

Your Road to Recovery for Bowel Surgery: The Enhanced Recovery Pathway for Bowel Surgery

This brochure will give you and your family an overview of what will happen and what you need to do before, during and after your bowel surgery.

If you have any questions, ask your physician or nurse.

Table of contents

Bowel surgery.....	1
Before your surgery (1 to 4 weeks)	3
1 day before your surgery	5
The day of your surgery.....	8
Recovering in the hospital after your surgery	12
Recovering at home after your surgery.....	14
Contact information	17
Appendix 1 What is an ostomy?.....	18
Appendix 2 Northwestern Memorial Hospital Map	21
Appendix 3 Patient Calendar After Surgery.....	22
Appendix 4 Patient Calendar Before Surgery	23
Appendix 5. Office and Phone Call Appointments	24
Appendix 6 Enhanced Recovery Pathway for Bowel Surgery Pharmacy Shopping List	25

Your surgeon (the physician who will be doing the surgery) will talk with you more about your specific bowel surgery. Your care team will follow treatment practices of the Enhanced Recovery Pathway (ERP), which have been studied and proven to work to help patients recover more safely and quickly. You are the most important member of this team. Your active participation in the ERP is important for your recovery. We will teach you about the things you can do to recover faster.

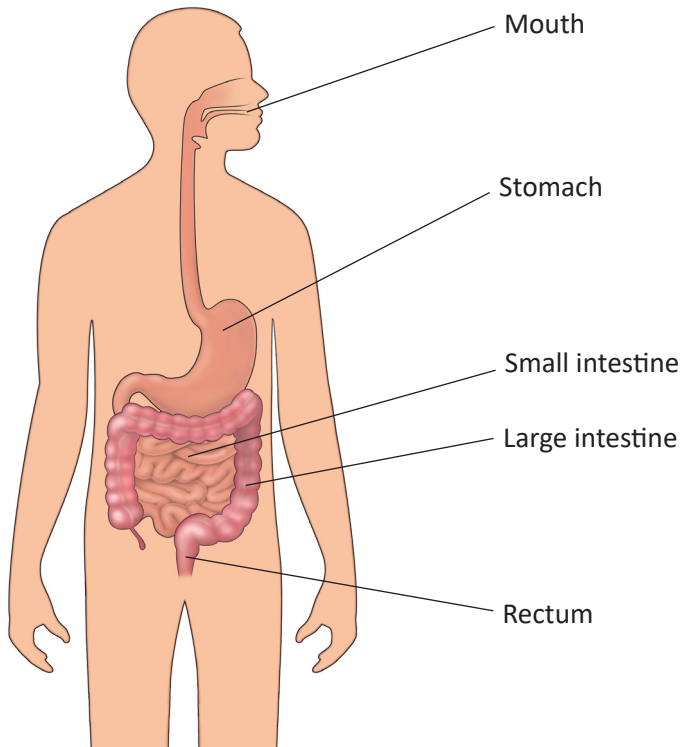
Please keep this brochure with you and use it as a guide. If you have any questions or concerns, please ask your physician or nurse.

Bowel surgery

Intestines (bowels) are the tubes that carry food through your body during digestion. When you eat, food travels from your mouth to your stomach (Figure 1). It then moves to the small intestine (small bowel), where your body absorbs the nutrients from the food. The unused parts of the food will then pass into your large intestine (large bowel or colon), which collects and moves the stool through the rest of the bowel. The large bowel also absorbs water from the food that is left. By the time this waste reaches the rectum, it is in a solid form. The rectum is the last 6 to 8 inches of large bowel that stores solid waste. When the waste leaves your body, it is called a bowel movement (BM), stool or feces.

The large bowel is about 4 to 5 feet long. The small bowel is about 10 to 20 feet long. Because there is usually so much intestine, pieces can be removed without making a big difference in digestion.

Figure 1: The digestive system



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Bowel surgery involves repair or removal of part of the bowel. Your surgeon will talk with you about the specific type of surgery that you will have.

Surgery may be done in 3 ways:

- **Laparoscopic surgery** – The surgeon uses a thin camera and instruments. The surgeon will make several small incisions in your belly to use the tools to remove a part of your bowel.
- **Robotic surgery** – The surgeon uses a robotic system with mechanical arms and a computer. They will make several small incisions in your belly to use the tools. The thin camera and instruments help the surgeon see and access the area better.
- **Open surgery** – The surgeon removes part of your bowel through 1 larger incision.

Your surgeon will talk with you about whether open, laparoscopic or robotic surgery is right for you. Sometimes, laparoscopic or robotic surgery may not be possible, and open surgery is the only option. Other times, your surgeon may need to convert from a laparoscopic to an open surgery while you are asleep for surgery.

Before your surgery (1 to 4 weeks)

Pre-operative Assessment Clinic visit

Before surgery, you must go to the Northwestern Medicine Pre-operative Assessment Clinic (Pre-op Clinic) for an evaluation. It is located at:

Northwestern Memorial Hospital
Lavin Family Pavilion
259 East Erie Street, 17th Floor
Chicago, Illinois

You will not be able to have your surgery if you do not go to the Pre-op Clinic for an evaluation. The physician will talk with you about your health history and the type of anesthesia that is right for you. Your visit will take about 1 to 2 hours depending on the tests you will need. These may include:

- Blood tests
- ECG (electrocardiogram)
- X-rays

Your care team may order more tests based on your past medical history.

