Spine Surgery Guide

Hoag
Orthopedic
Institute

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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

MyChart

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.

Pre-Op Spine Class

Schedule virtual pre-op class as soon as surgery is scheduled. Class information and registration may be viewed at **HOIexperts.com/SpineClass**

Scan this QR code to register for the Spine Surgery Class.

Preparing for Spine Surgery Checklist

- ☐ Register for HOI's virtual Spine Surgery 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.
- ☐ Review nutrition recommendations on page 24.
- ☐ Start pre-surgical exercise program, page 26.
- ☐ 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).
- ☐ 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 (see pages 22-23).
- ☐ Evening before surgery: Follow the directions for the Miralax Protocol (see page 18).
- ☐ 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.

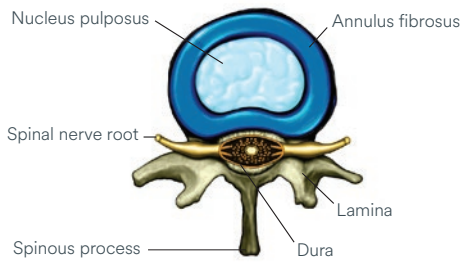
Introduction

Introduction

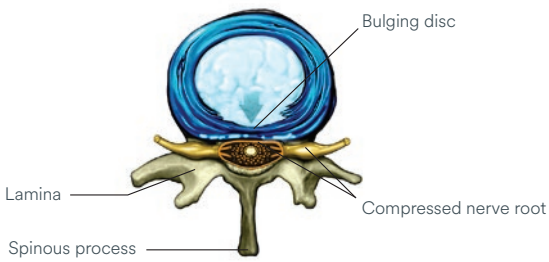
A healthy spine or vertebral column provides support for the body and protection for the spinal cord. It also allows you to move freely because of the three natural curves of the spine which keep your body balanced.

Understanding the Spine

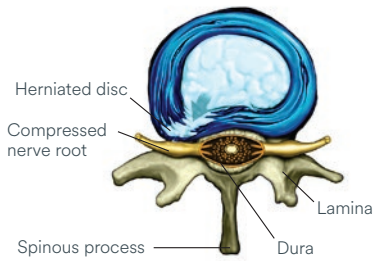
Normal spinal disc



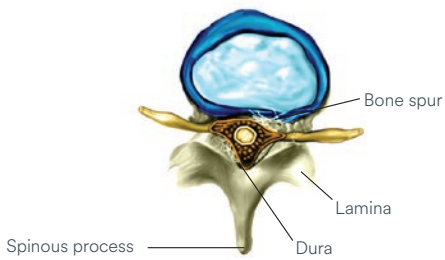
Bulging or protruding disc



Extruded disc

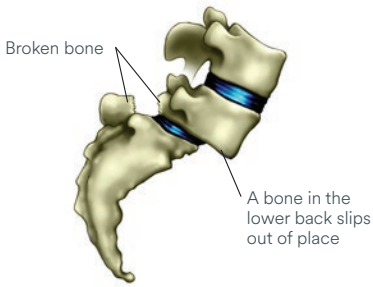


Bone spur



Normal spine

Spondylolisthesis



Scoliosis

Glossary of Terms

Spine Anatomy	**Disc:** Soft cushions located between each vertebrae. The disc acts as a shock absorber for the vertebrae. Each disc contains a jelly-like center called the nucleus and an outer lining called the annulus. **Annulus:** Tough outer lining of the vertebral disc. The annulus contains nerve fibers that can cause pain when injured or irritated. **Nucleus:** Fluid (jelly-like) center of the vertebral disc. **Facet:** A joint located between the vertebrae. **Foramen:** An opening between vertebrae. The spinal nerves exit through the foramina and branch out to other parts of your body. **Lamina:** Part of the vertebrae that covers the spinal cord and nerves in the back of your spine.
Conditions	**Herniated disc:** (Also referred to as "ruptured disc" or "slipped disc.") As a disc bulges, the nucleus moves closer to the edge of the annulus. Sudden movement or injury can rupture the annulus causing the nucleus to squeeze out, irritating a nerve and causing pain. **Osteophyte/Bone Spur:** Bony growth that can grow anywhere on the spine, but most commonly where bones meet. In the spine, they are most common on the cervical or lumbar spine. **Scoliosis:** Abnormal lateral curvature of the vertebral column, depending on etiology, there may be one curve or a primary, secondary compensatory curve. **Spinal stenosis:** Narrowing of the vertebral canal, nerve root canals or intervertebral foramina, causing irritation of the nearby nerves, congenital or due to spinal degeneration. **Spondylolisthesis (a slippage):** A displacement of one spinal vertebrae compared to another.
Types of Procedures	**Artificial Disc Replacement:** Surgical procedure where damaged or diseased disc is removed and replaced with an artificial disc to preserve movement. **Fusion:** Stabilization of two or more vertebrae to correct instability, fusion can be performed with bone grafts and plates, screws, and rods. **Decompression:** A surgical procedure which relieves pressure on the spinal cord or nerve roots. The pressure may result from arthritis, disc degeneration, fractures, infections, or tumors. **Discectomy:** Removal of all or a portion of the intervertebral disc. **Laminectomy:** Removal of the lamina. This procedure allows the surgeon to approach the spinal cord and nerves for removal of tumors and herniated discs. **Laminotomy:** Removal of only a portion of the lamina – the back part of a spinal bone – to relieve the pressure in a specific spot.

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 are the risks/side effects of anesthesia?

- Nausea and vomiting
- Sore throat
- Postoperative delirium – Confusion when regaining consciousness after surgery is common, but for some people – particularly older patients – the confusion can come and go for about a week.
- Muscle aches
- Itching
- Chills and shivering (hypothermia)

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

- Cognitive dysfunction – 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 heart disease, especially congestive heart failure, Parkinson's disease or Alzheimer'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 the physician anesthesiologist.

