

# BEFORE & AFTER HERNIA SURGERY: ENHANCED RECOVERY

## This booklet will:

- Help you understand and prepare for your surgery
- Explain how you will play an active part in your recovery
- Give you daily goals to achieve

## What is Enhanced Recovery?

When you are admitted to the hospital for hernia surgery, you will be part of a recovery program called Enhanced Recovery After Surgery (ERAS®).

The goal of this program is to help you recover quickly and safely, and to support you during all phases of this process. Your health care team worked together to create this pathway.

Research shows that you will recover faster if you do the things explained in this booklet. There are instructions about eating and drinking, physical activity, and controlling your pain. These things will help you to feel better faster and go home sooner.

Please bring this booklet with you on the day of surgery. Use it as a guide during your hospital stay. Hospital staff may refer to it as you recover, and review it with you when you go home.

Having surgery can be stressful for patients and their families. The good news is that you are not alone. We will support you each step of the way.

Please ask us at any time if you have questions about your care.

## What is Hernia Surgery?

Hernias most commonly occur in the abdominal area when the intestines push through a weakened area in the abdominal wall muscles, or through an area around scarring from a prior surgery or injury. The hernia usually causes a lump or bulge in the affected area and may be accompanied by pain, discomfort, pressure, or other symptoms.

Surgery is the only way to repair a hernia. It can be repaired by sewing the opening in the muscle wall closed, or by patching the opening with a special type of mesh that closes the opening and strengthens the repair.

Surgery can be done in one of two ways:

### 1. Laparoscopic

The surgeon works through small incisions in your abdomen, using a tiny camera and instruments.

### 2. Open

The surgeon works through a larger cut in your abdomen for increased visibility and access to the affected area.

Your surgeon will talk with you about the type of hernia you have and discuss the options that will work best for your repair.

## **BEFORE YOUR SURGERY**

### **Preparing for Surgery**

#### **1. MEDICAL CLEARANCE**

You will need to arrange an appointment with your primary care physician (PCP) within 30 days prior to your surgery date for medical clearance.

#### **2. BE ACTIVE**

Exercise will help your body to be as fit as possible and keep your weight under control. If you are already active, keep it up. If not, please try to begin exercising. Even just 15 minutes per day is beneficial. This does not need to be strenuous. Our recommendation is to aim for a BMI below 35 before undergoing the stress of surgery. However, this is an individual discussion you will have with your surgeon.

#### **3. STOP SMOKING**

If you smoke, stop before your surgery to reduce the risk of hernia recurrence, infection and other complications from surgery. Your PCP can help you stop smoking by prescribing medications if necessary. In some cases you will be required to quit smoking before surgery, and nicotine testing will be performed to verify this. No tobacco replacement products are appropriate as they all increase the risk of complications from hernia surgery.

#### **4. RESTRICT ALCOHOL**

Do not drink alcohol for at least 24 hours before surgery. Alcohol can interact with medications. If you need help decreasing your alcohol use before surgery, let us know.

#### **5. PLAN AHEAD**

You may need help with meals, laundry, bathing, or cleaning when you first go home from the hospital. Stock your fridge and freezer with food that is easy to reheat. Make plans with your family and friends so you will have the help you need.

#### **6. ARRANGE TRANSPORTATION**

The day of surgery is post-operative day 0. The plan is for you to go home from the hospital as soon as Day 1 or 2. Please make arrangements for a ride. You will not be able to drive yourself.

#### **7. CANCELLING YOUR SURGERY**

If you get sick, please call the surgery clinic as soon as possible at 847-570-1700.

### **Medications - General Guidelines**

1. Multivitamins, herbs, green tea, and over-the-counter supplements - **Stop 7 days** before surgery.

2. Aspirin 81 mg or 325 mg - **Continue taking up to and including the day of your surgery. If anyone advises you to stop, please contact your surgeon to clarify.**
3. Tylenol (acetaminophen) - Can be taken up until the night before surgery.
4. Seizure medication - Take this on the day of surgery with a sip of water.
5. Blood Pressure medication - Take as directed until the day before surgery. Most should also be taken on the day of surgery with a small sip of water. All blood pressure medications should be discussed with your primary care physician or cardiologist before surgery.