Your surgeon's office will give you the instructions about your Pre-op Clinic visit. If this appointment has not been made for you, please call 312.926.4566 to schedule this important visit. The Pre-op Clinic is open:

- Monday through Thursday, 8 am to 5 pm
- Friday, 8:00 am to 3:30 pm
- Saturday and Sunday, closed

The Pre-op Clinic appointment needs to be 7 to 30 days before your surgery. Call 312.926.4566 to schedule this appointment.

Please call your surgeon's office if you have any problems scheduling or attending the Pre-op Clinic visit.

Clinic visit

Plan to arrive 15 minutes before your scheduled time. When you come to the clinic for your appointment, please bring:

- All current medications, either in the bottles or as a written list with doses.
- A list of your physicians with their phone numbers.

There is **no need to stop eating** before this appointment. The Pre-op Clinic care team will give you written instructions for taking or stopping medications before surgery. They will give you pre-surgery prescriptions and a pharmacy shopping list for other items you will need (see Appendix 6: Pharmacy Shopping List).

If you have any questions, you may contact the Pre-op Clinic directly at **312.926.4343**. For more information, go to **preop.nm.org**.

Stay fit

It is very important that you are in good shape before going to surgery. Exercising, eating a healthy diet and managing your stress level can help you prepare.

It is never too late to start adding activity into your daily schedule. Exercise does not have to be heavy. Try going on a 15-minute walk 3 times a week and slowly increase activity up until the date of your surgery.

Stop smoking

Quitting tobacco is an important step you can take to improve your health. Your surgical wound will heal faster and be less likely to get infected if you quit at least 4 weeks before surgery and up to 8 weeks after surgery. You will benefit the most by stopping smoking before your surgery. It's never too late to stop. The earlier you quit, the better off you will be.

Every day you keep from smoking improves your chances for a healthy recovery.

Talk with your primary care physician or Pre-op Clinic nurse to learn more about quitting tobacco use. A variety of medical and counseling services are available to help you quit.

Avoid alcohol

Do not drink alcohol for 24 hours before your surgery. Alcohol can cause a bad reaction with the medication you will get in the hospital. Please tell us if you need help decreasing your alcohol use before surgery. Let us know if you have ever gotten shaky or had a seizure if you do not drink alcohol.

Stop and discuss illegal drugs

If you use illegal drugs, please speak privately with your surgeon or physician in the Pre-op Clinic. Any conversation regarding illegal drug use is confidential and will stay private. Our goal is your health and wellness. Using illegal drugs can lead to dangerous problems around the time of surgery. We need to know all of the medications and drugs you use so that we can best take care of you.

Plan ahead

Before your surgery, we suggest that you arrange help from family and friends for when you return home. Each person recovers from surgery differently. It is hard to predict how much help you will need. Generally, you should try to keep a light schedule for 1 month after surgery. When you go home, you should be able to do light tasks like walking up stairs, bathing and eating.

Just in case, make a plan with your loved ones so you will have the help you need with:

- Making meals, and stocking your fridge and freezer with food that is easy to reheat
- Driving you to appointments
- Bathing and personal care, as needed
- Household chores such as cleaning and laundry
- Child or pet care.

Start to gather your resources for those who can help you during your recovery.

Insurance, disability, and Family Medical Leave Act (FMLA) forms

Your employer may ask you to have your physician's office complete insurance, short-term disability and FMLA paperwork. It may take up to 5 business days for your surgeon's office staff to complete the paperwork.

Please forward any forms to your surgeon's office **before** your surgery so you can have them back in a timely manner

Arrange transportation

Remember to arrange for a ride home from the hospital since you will not be allowed to drive for the first few weeks after your surgery. Let your nurse know if you have any concerns about going home.

We advise against international and far-away travel for the first 4 weeks after surgery. This to protect your health in the rare event that you may have a problem after surgery. If you are traveling a long way to Northwestern Memorial Hospital for your surgery, talk with your surgeon about post-operative travel arrangements.

Cancelling surgery

Please call your surgeon's office as soon as possible if you get sick or become pregnant. If you cannot reach your surgeon, call the Pre-op Clinic at 312.926.4566 to discuss the issue.

1 day before your surgery

You will get 2 calls on the day before your surgery: 1 from the surgeon's office and 1 from the Same-Day Surgery/Operating Room Scheduling Desk staff.

Phone call from your surgeon's office

The day before your surgery (or on Friday if your surgery is on Monday), your surgeon's clinic will call you to remind you of all the steps you need to take before surgery. We will tell you what day and time your surgeon's office will call you. Please be sure to answer your phone around this time.

Phone call from the Same-Day Surgery/Operating Room Scheduling Desk staff

You will also get a call from the Same-Day Surgery scheduling nurse between 2 and 5 pm to tell you:

- When and where you should arrive at the hospital
- Time of your surgery
- Diet and medication instructions before your surgery

Please note: If the instructions you get from the nurse are different from what you have heard before from your surgeon or Pre-op Clinic, please check with your surgeon's office.

Please answer your phone around this time. If you do not get a call by 5 pm or would like to talk with the Pre-op nurse, please call 312.926.5450 before 7 pm.

Surgery times may change and are not final until 3 pm on the business day before surgery.

Answer your phone calls in the days before your surgery. Phone calls from the hospital or physician's office may show up as an unlisted number and call-back may not be possible.