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 and Possible Complications

The following is a list of potential complications and risks associated with major surgeries such as your spine surgery. Your physician will explain risks that are pertinent to your specific surgery.

- Dural tear, “spinal fluid leak”
- Complications from anesthesia
- Infection
- Injury to blood vessels
- Injury to nerves
- Blood clots
- Blood loss
- Transfusion reactions
- Death

There may be potential risks that apply to you as an individual that are not listed. If you have any questions or concerns about these or other complications of surgery, please discuss them with your physician.

Getting Ready for Your Procedure

What to Bring to the Hospital on Day of Surgery

- ☐ Spine Surgery Guide
- ☐ Photo identification
- ☐ Insurance card
- ☐ Form of payment, if needed
- ☐ Advance Directive, if not already in your chart
- ☐ Toiletries
- ☐ Closed-toe/non-skid slippers or shoes (if you use an orthotic, please bring it too)
- ☐ Loose-fitting clothing including socks, shoes and undergarments
- ☐ Orthotic brace (if provided to you)
- ☐ Hearing aides
- ☐ Glasses with case
- ☐ CPAP mask and machine
- ☐ Cell phone and charger

LEAVE jewelry and valuables at home.

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.

If you already have an Advance Directive or a Living Will, please have a copy available for your pre-admission screening appointment and 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.

Review Insurance and Financial Planning

Thoroughly review your insurance benefits and/or alternative plans for payment.

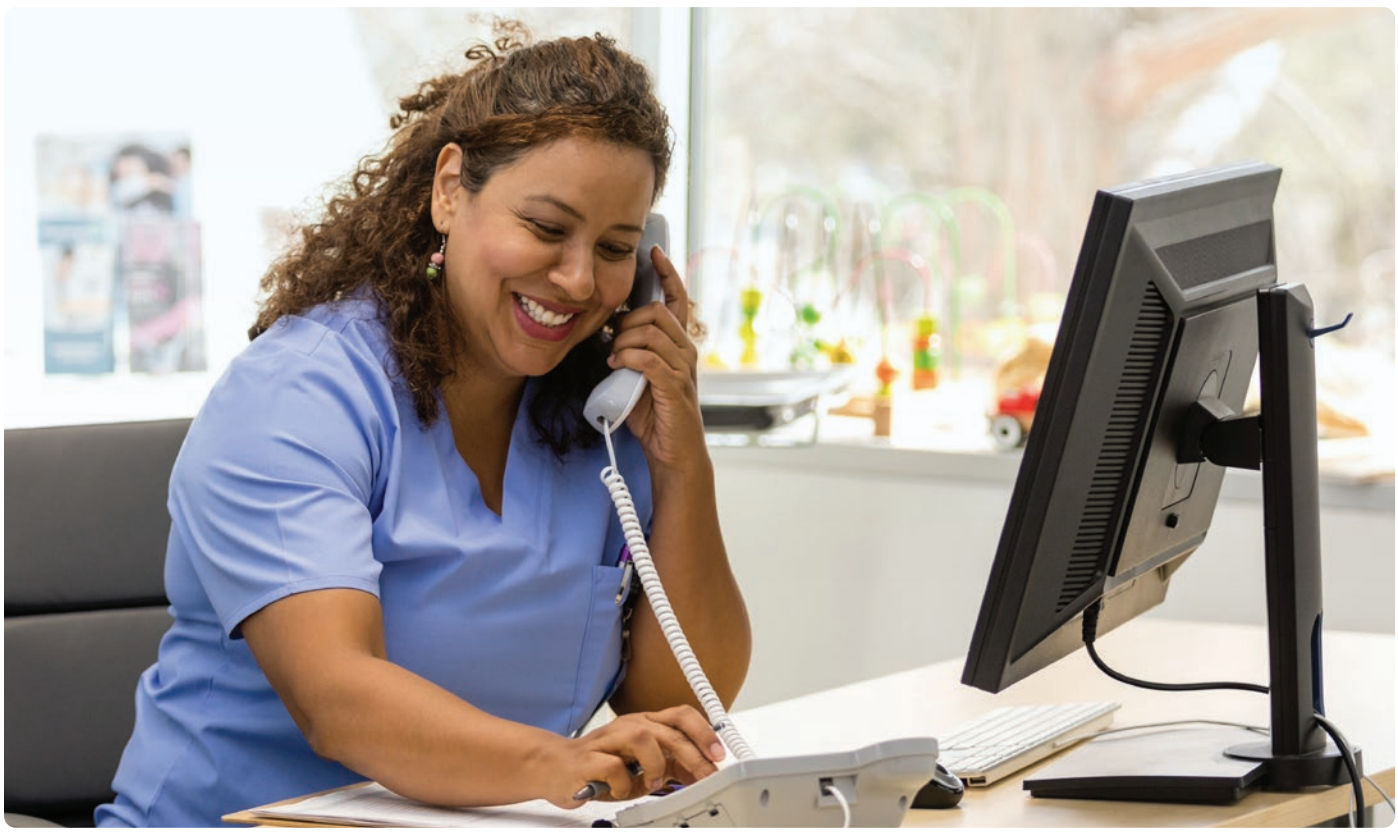
If you have any questions about your health insurance benefits, **please call your insurance plan's customer relations department**. The number is usually toll free and may be found on the back of your insurance card.

A member of the Registration team will call to confirm your insurance, address, and phone number. They will notify you if there is any financial responsibility. Full estimated payment is required prior to admission or on day of service.

Pre-Admission Call

The pre-admission staff (PAS) at Hoag Orthopedic Institute will call you within days of being scheduled for surgery. During this call, they will:

- Confirm your personal information
- Assist in scheduling dates for pre-admission testing
- Schedule your nurse navigator call that takes place approximately one week prior to surgery



Discharge Planning

Advantages of Discharge to Home

Studies have found that patients who discharge home following their hospitalization have lower risks for infection, medical complications, and hospital readmissions.