**DO NOT TAKE CARDIAC MEDICATION ON THE DAY OF SURGERY IF IT IS A:**

- a. Diuretic , also known as a water pill,
  - b. Angiotensin Converting Enzyme (ACE) Inhibitor such as Enalapril, (AKA Vasotec); Lisinopril, (AKA Zestril or Prinivil); and Ramipril, (AKA Altace); and others too numerous to list here.
  - c. Angiotensin Receptor Blocker (ARB) such as Losartan (AKA Cozaar); Candesartan, (AKA Atacand); Valsartan, (AKA Diovan); Irbesartan (AKA Avapro); Olmesartan (AKA Benicar), and others too numerous to list here.
6. **Blood Thinning, Anticoagulation, and Antiplatelet Medication will need to be modified or stopped before surgery. Follow the guidance of your primary care provider or cardiologist if you are taking these or other blood thinning medications :**
- |                       |                       |                         |
|-----------------------|-----------------------|-------------------------|
| * Heparin             | *Lovenox (enoxaparin) | *Arixtra (fondaparinux) |
| *Fragmin (dalteparin) | *Pradaxa (dabigatran) | *Xarelto (rivaroxaban)  |
| *Eliquis (apixaban)   | *Coumadin (warfarin)  | *Plavix (clopidogrel)   |

For further questions regarding medications, please contact the office at 847-570-1700.

### **Patients with Diabetes**

If you have diabetes, please discuss how to manage your diabetic medications with your PCP and/or endocrinologist before surgery. It is important to verify the medication(s), dose(s), and schedule that are appropriate for your individual needs.

**We advise patients to aim for a HgbA1C below 7 at the time of surgery.** There is evidence this leads to better outcomes and fewer complications. Your PCP and/or endocrinologist can help you understand how to get as close to this goal as possible.

### **Pre-operative Clearance**

1. It is your responsibility to call and schedule an appointment with your Primary Care Provider (PCP). You will need them to perform a preoperative clearance exam, similar to an annual physical, **WITHIN 30 DAYS PRIOR** to your surgical date.

2. You will also need to have a series of pre-operative **blood tests**. These can be done at your PCP's office, or at the hospital.
3. You will need to have a **Nasal Swab** to test to see if you are a carrier for staphylococcus. This also can be done at your PCP's office or at the hospital. If you are positive for staph, you will be notified of the results and be given additional instructions for an antibiotic ointment that you will begin using 5 days prior to surgery.
4. You will need to have a **Type & Screen** within 30 days of your surgery. This test is done to determine your blood type and antibodies in your blood. **You MUST have this done at a Northshore Lab.** No appointment is required.
5. If you are **over age 65**, or age 50 with a cardiac history, you will need to have an **EKG**. If your PCP cannot perform this in their office, please let us know. We can place an order in your chart, at which time you can go to any Northshore Radiology department and have this test done. No appointment is required.
6. If you have a **pacemaker or defibrillator** implanted, you will need to have the device evaluated by your cardiologist within 3 months prior to the surgery date.
7. If you have been diagnosed with **sleep apnea** and have been prescribed a sleep apnea device, such as a CPAP, you will need to bring this device to surgery with you.

### **Eating and Drinking**

1. The day before surgery:
  - Drink one (12 oz) carbohydrate drink (clear juice such as apple, cranberry, white grape, or commercial ice tea) during the evening before bed.
  - Do not eat any solid food after midnight
2. The morning of surgery:
  - Do not eat any food
  - Drink one (12 OZ) carbohydrate drink (clear juice) starting 3-4 hours prior to your scheduled surgery time. **STOP 2 hours before** your scheduled surgery start time.
    - i. Examples of clear carbohydrate drinks include: apple juice, white grape juice, cranberry juice, commercial ice tea**Your drink preference \_\_\_\_\_**
  - DO NOT drink any additional fluids within the 2 hours prior to surgery or you risk cancellation of your surgery.

### **Washing**

1. The night before surgery
  - Shower or bathe with Hibiclens (4% chlorhexidine) as the last part of your normal shower routine.
  - This is available over the counter.
  - Use a palm sized amount of this soap. It will not bubble or lather.
  - Rinse completely after the shower.

- AVOID CONTACT OF THE SOAP WITH YOUR EYES AS THIS CAN CAUSE IRRITATION. If some soap gets in your eyes, rinse thoroughly with water.
- Discard the Hibiclens container in the regular garbage when finished.