Date of surgery: _____

Time of arrival at the hospital: _____

The Operating Room (Same-Day Surgery) Scheduling Desk staff will tell you what your surgery time will be. Your surgeon's office will not know the exact surgery time.

Getting ready at home

Pre-op washing

It is important to follow the instructions for washing at home before surgery to prevent infections. You will take **1** shower the morning of surgery with the chlorhexidine soap prescribed by your surgeon. Use the entire bottle of chlorhexidine soap when showering.

The **morning of surgery**:

- Take a shower using 1 entire bottle of chlorhexidine soap. Follow these steps:
 1. Wash your face and hair with regular soap and shampoo.
 2. Fully rinse clean.
 3. Use chlorhexidine soap to scrub your body from the neck down, including your navel (belly button).
 4. Let the chlorhexidine soap suds soak on your skin for 1 minute.
 5. Rinse off the soap.
- **Do not** use the chlorhexidine soap on your head.
- **Do not** shave the belly area where you will have the operation.
- **Do not** wear lotion, perfume, makeup, nail polish, jewelry or piercings.
- Put on clean clothes.

It is very important to follow these instructions to prevent infection.

Bowel prep

You will need to have a bowel prep (laxative medication) the day before your surgery. This is much like the preparation needed for a colonoscopy. Your surgical team will give you the prescription and review it with you. Follow the instructions about what to eat and drink before your surgery. This will give you the energy and nutrients you need to recover quickly.

Follow these steps:

1. **1 day before surgery: Follow a clear liquid diet all day and up until 3 hours before your scheduled surgery start time.**
 - a. Clear liquids include things you can see through, such as:
 - Soft drinks (orange, ginger ale, cola, Sprite®)
 - Gatorade® (not red)
 - Kool-Aid® (not red)
 - Strained fruit juices without pulp (apple, white grape, orange, lemonade)
 - Water, tea or coffee (no milk or non-dairy creamer)
 - Low-sodium (low salt) chicken or beef bouillon/broth
 - Hard candies
 - Jell-O® – plain without fruit or topping
 - Popsicles – no sherbets or fruit bars
 - b. **Do not eat** solid foods, milk or dairy products (this includes coffee creamer and milk).
 - c. Continue to take your medication as you were told by your physician.
2. **1 day before surgery: Take the oral antibiotics, neomycin and metronidazole (Flagyl®).**
 - a. **1 pm:** Take **2** neomycin 500 milligrams (mg) tablets and **2** metronidazole 500 mg tablets by mouth.
 - b. **4 pm:** Take **2** neomycin 500 mg tablets and **2** metronidazole 500 mg tablets by mouth.
 - c. **10 pm:** Take **2** neomycin 500 mg tablets and **2** metronidazole 500 mg tablets by mouth.

This is a total of 12 tablets (6 neomycin and 6 metronidazole).

Your antibiotics might be neomycin and erythromycin if you are allergic to metronidazole.

3. **1 day before surgery: Take 4 mg of Zofran at noon.**
4. **1 day before surgery: Start the polyethylene glycol (PEG) or SUPREP® bowel prep at 12 pm (noon). Finish the PEG by 4 pm or the SUPREP bowel prep by 6 pm.**
 - a. If you were prescribed the PEG bowel prep:
 - Mix as directed. You may add lemonade powder (or other flavored powder such as Crystal Light®) to the mix, but only enough to give it a taste that lets you drink it. You can refrigerate the mix if it's easier for you to drink it cold.
 - Start drinking the PEG prep at noon. Drink about 8 ounces every 10 minutes until your bowel movements are **clear**. This will usually be about 4 liters (1 gallon).
 - Finish the PEG prep by 4 pm.

- b. If you were prescribed the SUPREP bowel prep:
- Pour 1 (6 ounce) bottle of SUPREP liquid into the mixing container. Add cool drinking water to the 16-ounce line on the container and mix.
 - Drink **all** the liquid in the container. Then, you **must** drink 2 more 16-ounce containers of water over the next 1 hour.
 - At 6 pm, the evening before your procedure, repeat the steps above.
- c. If instructed by your surgeon, drink 2 (20-ounce bottles) Gatorade® (not red) throughout the day.
- d. You may continue a clear liquid diet (as described above) after completing the bowel prep.

Some patients feel nauseous or throw up the bowel prep/antibiotics. If this happens, slow down how fast you are drinking it.

Try your best to hold down what you can. The more bowel prep and antibiotics you can hold down the better. Some is better than none.

The day of your surgery

Eating and drinking on the morning of surgery:

- You may continue the clear liquid diet up to 3 hours before your scheduled surgery start time.
- Do not eat any solid food.
- Take your medications with a sip of water about 3 hours before surgery.
- **Do not eat, drink or put anything in your mouth after this time.** Do not use gum or cough drops.

What to bring for your hospital stay

Bring these to the hospital:

- This brochure
- Your photo ID
- Medical insurance information and card
- Medicare card (if you have Medicare)
- List of your allergies
- List of all your current medications (prescription, over-the-counter and herbals)
- Recent test or physical exam reports
- Copies of advance directives, such as a living will or power of attorney

Bring the following items to have after surgery:

- 2 packages of your favorite sugar-free chewing gum
- Bathrobe, slippers or walking shoes, and pajamas
- Glasses, contact lenses, hearing aids, dentures and their storage containers, labeled with your name

- Cane, crutches or walker as needed, labeled with your name
- All of your CPAP equipment (mask and machine) if you have sleep apnea
- Magazine, book or other things to read, if you wish
- Loose, comfortable clothing to wear home when you are discharged

Bring only the items you need. Please leave all valuables (jewelry, credit cards, money) at home. This includes body-piercing jewelry and tongue studs. You may not wear any jewelry during surgery.

