

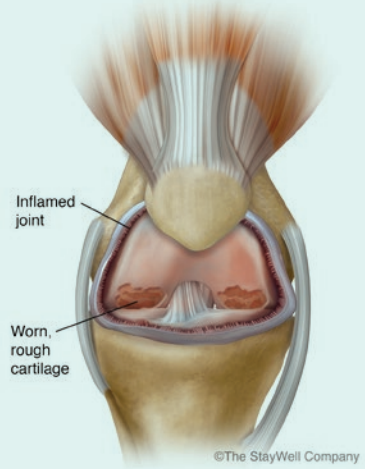
Understanding Knee Replacement

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.



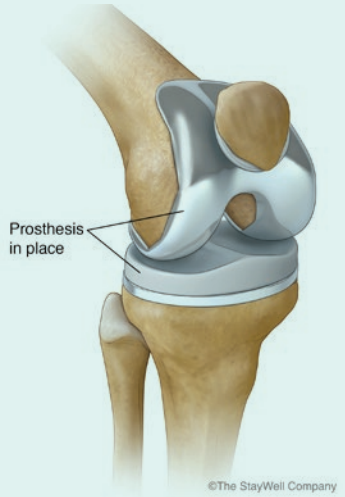
Healthy Knee

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.



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.

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.

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.

Risks of Surgery

- Anesthesia Complications
- Blood Clots
- Blood Loss
- Bone Fracture
- Implant Wear and Failure
- Infection
- Injury to Blood Vessels
- Lack of Pain Relief
- Reaction to Materials
- Wound Complications

Joint Specific Complications

Hip Replacement Risks

- Dislocation
- Leg Length Discrepancy
- Nerve Damage

Knee Replacement Risks

- Leg Length Discrepancy
- Limited Knee Motion
- Nerve Damage
- Skin Necrosis
- Tendon Rupture

Risks of Anesthesia

- Chills and Shivering (Hypothermia)
- Cognitive Dysfunction
- Hiccups
- Itching
- Malignant Hyperthermia
- Muscle Aches
- Nausea and Vomiting
- Postoperative Delirium
- Sore Throat
- Spinal Headaches

Getting Ready for Your Procedure

Pre-Op Phone Call

The pre-operative call is conducted by a surgery center nurse, typically scheduled anywhere from one month to one week before the procedure. They will review your medical history, home medications, hydration protocol, caregiver coordination, and if you need a walker. They will also confirm that your class has been taken. Walkers and ice packs are provided by the surgery center.

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), deductibles and copayments.

If you have any questions about your health insurance benefits, please contact the customer service number located on the back of your insurance card. You will be provided with a walker at the surgery center. Home health physical therapy is set up for you.

What to Bring to the Surgery Center

- ☐ Bring this book
- ☐ Photo ID and your insurance card
- ☐ Co-payment for surgery/ hospitalization, if needed
- ☐ Wear loose fitting clothes, including socks and undergarments
- ☐ Wear closed-toe shoes and orthotic (if using)
- ☐ Rescue Inhaler
- ☐ CPAP
- ☐ Do not wear jewelry and remove permanent jewelry (if not removed, there is a high likelihood that it will need to be cut off prior to surgery)
- ☐ Leave valuables at home

*If you have a walker, have it brought when you are picked up so that it can be sized correctly.

Preparing Yourself and Your Home

Prepare Yourself

- Select loose comfortable clothing to wear during your recovery.
- Select closed toed and heeled footwear that stay securely on your feet and have non-skid soles.
- Identify where you will be elevating your surgical leg.

Nutrition

- Focus on eating high quality proteins.
- Eat a wide variety of fruits and vegetables.
- Include whole grains in your diet.
- Cut back on junk food.
- Avoid crash dieting.

Create a Safe Environment

- Inspect your home for uneven surfaces.
- Make sure you have space to walk with your walker.
- Remove small throw rugs and tack down large area rugs.
- Ensure bathrooms have non-skid surfaces.
- Use night lights.
- Chairs and beds above knee height but below the buttocks make sitting and standing easier.
- Make plans for who will help with your pets.
- Practice using stairs, getting in/out of a car, getting in and out of bed properly.