2. The morning of surgery:

- Put on clean clothes
- Do not wear lotion, perfume, makeup, nail polish, jewelry, or piercings.
- Do not shave the area where the operation will be done.

**Expect our call**

The day before you come to Northshore, staff from the following areas will contact you:

1. Hospital Admitting Department
  - A staff member will call to verify your insurance coverage. If your scheduled procedure is within 48 hours and you have not been contacted, please call the Admitting Department.
2. Peri-Operative Care Unit (PCU)
  - A nurse from the Perioperative Care Unit (PCU) will call to review your health history, instructions for pre-procedural preparation, and confirm the time you need to arrive at Northshore.

**DATE OF SURGERY:** \_\_\_\_\_

**TIME TO ARRIVE AT THE HOSPITAL:** \_\_\_\_\_

**THINGS TO BRING TO THE HOSPITAL**



- ✓ This booklet!!
- ✓ Photo ID (driver's license or state ID)
- ✓ Insurance card and information
- ✓ Two packages of your favorite SUGARLESS gum
- ✓ List of prescription and non-prescription medications that you take (including vitamins, supplements and herbal medications).
- ✓ List of past hospitalizations, illnesses, surgeries, allergies (and allergic reactions) and immunizations.
- ✓ Assistive devices, such as walkers, crutches, canes, hearing aids and glasses. **Please label all personal items with your name.**
- ✓ Names and phone numbers of family or friends to contact in case of emergency.

- ✓ Robe, slippers, and loose fitting comfortable clothes to wear home.
- ✓ Slip on shoes that don't require you to bend over
- ✓ Money to purchase newspapers, magazines or other items (limit of \$10 in cash).
- ✓ Copy of your advance directives, if you have such documents.
- ✓ Personal toiletries, such as shampoo, deodorant, toothbrush, toothpaste, denture cream, moisturizer.
- ✓ Please do not bring anything of value, including credit cards and jewelry. The hospital is not responsible for lost or stolen items.

### At the hospital

- I. Arriving at the hospital:
  - Evanston - Please park on the 5<sup>th</sup> floor of the parking garage, the Notre Dame level. You will be directed from the parking garage to the check-in area on the 3<sup>rd</sup> floor of the hospital where you are having your procedure. A staff member will greet and assist you. (Valet parking is available)
  - Glenbrook, Skokie, Highland Park - Park in the main lot in front of the hospital. You will enter through the main hospital entrance. A staff member will greet you and direct you to the check-in area at the front desk. (Valet parking is available)
  - After completing the check-in process, you will be escorted to your individual room in Ambulatory Surgery Unit (ASU) where you will meet the nursing staff and anesthesia team. They will complete your preparations for surgery. You will also see and speak to your surgeon in the ASU before your surgery.
- II. Admitting area:
  - You will arrive here first to sign in and complete any admission forms.
- III. Ambulatory Surgery Unit:
  - The nurse will ask you to change into a hospital gown and complete a pre-operative checklist with you.
  - You may be asked to put on tight elastic stockings; these will help your circulation and help to prevent blood clots from forming.
  - An IV will be inserted.
  - You will receive several medications from the staff that have been prescribed for you by your anesthesia and surgery team.
    - These medications will help to prevent pain, nausea/vomiting, and decrease the risk of infection and blood clots after surgery.
    - You will take these medications orally with very small sips of water.
  - Your family will be able to stay with you at this time.
- IV. Operating room
  - You will be given sedative medication just prior to being taken to the OR.
  - The anesthesiologist will put you to sleep in the OR.
  - You will be asleep and pain free during your surgery.

V. Waiting room

- Your family will be escorted to the waiting room during your surgery.
- They will be provided with updates and notified when you are out of surgery.
- They should check in with the desk to provide a contact number in case they leave temporarily for any reason.
- Chase bank ATM's are located at each hospital.
- Each hospital has a cafeteria and gift shop for purchasing of food/beverages.

VI. PACU (post anesthesia care unit)

- You will wake up here and remain here for several hours after your surgery.
- Family is not allowed to visit in the PACU.
- You may have a mask providing you with oxygen, an IV giving you fluids, a catheter draining urine from your bladder, and a drainage tube in your abdomen to remove fluid from beneath the incision.
- A nurse will check your vital signs often, check your bandages, and make sure you are comfortable.
- Once your vital signs are stable, you will be transferred to your hospital room. Your family will be able to visit you when you arrive there.