Parking

Surgery is done in 1 of 4 operating rooms at Northwestern Memorial Hospital. Although the operating rooms are in different buildings, all buildings at Northwestern Memorial Hospital are connected by walking bridges. Depending on the location you are assigned to, you may choose 1 of the following parking options.

Parking is available for patients and guests in:

- **Parking Lot A at 222 East Huron Street**, across from Galter and Feinberg pavilions or at 223 East Superior Street, across from Northwestern Medicine Prentice Women’s Hospital. This lot is recommended for:
 - Patients having surgery at Olson, Prentice or Same-Day Surgery
 - Patients who have a planned hospital admission after their surgery
- **Parking Lot B located within Lavin Family Pavilion at 259 East Erie Street.** You can access valet and self-parking from the driveways on both Erie and Ontario streets. This lot is recommended for:
 - Patients having same-day surgery at Lavin Family Pavilion
- **Parking Lots C and D – Erie/Ontario at 321 East Ontario Street** between Erie and Ontario streets. A 2nd-floor bridge connects it to 259 East Erie Street.
- **Valet parking** is available at Lavin Family Pavilion (259 East Erie Street) and Prentice Women’s Hospital (250 East Superior Street).

Please bring your parking ticket in with you. You can validate the ticket at the Customer Services Desks on the 1st and 2nd floor of Feinberg and Galter pavilions and on the 1st floor of Prentice Women’s Hospital.

Current parking costs (subject to change):

- \$13 for less than 7 hours
- \$28 for 7 to 24 hours

Admitting area:

Check in at your assigned Registration Desk at the time you were told unless instructed otherwise. The admitting clerk will ask you to sign an admission form.

Galter Pavilion
 201 East Huron Street
 5th Floor Registration

Prentice Hospital
250 East Superior Street
6th Floor Registration

Lavin Family Pavilion
259 East Erie Street
12th Floor Registration

Olson Pavilion
(Clinic Entrance at Superior)
710 North Fairbanks Court
6th Floor Registration

Pre-op area

A nurse will take you to the pre-op area and complete a final checklist with you. They will ask you to change into a hospital gown. You may get a small injection of a blood thinner to prevent blood clots. The care team will put an IV (into the vein) line in your hand or arm so that you can get fluid and medication during the surgery.

You will meet your anesthesiologist (the physician who will put you to sleep) and other members of your surgical team. They will answer your questions and ask you to sign consent forms.

During your surgery

You will be asleep and monitored by the care team during your surgery.

Family spokesperson

It is helpful to choose a family spokesperson who can update family members and friends about your condition after surgery. We cannot share any medical information about you by phone to outside callers.

Waiting room

Family or friends may wait for you in the surgical waiting area of the operating room. There is a video screen that will track the status of your surgery. Volunteers at the desk will be able to give them updates. Your family may visit you once you are in your hospital room. Your surgeon may want to speak with family or friends in a private room after surgery, but this does not mean that something bad happened during your surgery. Your surgeon will also speak with you after surgery, but if you are still recovering from anesthesia, you may not remember this later.

Other resources

Food options are available throughout the hospital and on the 2nd floor of Feinberg, Galter and Lavin Family pavilions, and Prentice Women's Hospital.

Bank machines are available on the 2nd floor of Galter and Feinberg pavilions.

Family or friends may bring these items to pass the time:

- Laptop computers (we offer high-speed wireless internet in our waiting rooms)
- Mobile devices such as smartphones or tablets
- Magazines, books or other things to read

For safety and privacy reasons, children under the age of 16 may not visit in the surgical patient care areas. Children under age 16 should not be left alone in the waiting room. A responsible adult other than the patient must supervise them.

After your surgery

Recovery area

After your surgery, you will wake up in the Post-anesthesia Care Unit (PACU). Your nurse will check your blood pressure, pulse and incision often. The nurse will ask you about your pain and make sure you are comfortable. You will stay here for several hours until you are fully awake.

You may have:

- An oxygen mask over your face
- An IV giving you fluids and medication
- A urinary catheter (tube) draining urine out of your bladder

Visitors are not allowed in the PACU. Your family may visit you once you are in your hospital room, which is usually 1 to 3 hours after the surgery is finished. When you are ready, the care team will take you to your room.