Front Wheel Walker

Provided by the surgery center and used by all patients.

Equipment that may aid recovery (Not covered by insurance)

3:1 Commode

Can act as a toilet riser, shower chair, or bedside commode.

Safety Frame for Toilet

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.

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.*

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.

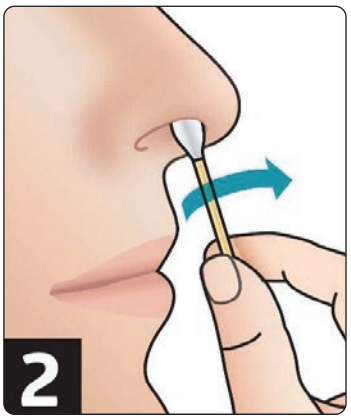
You can resume use of the CHG product after your surgery, when your surgeon allows you to shower, until it is finished.

Cleaning Your Nose Before Your Surgery

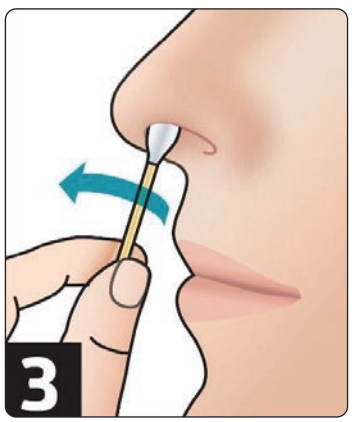
Our noses can carry a bacteria called Staphylococcus aureus. Studies show that ~30-40% of the population carry these bacteria. Using an alcohol-based nasal swab helps remove them. Before surgery, it is important that you take an extra step to help get rid of germs. This lowers the risk of infection at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

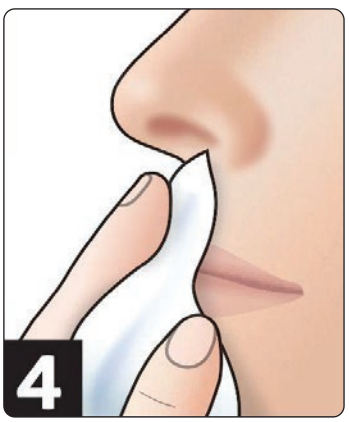
Use a tissue to clean the inside of both nostrils, including the inside tip of nostril. Discard.



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.

Hydration Instructions Before Surgery

Follow guidelines, **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 and go home sooner.
- 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

Surgery and Recovery

Your Day at the Surgery Center

Patient Registration	• Check in and review information
Pre-Op	• Patient Registration • Changing into hospital gown • IV insertion • Review of paperwork • Speak with your Surgeon • Speak with your Anesthesiologist
Operating Room	• Continuous monitoring of your blood pressure, heart rate and breathing status. • Surgery performed
Post Anesthesia Care Unit (PACU)	• Ensure safe recovery from anesthesia • Monitor vital signs • Pain management • X-ray of new joint • Given walker • Bed exercises and up walking with Nursing • Walking to bathroom and able to urinate on own
Discharge	• Verbal and written instructions for discharge

Recovery Timeline

TIMELINE	WHAT TO EXPECT AT THIS STAGE
Day of Surgery	• Rehabilitation begins shortly after you wake up from surgery. • Nursing 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. • 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	• A daily routine includes 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. • 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. • Monitor your diet and fluid intake to maintain your strength. • Monitor your bowel movements.
Weeks 2-3	• Progress frequency and duration of walking/activity. • Progression to cane or no assistive device. • Showering and dressing without assistance. • Reduction of pain medication.
Weeks 4-6	• 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.

Opioids and Pain Management

Safe and Effective Pain Control

Safe pain control is 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 any unused opioids

How does pain affect my recovery?