Durable Medical Equipment (DME)

Insurance covers DME under certain criteria based on medical necessity. Some information to consider: Assistive devices such as walkers may not be covered if you have received one within the last 1-5 years. You may have a copayment if approved. Insurance does not cover adaptive equipment, such as bedside commodes, or cold therapy units. Depending on the type of equipment, you may have the option of renting or buying from a local or online store.

Transportation

Please plan for a ride home from a friend or loved one. Private non-emergency transportation options such as wheelchair van or gurney transport can be arranged at a private cost. Out of pocket costs vary based on service type and mileage.

Understanding Rehabilitation Options After Surgery

If a rehabilitation facility is recommended, a Care Manager will work with you to ensure your discharge is coordinated to a facility covered by your insurance and suited to your preferences. Please note that admission to a facility cannot be guaranteed and will depend on insurance approval and availability. **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. Criteria for acute rehabilitation hospitals include a recent onset of functional limitations due to conditions such as a stroke, traumatic brain injury, spinal cord disease, amputation, orthopedic disorder, neuromuscular disorder, cardio-pulmonary disease, and/or multiple traumas. These cases typically require intensive therapy, which involves at least three hours per day of occupational, physical, and/or speech therapy. For more help on planning for alternative discharge plans, please contact the HOI Care Management department.

A case 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 provider will reach out to schedule directly with you. For patients who need to arrange for outpatient physical therapy, please contact the surgeon's office to obtain the prescription to schedule your start of care. Outpatient therapy offers access to specialized equipment and targeted exercises designed to help you regain strength and mobility.

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.

Please refer to the Discharge Planning page on our website for additional resources.

Preparing to Care for Yourself After Spine Surgery

It is recommended that you have 24 hour assistance for at least the first 3-5 days after surgery. If your family and friends are unable to help you, the Care Management Department at the hospital is able to provide a list of agencies for referrals.

Caregiver Guidelines

- View 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 their home exercise program.
- Help organize medications.
- 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.
- Help with managing an assistive device such as a walker.
- Offer encouragement.
- Ensure you are taking care of yourself too.

Preparing Your Home for After Surgery

Flooring

- Be aware of uneven surfaces both inside and outside your home.
- Remove smaller rugs.
- Make sure area rugs have non-skid backings or use double-sides tape so they won't slip.
- Make sure area rugs and carpets are free of curled edges, worn spots and rips.
- Eliminate obstacles from pathways both outside and inside the home.

Kitchen

- Move frequently used items to areas between your hips and shoulders. This minimizes 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 your pet away from your incision site for 6 weeks.
- Be mindful of where your pet is while walking.
- Keep your pet off your bed.

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.
- If recommended, ensure grab bars or safety rails are securely anchored.
- A raised toilet seat or commode frame may be necessary.
- Keep toiletries within easy reach.

Lighting

- Maintain adequate lighting in all areas.
- Use night lights.

Furniture

- Sit in chairs with arm rests to help you get in and out of the chair.
- Place a firm cushion or pillow on seat of chair or couch if necessary.

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 equipment is in proper working condition.
- Make sure the rubber tips of canes and walkers are in good condition.
- Consider the use of a walker bag. Do not try to carry anything in your hands while you are using a walker.

Footwear

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

Personal Precautions

- If you live alone, have daily contact with family, friends or neighbors.
- Be alert for unexpected hazards like out of place furniture, pets, children, and toys.
- Avoid rushing.
- Make sure your vision is not obstructed when walking around the house.
- Take time to regain your balance and gait when you change positions, i.e., going from lying down to sitting and sitting to standing.
- Allow yourself extra time for activities.
- Take several rest breaks and sit when necessary.
- Do not use a step stool to reach items in high cupboards, get help.
- Coil or tape cords and wires next to the wall so you can't trip over them.

Constipation Prevention

Many patients experience constipation after surgery due to:

- Opioid pain medication
- Anesthesia
- Decreased appetite
- Decreased mobility

What can I do to prevent post-operative constipation BEFORE my surgery?

- **Take a one-time dose of over-the-counter MiraLAX (Polyethylene Glycol 3350) the evening prior to surgery**
  - Dose: Add 17 grams of powder (fill to cap line) to 4-8 ounces of beverage
  - See bottle for instructions
- Stay hydrated
- Maintain adequate daily fiber intake
- Maintain your activity level
- Review our Constipation Prevention Education on page 52

Follow the protocol exactly, do not take more as this can cause you to have a bowel movement on the operating table and increase your risk of infection.

Ask your doctor before taking if you have irritable bowel syndrome or known gastrointestinal issues.

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

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

Universal Decolonization is a strategy used to help prevent health care-associated infections, particularly those caused by methicillin-resistant Staphylococcus aureus (MRSA) and methicillin-sensitive Staphylococcus aureus (MSSA).

The goal of decolonization is to lower the microbial bio-burden on body sites to reduce the risk of infection. Nasal decolonization through the application of a topical antibiotic or antiseptic agent and skin decolonization through the application of an antiseptic during bathing are common methods and frequently are used together.

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.

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

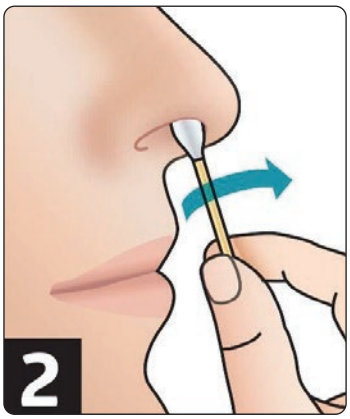
4. Do not use your regular soap after using and rinsing CHG product.
5. Pat yourself dry with a clean towel.
6. Use only compatible moisturizers or lotions.
7. Put on clean clothes.
8. Use clean bed linens after the first night's shower and the night before surgery.
9. If time allows, use the CHG shower product on the morning of surgery.