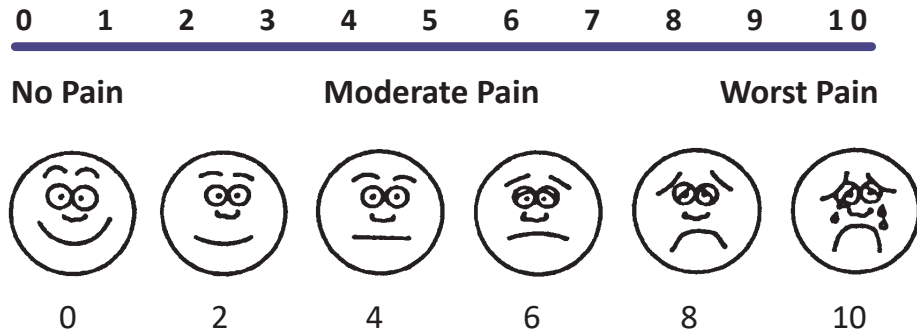
Managing pain

We will work with you to help manage your discomfort after surgery. When your pain is managed, you will be able to recover better by:

- Taking deep breaths to prevent lung problems
- Getting out of bed
- Eating better
- Sleeping well
- Doing things that are important to you

While no medication completely removes all pain, our goal is to manage your pain and keep you comfortable as you recover. Your nurse will ask you to describe your pain using a number between 0 (no pain) and 10 (the worst pain you can imagine).

We want to keep your pain below 4 (out of 10).



© Mosby Pain Rating Scale

You will get medication through your IV and by mouth to help manage your discomfort. You will get some medications continuously and others as needed. Please tell us if you do not have pain relief and we will help you.

Recovering in the hospital after your surgery

You are the most important member of your recovery team. Walking, deep breathing, coughing, turning and chewing gum are some of the things you can do to help yourself. Following the goals of the ERP will:

- Speed your recovery
- Improve your circulation
- Help you heal
- Improve bowel function
- Prevent problems after surgery

Your care team will include:

- Your surgeon (or “attending” surgeon)
- Residents (surgeons in training)
- Advanced practice providers (APPs) such as physician assistants, nurse practitioners and advanced practice nurses
- Nurses
- Medical students
- Other specialists as needed, such as wound care specialists, social workers, dietitians and physical and occupational therapists

While the attending surgeon is like the captain of the ship, the residents and students work very closely as a team and provide important sets of eyes and ears on your care.

Goals for the evening of surgery

- Managing your pain
- Sitting up in a chair and walking, if able

- Eating solid food and chewing gum
- Doing breathing exercises

Goals for day 1 (the first day after surgery)

Breathing

- Do your breathing exercises.

Activities

- Sit in a chair for meals.
- Take at least 4 walks around the halls, with help.
- Be out of bed, off and on, for a total of 8 hours, as you are able.

Pain management

- Tell your nurse if your pain reaches 4 out of 10 on the pain scale.

Eating and drinking

- Drink liquids to stay hydrated. You will be given an immunonutrition drink 2 times a day.
- Eat solid food, as you are able.
- Chew gum for 30 minutes, 3 times a day.

Tubes and lines

- For most patients, your urinary catheter will be removed on day 1.
- Your IV fluids will be stopped in the morning.

Clot prevention

- In addition to walking, you will be given a blood thinner injection.

If a stoma was created at the time of your surgery, a wound, ostomy and continence (WOC) nurse will visit you.

Goals for going home

You will be ready to go home when you have reached the following goals:

- Your pain is managed on oral (by mouth) medication only.
- You are able to walk without help.
- You are able to eat solid foods (regular diet) without too much nausea.
- You have no other problems that keep you from going home.

On the day you are discharged, plan to go home before 11 am. Before you leave, your physician and nurse will review your discharge instructions with you. You will get prescriptions for the medications that you will need to take at home. Some patients may need blood thinner shots to continue at home. You can fill your prescriptions at the Walgreens on the 1st floor in Galter Pavilion, if you prefer.

We will give you information about your follow-up visit with your surgeon before you leave the hospital. If you have staples that need to come out, we will schedule a visit with your surgeon's office to do this 1 to 2 weeks after surgery.

Recovering at home after your surgery

Most patients get better each day after surgery. It may take 1 to 3 months to fully recover from your surgery, but most patients make quick progress during the first several days. You will slowly feel stronger and become more active. Follow your discharge instructions to help your recovery. It is important to keep your follow-up appointments with your physician, even if you are feeling well. If you have any questions or concerns, please ask your physician or nurse.

Phone check-in

Your surgeon's office will call you at home 4 business days after your surgery to see how you are doing. This call may be later if you need to stay in the hospital.

Pain

It is common to have discomfort after surgery. You may have discomfort from the incision and muscle aches. Getting up and moving around can ease some of the discomfort. Brace your incision with a pillow when you cough or sneeze.

Your physician will prescribe pain medication. Take your pain medication as ordered. Some medication may upset your empty stomach. To prevent nausea, you should take the medication with food.

Call your physician if you have any side effects, such as:

- Nausea or vomiting
- Headache
- Rash
- Drowsiness
- Dizziness
- Constipation
- Fever

Pain medication may cause constipation. To help your bowels stay regular:

- Drink more liquids.
- Eat more whole grains, fruits and vegetables.
- Get regular exercise (a 15-minute walk is a good start).
- Take stool softeners if your physician tells you to.

Some of your pain medication may contain acetaminophen. Acetaminophen can cause liver damage if you take too much. Be sure to read labels carefully and check with your pharmacist about your medication. If you are taking Tylenol® (acetaminophen) for pain, do not take more than 3,000 mg in 24 hours. Norco® and Tylenol 3® also contain acetaminophen. Check with your physician about the 24-hour limits that are right for you.

If you are taking narcotic pain medication or sleeping medication, do not drink any alcohol. You should not drive any vehicles while taking narcotics.

Sometimes patients need a refill prescription for their narcotic pain medications.