## AFTER SURGERY: INPATIENT

I. Pain Control

a) It is important to control your pain because it will help you to:

- Take deep breaths
- Move more easily
- Eat better
- Sleep well
- Recover faster
- Do the things that are important to you

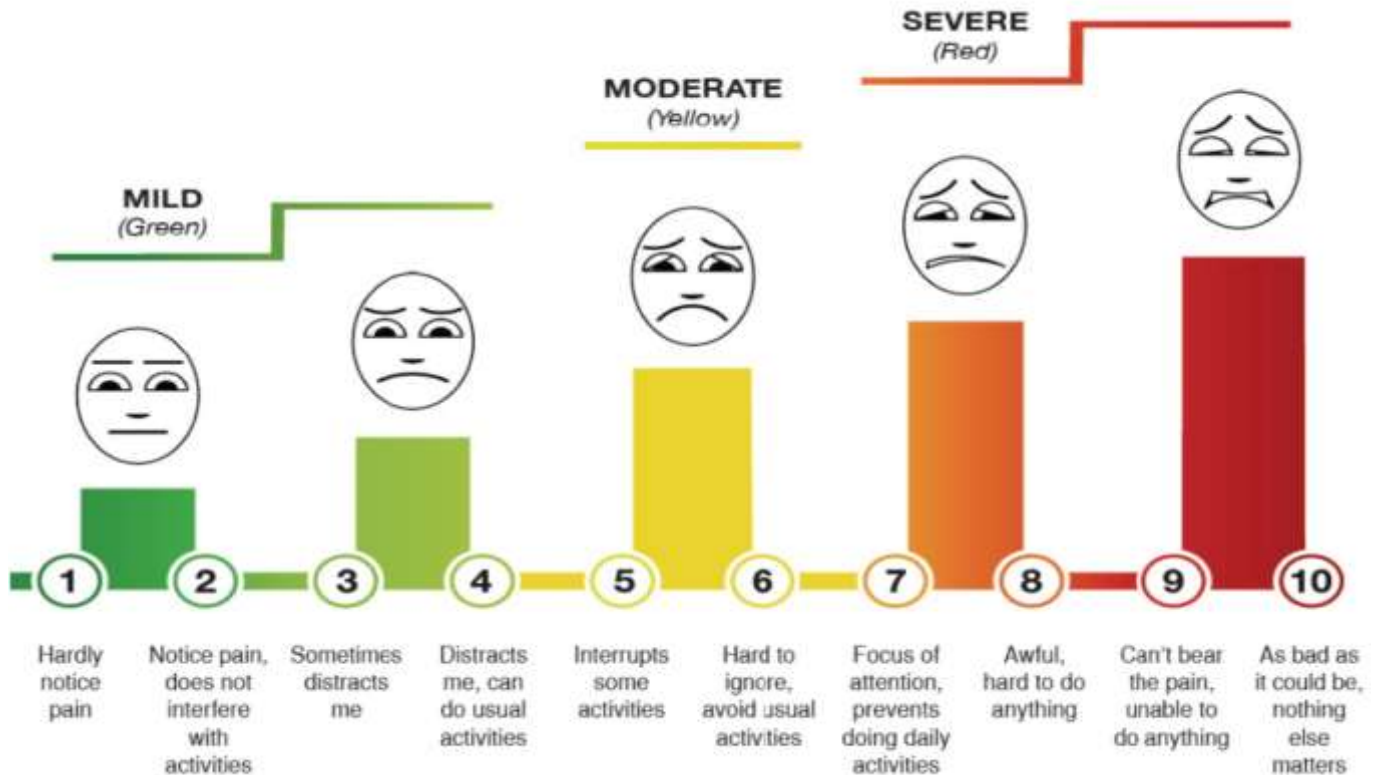
b) Other types of pain management that may be used

- TAP - The Transversus Abdominis Plane (TAP) block
  - Relatively new regional anesthesia technique that provides analgesia to the parietal peritoneum as well as the skin and muscles of the anterior abdominal wall.
- Patient controlled anesthesia (PCA)
  - Some patients have a medicine pump (PCA) attached to their IV. When you push a hand-held button the pump gives you a safe dose of pain medicine.