You may resume use of the CHG product after your surgery when your surgeon allows you to shower. List of CHG-compatible moisturizers on the QR code here.

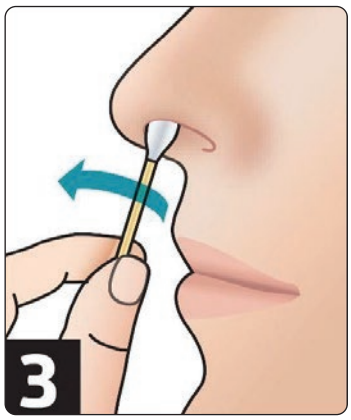
Cleaning Your Nose Before Your Surgery

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.

Fuel Your Recovery with Nutrition

Proper nutrition is important for leading a healthy lifestyle.

Your pre and post-surgery diet should include as many nutrients from healthy food as possible. Start now.

- **Eat enough protein.**
- **Stock up on fruit and vegetables.**
- **Include whole grains.**
- **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 available.
  - 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 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.

Exercises and Activities

Pre-Op and Post-Op Exercises

Practicing gentle exercises and correct positioning pre-operatively help to prepare you for your surgery and recovery.

- When exercising:
  - Use proper body mechanics as you position yourself on a firm surface or bed.
  - Keep your ears, shoulder and hips in alignment.
  - Avoid twisting or bending your back.
- Start performing these exercises today and continue until the day of your surgery.
- Do them twice each day.
- When exercising lying down, use a firm surface such as a bed or couch.
- Do exercises gently and slowly without increasing pain.
- Remember to breathe while exercising.

ANKLE PUMPS

- Move ankles up and down and around in circles.
- Repeat a minimum of 10 times.

QUAD SETS

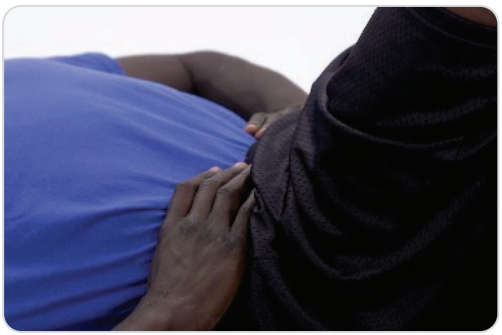
- Slowly tighten muscles on thigh of straight leg.
- Hold for a count of 5 while continuing to breathe.
- You may have both legs flat on bed to do this exercise.
- Repeat 10 times.

GLUTEAL SETS

- Pinch your buttocks together.
- Hold contraction for a count of 5 while continuing to breathe.
- Repeat 10 times.

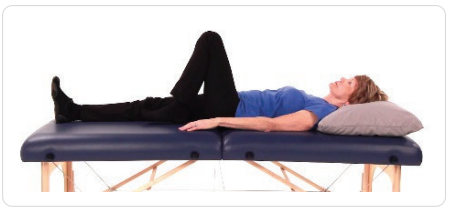
ABDOMINAL BRACING

- Lie on your back with your knees bent.
- Place your fingertips on your lower abdominals.
- Tighten your abdominals as if you were pulling on a tight pair of pants.
- Hold for a count of 5 while continuing to breathe.
- Repeat 10 times.



HEEL SLIDES

- Contract lower abdominals.
- Bend knee and pull heel toward buttocks.
- Straighten knee, relax abdominals and repeat with other knee.



HEEL AND TOE RAISES

- Stand erect without leaning forward.
- Your hand may touch something for balance only.
- Tighten abdominals and buttocks.
- Rise on balls of feet with knees straight.
- Return to starting position.
- Now raise toes up toward ceiling without moving trunk.
- Repeat 10 times.

Positioning and Body Mechanics

The following techniques will enable you to move safely, and get in and out of bed while protecting your neck and back.

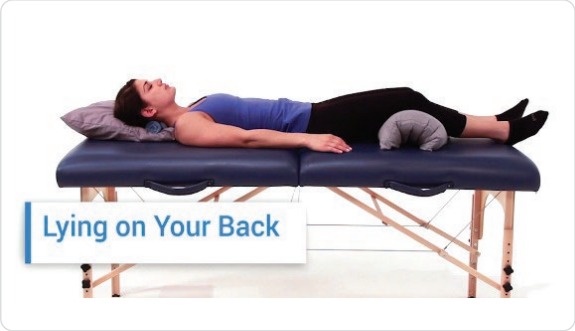
SLEEPING POSITIONS

Lying on your back:

- Place a pillow under your neck and head for support, avoiding excessive forward head motion.
- Place another pillow under your knees and thighs.

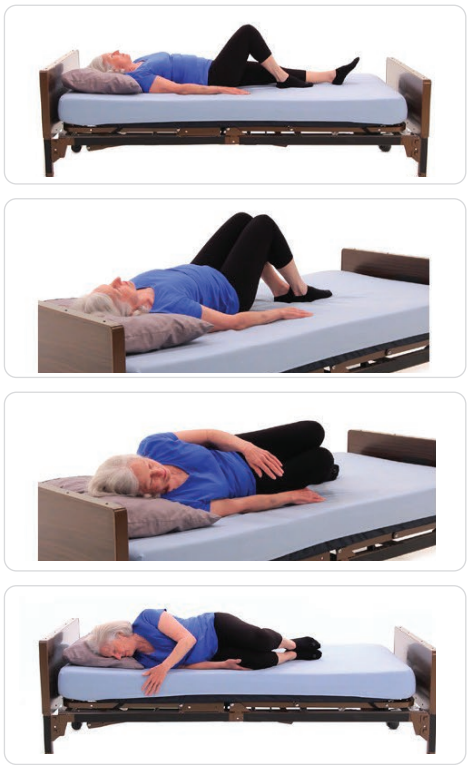
Lying on your side:

- Place a pillow under your neck and head to support it. Keep head, shoulders and hips in alignment.
- Place a pillow between your knees with the knees slightly bent.
- Hold a pillow in front of your chest to support your arm as this may prevent your shoulder rolling forward and improve your comfort.