Narcotic refills must have a paper prescription that cannot be faxed or sent electronically. If you think you will need refills, please call your surgeon's office several days before you expect to run out so that your medication can be filled in a timely manner. Narcotics cannot be refilled through the MyNM patient portal.

Caring for your incision

It is important to keep your incision clean and dry to prevent infection. This will help your incision heal. Wash your hands before and after touching your incision. To clean your incision each day:

- Continue to wash the incision for 1 week, as you were instructed, with the pink chlorhexidine soap.
- After 1 week, wash the wound gently with clean water and mild soap.
- Do not soak the area.
- Gently pat dry. Do not rub.

Do not use lotions, creams or ointments on the wound unless they have been ordered by your physician. You should wear comfortable clothing. Do not wear soiled or tight clothing over the wound. If you have paper strips of tape (Steri-Strips™) on the skin over your incision, leave them on until they fall off. These offer extra support as your incision heals. The stitches are absorbed into your body and do not need to be taken out. No other dressing is needed. Some bruising around the wound is common.

Notify your physician if you have these symptoms:

- Increased redness, swelling or pain at the site
- Thick drainage or pus from the incision

Showering

You may shower 2 days after surgery. Let warm water run over the incision and carefully pat it dry. Do not scrub. Do not take a tub bath for 2 weeks.

Diet

Your appetite will not be normal right after surgery, but it should return over several weeks. You should be able to eat small and frequent meals after surgery. You may eat anything you want, unless your physician, nurse or dietitian tell you not to. It is normal to lose some weight after bowel surgery. Some people lose 10 pounds or more. Soon it will level off and slowly you may start to regain some of the weight you lost. Do not be discouraged. Your body burns up a lot of extra calories as it heals.

Eating a healthy diet will help your body heal. We recommend that you:

- Eat foods with protein such as meat, poultry, fish and dairy products.
- Eat smaller, more frequent meals, spaced throughout the day.
- Add nutritious snacks between meals.
- Try high protein, high calorie shakes, or commercial supplements like Ensure® or Boost®.
- Do not eat foods that cause stomach upset or loose stools for now. Start them one at a time when you feel better.

Since part of your bowel has been removed, you may notice a change in your bowel habits. Bowel movements tend to be loose and liquid at first, and will gradually become thicker. You may have more frequent or loose stools, or become constipated. You will become more regular as your bowel heals.

Call your physician if you have these symptoms:

- You cannot drink fluids or keep them down.
- You have not had a bowel movement after 3 days.

Activity

Continue to walk several times each day and slowly increase your activity. Rest if you get tired. Try to get a good night's sleep. Taking pain medication at bedtime may be helpful if it is hard to get in a comfortable sleeping position. Do not lift anything heavier than 10 pounds (about the weight of a gallon of milk) for 6 weeks after your surgery. Heavy lifting puts a strain on your incision. It is OK to walk, shower, and climb stairs. Do not overexert yourself.

Do not do strenuous physical activity (weight training, stair-stepping machines, elliptical machines, yoga, Pilates™ and treadmills) for 6 weeks after surgery. As a rule, let pain be your guide as you increase physical activity after surgery. If you feel pain, stop doing the current activity.

Driving

Your physician will let you know when you can go back to driving. Do not drive after taking narcotic medication or sleeping pills.

Sexual activity

Many people have questions about having sexual activity after surgery. If you feel good and are well rested, sexual activity is OK. Avoid positions that strain the incision site.

Work

We recommend that you arrange to take 4 weeks off from work after surgery. People with non-physical jobs may return to work when they feel well enough to do so. But, it is hard to predict energy levels after surgery. People whose jobs involve heavy physical work may be off work for a longer time. Please talk with your physician about when you can go back to work.

When to call your physician

Contact your physician if you notice any of the following symptoms:

- A temperature over 100.4 degrees F
- Drainage or fluid from the incision that may be foul-smelling
- Increased tenderness or soreness at the wound
- Wound edges that are no longer together
- Redness or swelling at the wound site

- Severe pain not managed by your pain medication
- Nausea or vomiting that is not relieved
- Inability to drink fluids or keep fluids down

If you cannot reach your physician, go to the nearest emergency department.

Contact information

You may contact your physician 24 hours a day, 7 days a week at **312.695.6868** (TTY: 711).

- During business hours (Monday through Friday, 8 am to 5 pm) please ask for your surgeon's nursing team.
- Non-emergency messages, such as paperwork requests, can be sent through the MyNM patient portal (**mynm.org**). Please allow 2 business days for a response to MyNM messages. **MyNM is meant for non-urgent issues only.**
- **For urgent issues** during non-business hours, an answering service will take your call.
- **For all emergencies, call 911.**

Appendix 1. Ostomy

Some patients who have bowel surgery may need to have an ostomy. An ostomy is a common surgical procedure where the surgeon brings the intestine outside the body to allow a new way for stool to leave the body. The end of the intestine brought to the skin surface is called a stoma. The stoma becomes the exit for all bowel movements and gas. This is collected in a plastic pouch applied to the skin. Only some people will need an ostomy after bowel surgery.