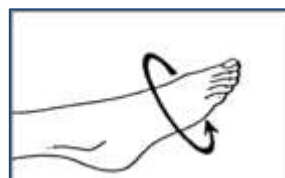
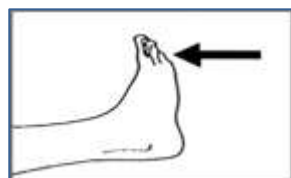


- c) Your nurse may ask you to describe your pain using a number between 0 and 10. 0 means no pain and 10 is the worst pain you can imagine. The goal is keep your pain at or below 4 out of 10.



## II. Exercises

- Move around while in bed. Movement helps to prevent pneumonia, blood clots, and muscle weakness. Start when you get to your room and continue during your hospital stay.
- Leg exercises:
  - These exercises help your blood to circulate in your legs. Repeat each exercise 4 to 5 times every half hour while you are awake.
    - Rotate your foot to the left and right.
    - Wiggle your toes and bend your feet up and down.
    - Stretch your legs out straight.





c) Deep Breathing and Coughing Exercises:

- An incentive spirometer is a device that helps you breathe deeply to prevent pneumonia. To use the device:
  - Sit up straight.
  - Put your mouth tightly around the mouth piece.
  - Take a deep breath in through your nose, then blow it out slowly and completely into the mouthpiece. This allows the lungs to fully expand. You will see the piston/ball rise with each breath.
  - Rest for a few seconds and repeat this task 10 times every hour.
  - Cough well after completion to clear your lungs. You may want to use a pillow or your hands to hold your incision taut (splinting) while coughing.

**How to Use an Incentive Spirometer**



d) Ambulation

- You will be up and out of bed, with assistance, to walk in the hallway from 4 - 5 times daily. There is always a risk of getting blood clots after surgery. The risk is decreased with walking and exercise.

**The evening after surgery - Post-operative Day #0**

I. Pain Control

- Tell your nurse if your pain is getting out of control. We want to help you keep your pain as well controlled as possible. It is best to treat it before it is severe.

II. Breathing

- Do your breathing exercises with the incentive spirometer 10 times every hour.
- Cough well after each cycle of 10.

III. Activities

- Do your leg exercises 4-5 times every hour while awake.
- Get up and sit in a chair with help from your nurse or aide.
- Track your progress on the checklist (see page 18)

IV. Eating and Drinking

- Drink liquids as tolerated.
- Chew gum for 30 minutes.

V. Tubes and Lines

- An intravenous line (IV) will be giving you a small amount of fluid.
- You may have a PCA giving you pain medication.
- You may have a urinary catheter to drain (and measure) the urine from your bladder.
- You will have one or more drainage tubes in your abdomen to remove fluid from beneath the incision.

**Post-operative Day #1**

I. Pain Control

- You will be receiving several scheduled oral medications to prevent pain, including: Tylenol (acetaminophen), Motrin (ibuprofen), Neurontin (gabapentin).
- We want to help you keep your pain as well controlled as possible. Please tell us if your pain is getting out of control. It is best to treat it before it is severe.

II. Breathing

- Do your breathing exercises with the incentive spirometer 10 times every hour.
- Cough well after every cycle of 10

III. Activities

- Sit in a chair during meals.
- Walk in the hallway 4-5 times with help.
- Be out of bed, off and on, for a total of 6 hours throughout the day.
- Track your progress on the checklist (see Page 14)
- An abdominal binder may be ordered by your surgeon for your comfort as you increase your activity.

IV. Eating and Drinking

- Drink liquids.
- Diet as prescribed by your physician, starting solid food as soon as possible.
- Chew gum for 30 minutes 3 times per day.

V. Tubes and Lines

- For most patients, your urinary catheter will be removed in the morning. For some patients, you will need to keep your catheter for 2 or 3 days.
- Your IV fluids will be stopped when you are able to take in enough oral fluids.
- The drainage tube(s) will remain in place during your hospital stay and you may be discharged home with these still in place.