LOG ROLL
(Rolling From Your Back to Your Side)

- Begin lying on your back in the middle of your bed.
- Slowly bend one knee and place your foot on the mattress, then repeat with the other leg.
- Lift your hips off the bed and shift your body away from the side you will be rolling to.
- Leading with your knees and reaching your arm across your body, roll onto your side.
- To roll onto your back, rotate your hips and shoulders back toward the bed, keeping your torso straight

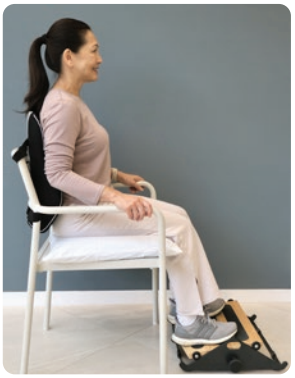


GETTING IN AND OUT OF BED

- To sit at the side of the bed, log roll to your side.
- Brace your abdominals, lower your legs off the bed at the same time as you push with elbow underneath you and other hand in front of body to attain upright position.
- Maintain your shoulders, hips and knees in alignment.
- Maintain your head and shoulders in alignment.
- To return to bed: reverse the above.

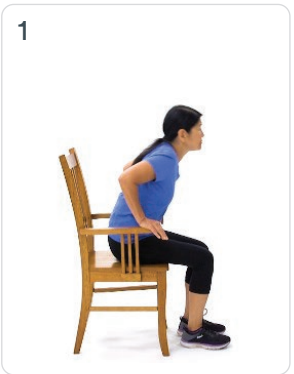
HEALTHY POSTURE IN A CHAIR

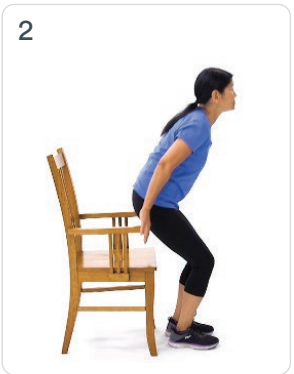
- Sit in a chair with back support to avoid slumping.
- It is ideal to sit in a chair that allows your hips to be higher than your knees by at least two inches for ease with getting up/down.
- You can place pillows on seat to elevate chair seat height.



STANDING UP

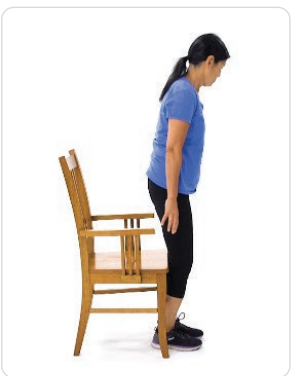
- **Step 1:** Scoot towards the edge of the chair and place your feet flat on the floor. Then lean forward so your nose is over your toes.
- **Step 2:** Push up into a standing position.





SITTING DOWN

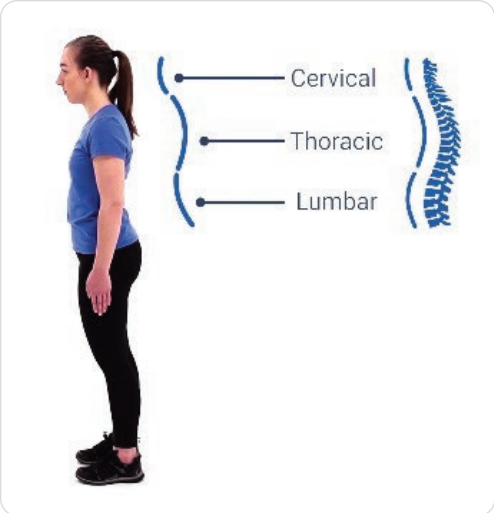
- **Step 1:** Begin with the backs of your legs touching the seat.
- **Step 2:** Reach back for the armrests and slowly sit down.



GOOD POSTURE / SPINE IN NEUTRAL

Keep Spine in Neutral Position

- In this position your body is maintaining its three natural curves (cervical, thoracic, lumbar).
- A vertical line through your body should go through your ear, shoulder, pelvis and ankle.
- You should attempt to maintain your "stable spine" with all activities.
- This is done by bracing your stomach and back muscles with initiating all movements and activities.



CAR TRANSFER WITH WALKER AND LUMBAR PRECAUTIONS

- Lower onto the seat.
- Scoot back then bring one leg in at a time.
- Pivot on bottom to turn to get in/out of the car.
- **DO NOT** grab the door to get in/out of the car.
- Reverse to get out.

Activities of Daily Living

Consider the activities you do daily and the modifications that may be needed after surgery.

DRESSING TIPS / CLOTHES

- Choose clothing that is easy to pull up and down.
  - Pull your pants up over your knees before standing to prevent them from falling to your ankles when you stand up.
- Use pull-up style incontinence briefs instead of ones with side tabs.
- Keep a change of clothing within reach of the toilet in case you experience incontinence.
- If you use adaptive equipment when getting dressed, keep an extra set of tools in the bathroom.

GROOMING

- Bend knees slightly hinging at the hips.
- Keep back straight.
- If needed, brace self with one arm while grooming self with other hand.