An ostomy may be needed to treat illnesses such as:

- Cancer
- Trauma
- Diverticulitis
- Crohn's disease
- Ulcerative colitis
- Some urologic and neurologic conditions

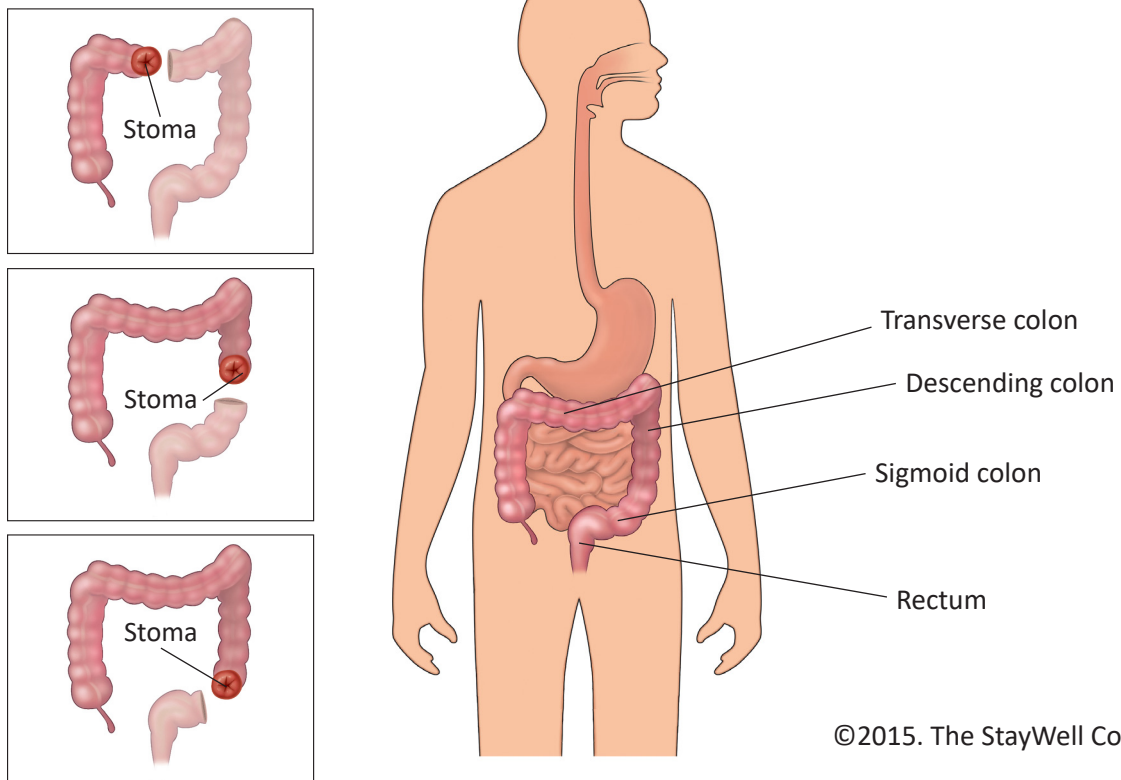
It may be temporary or permanent. Your surgeon will talk with you about your surgery and if you may need an ostomy.

Types of ostomies

Ostomies are named by the part of the intestine that is brought outside the body.

A colostomy (Figure 2) is a stoma created from the colon (large bowel).

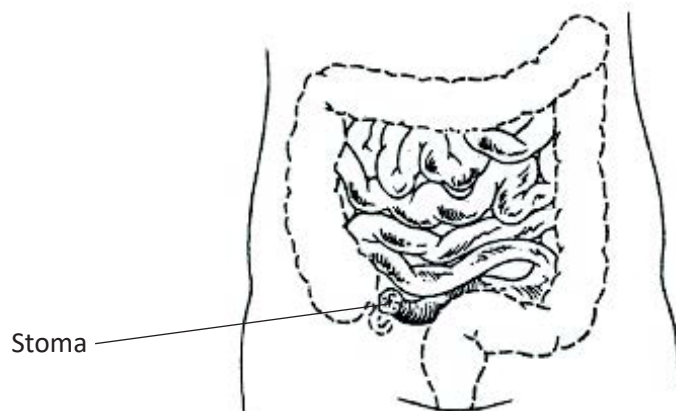
Figure 2: Colostomy



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An ileostomy (Figure 3) is created from the ileum, which is part of the small intestine.

Figure 3: Ileostomy



Stool is collected by an smell-proof pouch that covers the stoma. The pouch is hidden under your clothing. Ostomy supplies come in different types and sizes. Most often, you apply an adhesive wafer that seals tightly to the skin and a leak-proof collecting pouch. The wafer protects your skin from ostomy drainage. You will change it every few days. The removable pouch has a tight seal on the wafer to contain stool and gas. You can empty the pouch in a toilet once the pouch starts to get full.

Living with an ostomy

Sometimes a temporary or permanent ostomy may be needed. The ostomy may improve quality of life for people with some illnesses, or help to avoid problems after surgery.

If your surgeon has decided that you may need an ostomy, you will meet with the ostomy care team before surgery. The team will talk with you about where the stoma will be placed and how to care for yourself after surgery. Sometimes emergency bowel surgery or unexpected findings at the time of bowel surgery may cause the surgeon to create an ostomy on the spot. In this case, the ostomy care team will help you learn about the ostomy and caring for yourself after surgery.

Like many things, learning to care for a stoma may seem hard at first. With help from the ostomy care team, you will:

- Learn how to care for your stoma
- Find ostomy supplies
- Create a routine that is right for you

We urge people with a new ostomy to help care for their own stoma while in the hospital. This helps you practice your own skills.