## **Post-operative Day #2**

- I. Pain Control
  - You will continue receiving scheduled medications to prevent pain including Tylenol (Acetaminophen) or Motrin (ibuprofen).
  - We want to help you keep your pain as well controlled as possible. Please tell us if your pain is getting out of control. It is best to treat it before it is severe.
- II. Breathing
  - Do your breathing exercises with the incentive spirometer 10 times every hour.
  - Cough well after every cycle of 10
- III. Activities
  - Sit in a chair during meals.
  - Walk in the hallway 5 times with help from a caregiver or independently if able.
  - Be out of bed, off and on, for a total of 6 hours, as tolerated.
  - Track your progress on the checklist (see Page 15)
- IV. Eating and Drinking
  - Drink liquids.
  - Eat a low residue diet, as tolerated.
  - Chew gum for 30 minutes 3 times per day.
- V. Tubes and Lines
  - Your IV fluids will be discontinued when you are drinking well.
  - If you have a PCA pump, it may be removed today and you will take pills to control your pain.
  - Your surgeon will decide if the drainage tube(s) around your incision can be removed or should remain in place at home for a period of time.

## **Goals for Discharge**

The goal is to have you prepared to go home in the late afternoon of Post-op Day 2 or in the morning on Post-op Day 3. The following criteria will be used to help us determine if you are ready to go home:

- You are able to eat a diet without feeling nauseous or experiencing any vomiting.
- You have adequate pain control on oral medication.
- You are getting out of bed and walking without help.
- You have a normal body temperature (no fever).

We will give you information about your follow-up appointment with your surgeon before you leave the hospital.

## HOME CARE INSTRUCTIONS

### I. Incision care

- Your incision(s) may be slightly red and uncomfortable for 1-2 weeks after surgery
- You may be discharged home with one or more drains still in your abdomen. If so you will be taught how to care for these before you leave the hospital. In addition a visiting nurse may be suggested.
- **You may take a shower:**
  - 3 days after laparoscopic surgery
  - 5 days after open (incision) surgery
    - ❖ Let the water run softly over your incision(s) and wash the area gently. Do not scrub. Do not take a tub bath, use a swimming pool, or a hot tub for two weeks.
- If you have staples or stitches to be removed, we will arrange for a follow-up appointment with your surgeon for 1 week from surgery.
- If you have dissolvable stitches, we will arrange for a follow-up appointment in 2 weeks.
- Tell your surgeon if your incision becomes warm, red, hard, or you see pus or other drainage coming from it.

### II. Pain

- You may have pain for a few weeks after surgery. Take acetaminophen (Tylenol) and your anti-inflammatory medicine to relieve your pain.
- If your pain is not controlled by acetaminophen (Tylenol) and the anti-inflammatory, add the narcotic medication that your doctor ordered.
- If the anti-inflammatory or other pain medications are causing a burning sensation or pain in your stomach, stop taking them and call your surgeon.
- If you have severe pain that is not relieved with the medicine that has been recommended for you, call your surgeon or go to the Emergency Room.
- Your surgeon or nurse may ask you to keep a record of your pain and the medications that you take at home. You can do this in the "Notes" section at the end of this booklet. (See Pages 15 and 16)

### III. Constipation

- Pain medication may cause constipation. To help your bowels stay regular:
  - Drink more liquids.
  - Get regular exercise (a 15 minute walk is a good start!).
  - Take stool softeners if your doctor tells you to do so.

### IV. Bowel Habits

- Your bowel patterns may change after surgery.
- You may have loose stools, become constipated, or have more frequent bowel movements. This should settle into a normal pattern over time.
- Warning signs to call your surgeon: you stop passing gas for more than 12 hours, have significant diarrhea, or have worsening nausea or vomiting.

#### V. Prescriptions and Refills

- If you need to continue your pain medication at home and require a refill on a prescription, please notify the clinic staff immediately. **Do not wait until your pills are gone. Call 847-570-1700.**
- Refills for narcotic pain medications need to be picked up in the office, or can be electronically sent to your pharmacy **depending on the medication.**
- If requesting a mailed prescription refill, please be aware that it may take 5-7 business days to reach you.