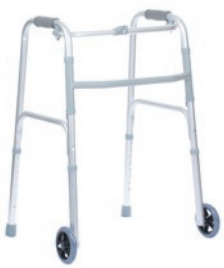
Medical and Adaptive Equipment

The purpose of adaptive equipment is to assist you in performing tasks associated with daily living. Proper equipment increases safety, helps maintain surgical precautions, and decrease pain. Most adaptive equipment is not covered by insurance. Please contact your insurer for guidance. If you know you need equipment, please purchase it before surgery. Otherwise, our therapy team will recommend equipment, if needed, during your stay.

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.

FRONT WHEEL WALKER



REACHER

SOCK AID

3:1 COMMODE

SHOWER CHAIR

TUB TRANSFER BENCH

LONG-HANDLED SPONGE

BATHROOM TONGS

TOILET AIDE

PUTTING ON PANTS USING A REACHER

- Use the reacher to lower the pants to your feet and slide the pants over your leg until you can see your foot.
- Repeat on the other side.
- Then stand up, holding, onto the pants, and pull the pants over your hips.

TAKING PANTS OFF USING A REACHER

- Stand up and slide your pants down past your hips.
- Sit down, then use the reacher to push the pants down and pull the pants off one leg at a time.

PUTTING ON SOCKS WITH A SOCK AID

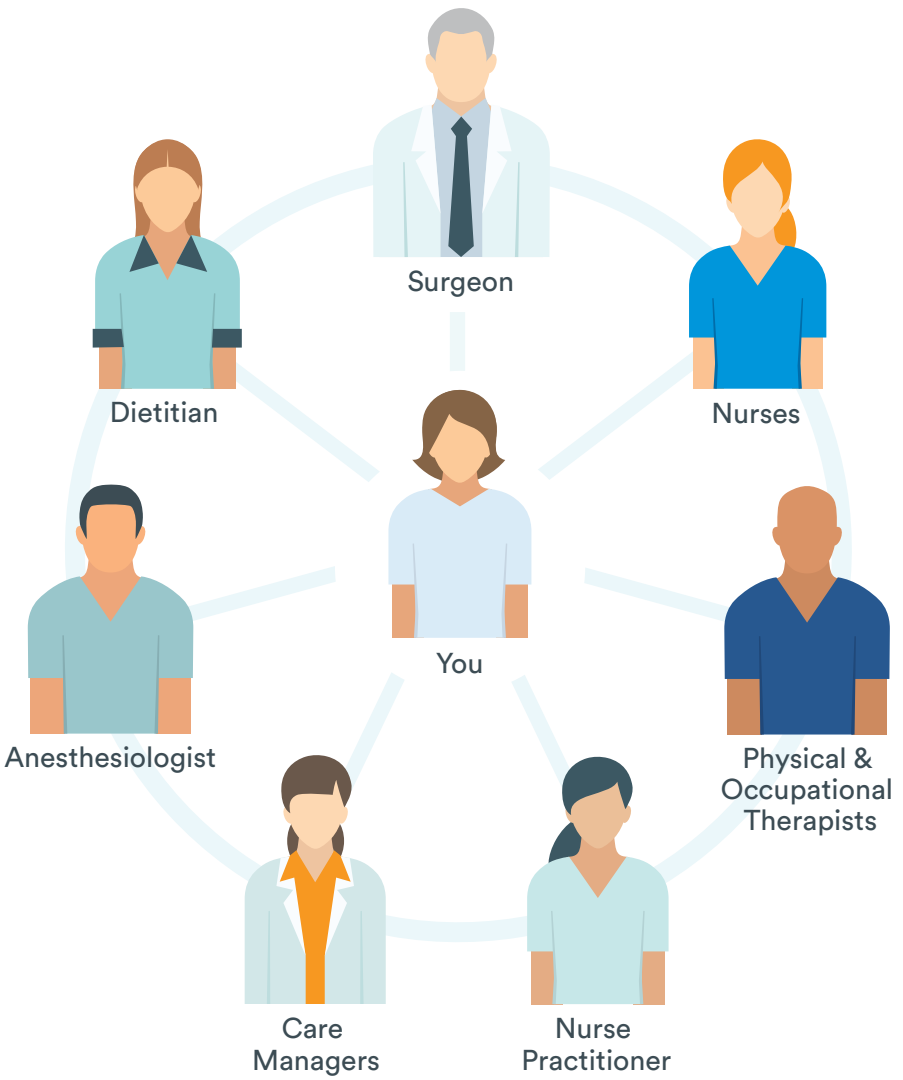
- Slide the sock on the sock aid ensuring the heel is at the bottom.
- Holding onto the cords, swing the sock aid out in front of the foot.
- Slip your foot into the sock aid, pull up on the cord, sliding sock onto foot.

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 at the bedside.

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 surgery.

Occupational Therapist (OT)

A healthcare professional that is responsible for planning safe ways for you to complete your daily activities, such as bathroom hygiene.

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. They can also answer 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 Day of Surgery

Registration Area

- HOI Registration is located in the hospital lobby.
- After checking in at the registration desk you will be escorted to the pre-operative unit.

Preoperative Unit (Pre-op)

- Preparations for your surgery are completed in the pre-op unit.
- Your support person will wait in the surgical waiting area until you have changed into your surgical gown.
- Your support person may then join you until you are taken to the operating room.
- Your support person's contact information will be verified 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.
- The nurses will perform a brief history and physical examination, start an intravenous line, administer medications, make you comfortable, and answer any questions.
- You will meet with your surgeon.
- Your anesthesiologist will meet you for a discussion about the anesthesia you will receive and answer any questions you may have.
- You will be given intravenous antibiotics.
- You will sign a surgical and anesthetic consent forms.
- You will meet an operating room registered nurse.
- You may receive some sedation and will then be transferred to the operating room when the OR is ready.
- You will then be transferred to the Operating Room by a nurse.