Unrelieved pain can delay your recovery process. Our goal is to provide balanced pain control so that you can participate in activities that help return you to your best level of functioning, for example, keep you moving and ambulating.

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

Any time you experience pain, inform your physician or registered nurse (RN) even if they don't ask you. 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.

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

Expect to progress in your activity level. Your pain may change over time. Also following different activities, tests or procedures, your pain medication may not be working effectively. It is important to report what makes your pain better or worse. The RN and physician will also be monitoring any untoward 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-opioids, anti-spasmotics, anti-inflammatories, or opioids. Commonly administered opioids are oxycodone or hydrocodone-acetaminophen or Norco™. There are also pain control methods that don't involve medicine, such as distraction, relaxation, repositioning, cold packs or massage.

What if my pain is still not controlled?

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

How can I safely use opioids to manage my pain?

Take the lowest dose possible for the shortest amount of time. For surgical patients with severe pain, addiction is rare when opioids are used for 5 days or less. **The soonest you can wean off opioids to non-opioids is the safest way to manage your pain**.

Never take more medication that prescribed. Do not crush pills, which can speed the rate your body absorbs the opioid and cause an overdose.

What if I have allergies to medications, foods or substances?

Tell the RN what your allergies are, and what type of reaction you have experienced in the past. Make sure it is written on your allergy armband.

What if I have chronic pain?

Let your RN and physician know what type of ongoing chronic pain you have been experiencing, and what medications or treatments have been effective for you. A pain management specialist may be added to your team to oversee your pain plan.

What are the side effects of opioids?

Common side effects of opioid medication can include: nausea, itchiness, constipation, difficulty urinating, and sedation. If you are bothered by any of these side effects tell the RN and/or physician. The staff will be checking your breathing and sedation level on a regular basis. It may be necessary to wake you in order to safely evaluate your breathing. If you develop any unusual feelings while receiving medication, notify the RN immediately.

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

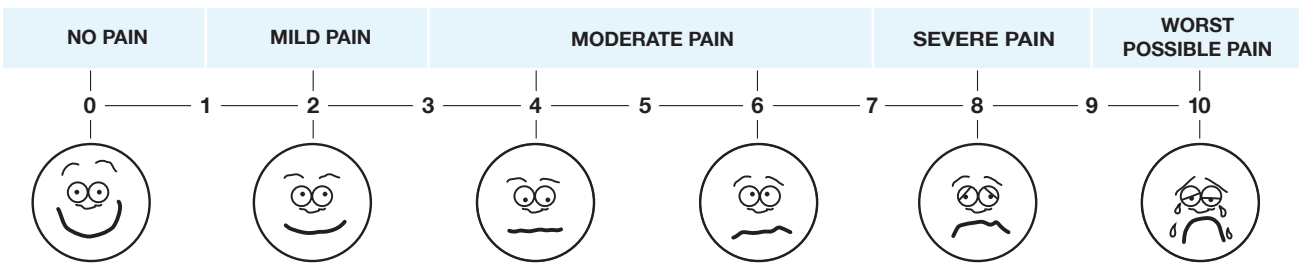
Due to the potential for opioid abuse, prescribers, such as surgeons, are required to adopt a safe prescribing practice for opioids. The number of opioid tablets or pills a physician may prescribe to a patient at one time is limited.

How do I store or get rid of my leftover opioids?

For the safe storage of opioids:

- Keep out of reach of children or pets
- Hide or lock up medications
- Keep you 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

Dispose of opioids as soon as they are no longer needed at a drug take-back program or safe drop site. Find more information at http://usdoj.gov or search for DEA National Prescription Drug Take Back Day near you.



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.

Pain Management Techniques

Elevation

- Elevate the surgical extremity when sitting:
  - ottoman, coffee table, etc.
- Elevate the surgical extremity above the heart level in 30 minute increments, repeating this at least 4-5 times a day.

Icing and Cold Therapy

Icing and cold therapy are great techniques to use to help control the pain after undergoing surgery.