#### VI. Diet

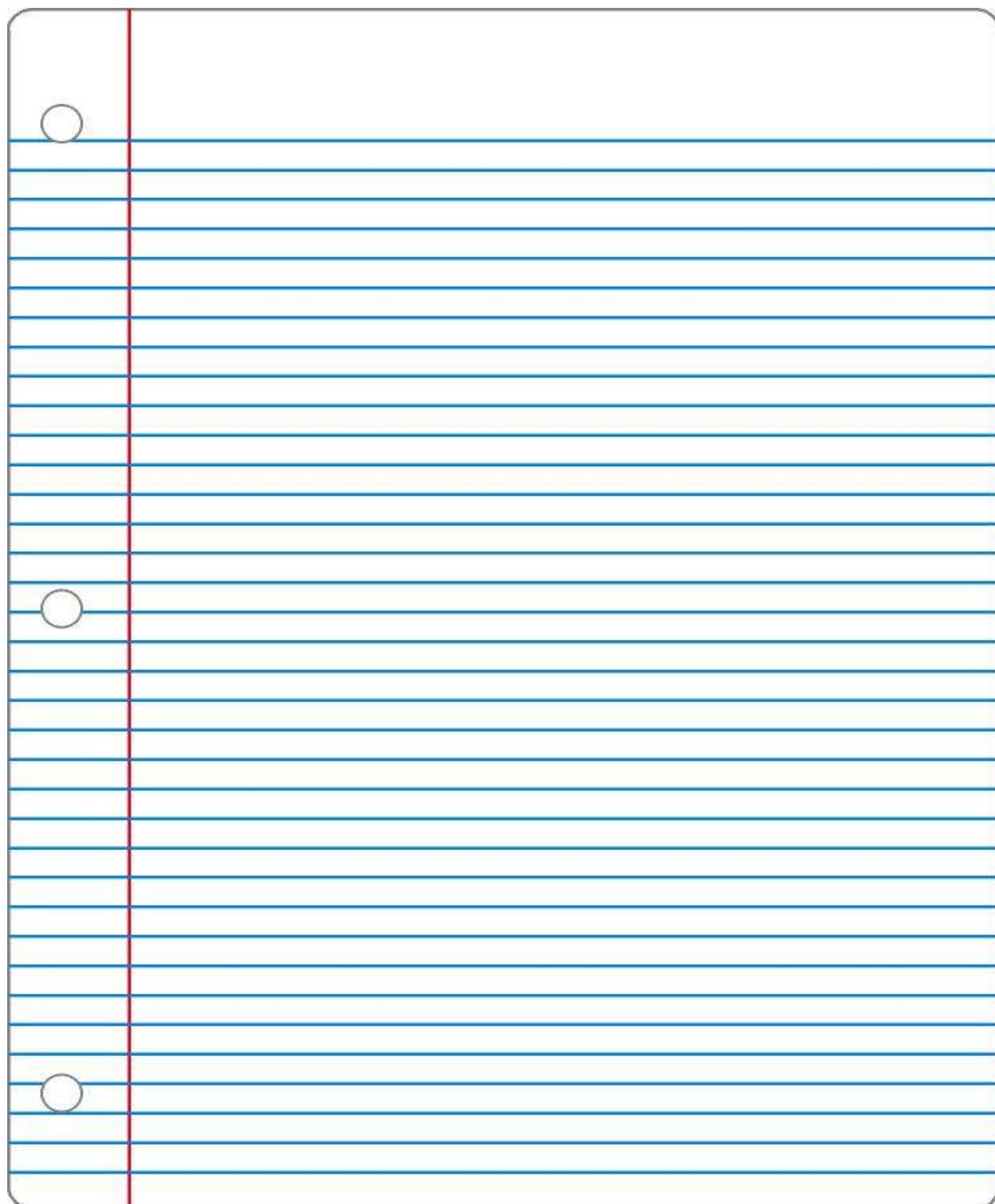
- Your surgeon will discuss the type of diet you need to follow for at least the first two weeks after surgery, or until your follow-up office appointment.
- Try to avoid straining when you have a bowel movement. If you are having difficulty, please call your surgeon's office for advice.
- Be sure to drink 8 to 10 glasses of water each day to help avoid constipation.
- Some foods may upset your stomach, or cause loose bowel movements, at first. If this happens, stop eating them for 2 to 3 weeks and start to eat them again when you feel better.
- If you find it hard to eat enough calories, try eating smaller servings at each meal. Add nutritious snacks between meals. Try high protein, high calorie shakes, or commercial supplements like Ensure or Boost.
- If you find yourself having difficulty tolerating foods or you are losing weight, contact your surgeon.