Operating Room

- You will be asked to move from the gurney to the operating table once you are in the surgery area.
- 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.
- 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 a highly trained 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 normal and you may be medicated for the shivering and warm blankets will be provided.
- If you have a drain, the 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.
- If you will be spending the night at HOI, you will be transported to the Orthopedic Nursing Unit.
- If you are going home on the day of your surgery, you will recover and discharge in the Day of Surgery Unit located within the PACU. Your support person can join you in the Day of Surgery Unit once you are medically stable. A physical therapist or nurse (depending on your surgery) will get you up and moving.

Cervical Spine Patients

Cervical Precautions

- Avoid excessive motion (flexion, extension, turning), reaching, and lifting of objects over 1-3 lbs. Pivot on your feet and turn your whole body instead.
- Avoid reaching for objects by moving closer to them.
- Avoid reaching overhead for objects; ask for assistance (normal hygiene activity is allowed).
- Avoid lifting objects weighing over 1-3 pounds using a cup of coffee or soda can as reference.
- Avoid slouching by keeping your three natural curves (cervical, thoracic, and lumbar) aligned with your head and shoulders over your hips and knees. This includes standing and sitting positions.
- Avoid any excessive neck motion which includes nodding “yes” or “no” when speaking.
- When lying down, avoid excessive pillows under the head which might push your head forward.
- When eating, loosen rigid braces one notch to allow for chewing. Make sure you are sitting fully upright. Be mindful of your movement as you will have less support during this time.
- Keep reading materials at eye level. You may need pillows to support arms.
- Watch for any items left in your path or small animals. In your rigid collar, you have no visual field to your feet.
- **Precaution timeframes are determined on an individual basis by your surgeon.**

Neck Brace

- Most patients wear a soft or rigid neck brace after surgery.
- The type of brace and how long it needs to be worn is determined by your surgeon.
- May remove brace to shower.

Pain

- It is important to expect pain after surgery.
- May experience pain in:
  - Back of neck
  - Shoulders
  - Sore throat

Anterior Approach

- May experience swallowing difficulties that can last for a few days up to a few weeks.

Diet

- Eating and drinking will start on the passing of a swallow evaluation.
- You will start on a pureed diet and be advanced as tolerated.

If coughing with water, thin liquids, or if unable to tolerate liquids, notify hospital staff immediately.

Lumbar Spine Patients

Back Precautions

- Avoid bending, lifting, twisting, reaching, pushing, and pulling.
- Avoid bending the trunk by keeping the back straight, hinge at the hips, and squat at the knees.
- Avoid lifting any object weighing over 5-10 pounds using a gallon of milk as reference.
- Avoid lifting and/or reaching by moving close to the object and use a step stool to keep objects at eye level.
- Avoid twisting by keeping shoulders, hips and knees facing the same direction. These include tasks such as vacuuming, laundry and food preparations.
- Avoid prolonged positioning by changing position frequently before fatigue or pain sets in. Do not sit for long periods of time.
- Short, frequent walks throughout the day may help.
- Avoid slouching and maintain the normal three curves of your spine (cervical, thoracic, and lumbar) by keeping your head and shoulders over your hips and knees. This is true for sitting and standing positions.
- When lying down on your back, use pillows under the knees and under the head and neck.
- When lying on your side, use pillows between knees and under your neck to maintain a midline posture.
- Log roll to get in and out of bed.
- **Precaution timeframes are determined on an individual basis by your surgeon.**

Back Brace (if needed)

- The type of brace and how long it needs to be worn is determined by your surgeon.
- Wear your brace as instructed.

Pain

- It is important to expect pain after surgery.
- Patients may have pain to lower back and legs.
- Your pain can be nerve and/or muscular, related to the incision or inflammation.

Your pre-op symptoms will continue to improve – not always measurable on a daily basis but as your recovery progresses.

- May experience intermittent pre-op symptoms as the nerve can be inflamed.
- Numbness and tingling take longer to resolve.

Post-Surgery Care: Orthopedic Floor

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

- When you arrive on 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 be monitored.
- You will be instructed to perform ankle pumps 10 times every hour while awake. These exercises increase circulation and reduce the risk of blood clot formation in your legs.
- You will have "pump-activated" stockings wrapped around your lower legs to help improve circulation.
- The nurse will check your surgical dressing during your stay in the hospital.
- Physical therapy typically takes place twice a day.
- Some patients also receive Occupational Therapy.
- Our care management team will work with you on your discharge plan and coordinate services and medical equipment.
- Patients are encouraged to eat their meals sitting in a chair.
- Your nurse will instruct you to use an Incentive Spirometer.

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.

Fall Prevention Guidelines While in the Hospital

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 hip fractures and head trauma which may require a surgery to fix the injury. Even if additional surgery is not required, your recovery time may be significantly increased if you suffer a fall.

The increased risk for falls is due to many reasons, such as:

- 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.

Fall Prevention Education Video

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 with going to 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.

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

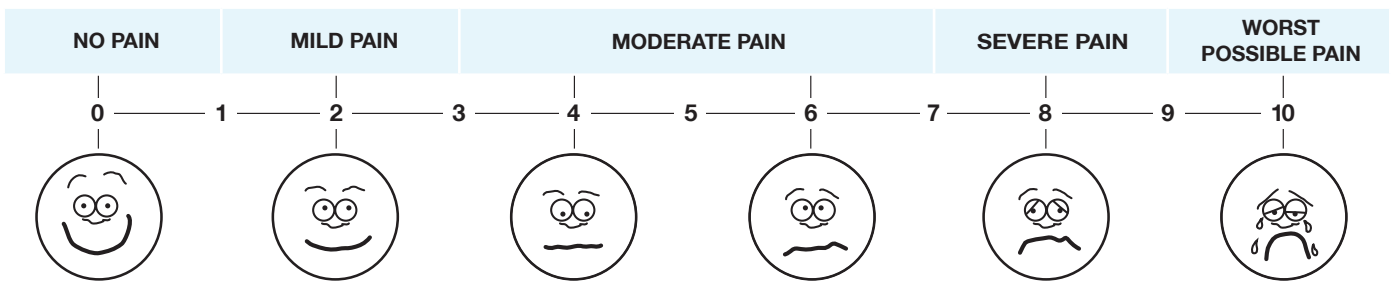
Dispose of opioids as soon as they are no longer needed at a drug take-back program or safe drop site. Find more information at http://usdoj.gov or search for DEA National Prescription Drug Take Back Day near you.