- Create a routine for icing.
- Use ice packs or a cold therapy ice machine.
- Never apply ice therapy directly to the skin. Use a protective barrier such as a towel. Check your skin often.
- Allow time for your skin to warm to its normal temperature between applications.

Distraction

- Consider activities that will keep your mind busy while you are healing:
  - TV, books, games on your phone.

For more information about **pain management resources**, please scan the QR code.

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 medications!
- 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

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.

Opioid Induced Constipation

Opioid medications are regularly prescribed after surgery to help manage pain and/or for chronic medical conditions.

Some common opioids include:

- Percocet (oxycodone/acetaminophen)
- Roxicodone (oxycodone)
- Norco (hydrocodone/acetaminophen)
- Dilaudid (hydromorphone)
- Ultram (tramadol)
- Morphine
- Fentanyl (Duragesic)
- Buprenorphine (suboxone)
- Codeine
- Methadone

About 6 out of every 10 people who take opioids after surgery have constipation. Opioids taken for medical reasons can also cause constipation.

This step-by-step guide can help you trigger a bowel movement (BM) and stay regular while taking opioids. Continue to follow your bowel care plan until you are done taking opioids, have regular bowel movements, or you get diarrhea.

Regardless of what bowel care step you are on, you should:

Limit taking opioids as you can. Ask your care team about other ways to help control pain.

Day 1:
Miralax (Polyethylene Glycol).
One capful in 8 oz. of water once daily.

IF NO BOWEL MOVEMENT

↓

Day 2:
Miralax (Polyethylene Glycol).
One capful in 8 oz. of water twice daily.

IF NO BOWEL MOVEMENT

↓

Day 3:
Miralax (Polyethylene Glycol).
One capful in 8 oz. of water twice daily
AND add Dulcolax (Bisacodyl) 5mg
once daily by mouth.

IF NO BOWEL MOVEMENT

↓

Day 4:
If no bowel movement after four days despite above regimen, call your physician.

NOTE: If you have had bowel surgery or if your surgeon gave you instructions for post-operative constipation, follow the instructions given to you by your surgeon. All medications listed above are available over the counter. No prescription is required.

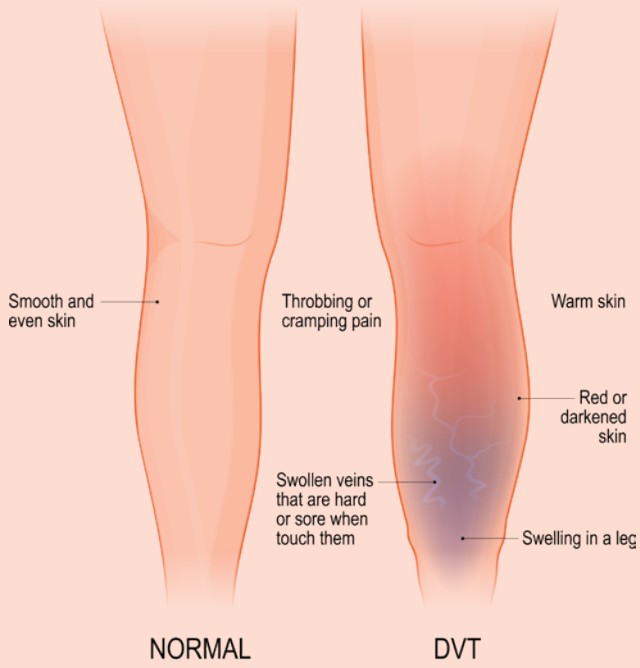
Common Issues After Surgery

- Constipation
- Low Grade Temperature
- Bruising
- Swelling

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.
  - 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)



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
- Frequently Asked Post-Operative Questions

- Pre and Post-Operative Exercises

Patient Reported Outcomes

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. The surgery center staff will explain how surveys are collected at their location.

To ensure completion, our team may follow up with you through email or phone.

** Please note not all surgery center require these surveys.*

Notes

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