#### VII. Activity

- You will not be allowed to lift, push, or pull anything greater than or equal to 20 lbs for 4-6 weeks after your surgery. For comparison purposes - a gallon of milk weighs about 9 lb.
- Lifting limitations may last up to 6 months for complex or recurrent repairs.
- You should avoid any strenuous activity for 4 weeks.
- It is recommended that you do not drive for 1-2 weeks after surgery.
- You should avoid driving while taking any narcotic pain medications

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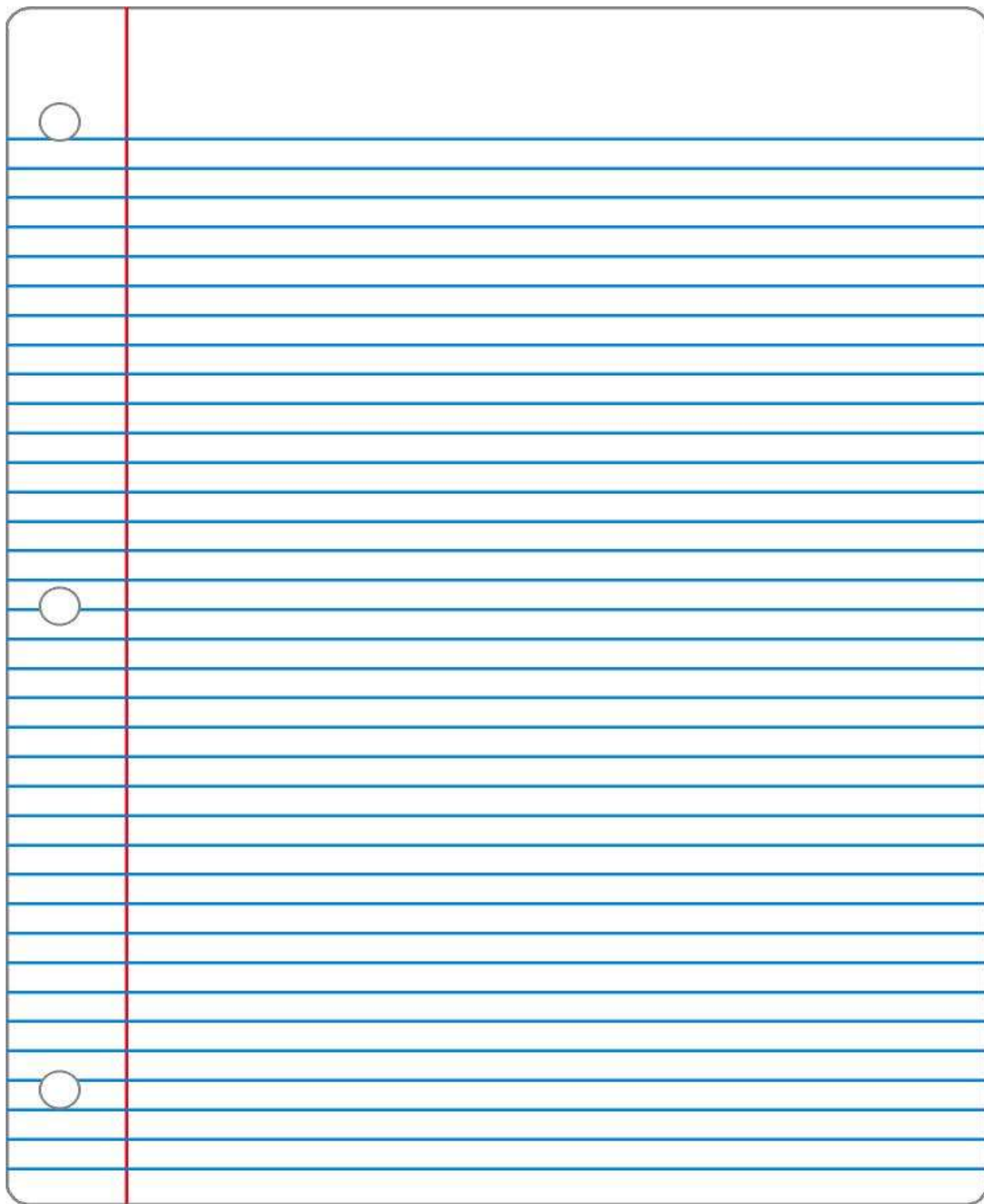
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