Cold Therapy

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

After your surgery, swelling can cause increased pain. Continue using ice packs or some form of cold therapy to help reduce swelling.

Always have something light between your skin/dressing/incisional area and the ice pack or cold therapy.



Day of Discharge: Patient Discharge Checklist

Please review all items below before discharge.

- ☐ I understand what my medications are, possible side effects and how to use them safely.
- ☐ 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 have collected all of my belongings (Phone chargers, ipads, equipment, home medications).
- ☐ I have watched the discharge video.
- ☐ I understand when to resume my regular home medications.

What to Expect During Your Recovery

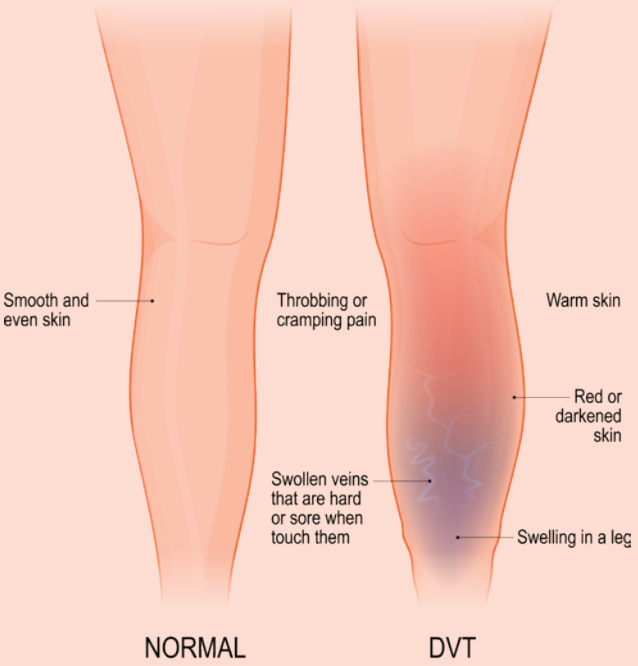
Common Issues After Surgery

- **Low grade temperature:** 99-100.5 degrees F.
- **Drainage**
  - 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 as instructed.
- **Sleep disturbances / Disrupted sleep patterns**
  - This can last for several weeks.
  - Pain may seem more intense at night. Taking a pain pill before bedtime may help.
- **Loss of endurance**
  - A loss of endurance and stamina occurs in almost every patient to some degree.
- **Lack of concentration**
  - This may be caused by the anesthesia, side effects of medications, or from pain. It is a common occurrence that will subside in time.
- **Pain**
  - As your nerves are healing, you may have recurrent nerve pain, numbness, or tingling. This is generally temporary. Call if persistent.

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.
- **Changes in sensation.**
- **Changes in bowel or bladder function.**
- **Persistent / worsening difficulties with swallowing (Cervical patients).**
- **Call 911 right away if you have chest pain or shortness of breath.**

Deep vein thrombosis
(signs and symptoms)



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

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, Vicodin)* ○ Hydromorphone (Dilaudid)* ○ Morphine (Duramorph, Kadian)* ○ Oxycodone (OxyIR, Roxicodone)* ○ Oxycodone/Acetaminophen (Percocet)* ○ Oxycontin*	 For moderate to severe pain	• Drowsiness • Constipation • Nausea/Vomiting • Itching • Confusion
○ Cyclobenzaprine (Flexeril) ○ Baclofen (Lioresal) ○ Methocarbamol (Robaxin) ○ Soma (Carisoprodol) ○ Zanaflex (Tizanidine)	 For muscle relaxation and pain	• Dizziness • Fatigue • Drowsiness • Headache
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 For gas (Simethicone)	• 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 reviewed your pre-operative medication's side effects with you, but because of side effects, you may not remember.

How to Manage Your Pain

The key to managing your pain is to relax, decrease swelling, and reduce pain by using the following medications if needed. This is a guide to help manage your pain after surgery. Some medications may or may not be prescribed to you. Follow the guide below.

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) **and** _____	TYLENOL (acetaminophen) **and** _____	TYLENOL (acetaminophen) **and** _____
+	+	+
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.

Constipation Prevention Education

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.

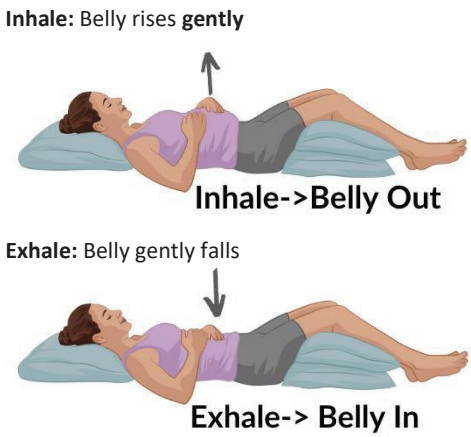
Colon Massage: DO NOT try/rub over any healing incisions.

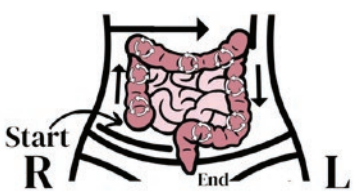
Position: Lying on your back with your knees bent or supported.

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.

***Follow Spinal Precautions as instructed**





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.

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