When you are ready to go home, the ostomy care team will make a plan for you so that help and supplies are available to you at home. Follow-up visits with the care team will help you avoid problems. Ostomy support groups, both in-person and online, are excellent support resources for all ostomy patients.

If you need an ostomy, a wound, ostomy, and continence (WOC) nurse will work with you before and after your surgery. The WOC nurse will help you learn how to take care of your ostomy and be a resource for you when you go home.

Please contact the WOC nurse at 312.695.6868 as soon as possible to make an appointment for your pre-surgery stoma teaching. When you call, please give them the name of your surgeon and your surgery date, and tell them that you are taking part in the Enhanced Recovery Pathway.

The following resources will help you learn more about an ostomy. Please check with your WOC nurse before ordering any products from these sites.

American College of Surgeons Ostomy Home Skills Kit	facs.org/for-patients/home-skills-for-patients/ostomy/adult-colostomy-ileostomy/
American Society of Colon and Rectal Surgeons	fascrs.org/patients/tips-for-patients
United Ostomy Associations of America	ostomy.org
Wound, Ostomy and Continence Nurses Society (find a local stoma care nurse)	wocn.org/page/patients
Hollister	hollister.com/en/ostomycare/educationaltools
Coloplast	coloplast.us/ostomy/people-with-an-ostomy/before-ostomy-surgery
ConvaTec	convatec.com/ostomy

Appendix 2. Northwestern Memorial Hospital Map



Guide to the Downtown Medical Campus



Northwestern Memorial Hospital Feinberg and Galter Pavilions

- 1 Main drive-through entrance
251 E. Huron St.
 - 2 Emergency Department
250 E. Erie St.
- #### Galter Pavilion
- 3 Stone Institute of Psychiatry
201 E. Huron St.
 - 4 Physician offices
201 E. Huron St.
 - 5 Robert H. Lurie Comprehensive Cancer
Center of Northwestern University
675 N. Saint Clair St.
Same Day Surgery
675 N. Saint Clair St., Fifth Floor

Prentice Women's Hospital

- 6 Main drive-through entrance
250 E. Superior St.
- 7 Entrance
250 E. Superior St.
Robert H. Lurie
Comprehensive Cancer Center
of Northwestern University
250 E. Superior St.
- 8 Entrance
Corner of Chicago Avenue
and Fairbanks Court

Other Locations

- 9 Lavin Pavilion
259 East Erie St.
Entrance and parking
Preoperative Clinic
17th Floor

- 10 Olson Pavilion
Ambulatory Surgery Center
710 N. Fairbanks Court
Sixth Floor
- 11 Northwestern Memorial
HealthCare Human Resources
541 N. Fairbanks Court
17th Floor
- 12 Stone Institute of Psychiatry
Administrative offices
and outpatient services
Onterie Center
446 E. Ontario St.
- 13 Physician offices
211 E. Chicago Ave.
- 14 Immediate Care Center
635 N. Fairbanks Court

- 15 Physician offices
737 N. Michigan Ave.
(Entrance on Chicago Ave.)
- 16 Physician offices
150 E. Huron St.
- 17 Physician offices
645 N. Michigan Ave.
- 18 Arkes Pavilion
Physician offices
676 N. Saint Clair St.
- 19 Northwestern Memorial
Imaging Center
676 N. Saint Clair St.
- 20 Physician offices
680 N. Lake Shore Drive

Need a physician? Call physician referral at 312.926.8400.
For more information on Northwestern Medicine, visit nm.org.

Appendix 3. Patient Calendar After Surgery

	Date: _____ / _____ / _____ Day of Surgery	Date: _____ / _____ / _____ Day 1 After Surgery	Date: _____ / _____ / _____ Day 2 Through 7 After Surgery
Diet	<input type="checkbox"/> Regular diet, as you are able <input type="checkbox"/> Chew gum	<input type="checkbox"/> Regular diet, as you are able <input type="checkbox"/> Chew gum	<input type="checkbox"/> Regular diet, as you are able <input type="checkbox"/> Chew gum
Pain Management	<input type="checkbox"/> IV (into the vein) pain medication <input type="checkbox"/> Pain pills (if needed)	<input type="checkbox"/> IV pain medication <input type="checkbox"/> Pain pills (if needed)	<input type="checkbox"/> Pain pills (if needed)
Skin Care	<input type="checkbox"/> Keep surgery dressing on	<input type="checkbox"/> Keep surgery dressing on	<input type="checkbox"/> Surgery dressing removed <input type="checkbox"/> Chlorhexadine incision care
Activity	<input type="checkbox"/> Up to chair in evening and walk if able <input type="checkbox"/> Deep breathing exercises hourly while awake	<input type="checkbox"/> Out of bed during day <input type="checkbox"/> Walking 4 times per day <input type="checkbox"/> Deep breathing exercises hourly while awake	<input type="checkbox"/> Out of bed during day <input type="checkbox"/> Walking 4 times per day <input type="checkbox"/> Deep breathing exercises hourly while awake
Other Treatments	<input type="checkbox"/> Blood thinner shots <input type="checkbox"/> 1 overnight stay in the hospital is required	<input type="checkbox"/> Blood thinner shots <input type="checkbox"/> Urinary catheter removed <input type="checkbox"/> Maybe home	<input type="checkbox"/> Blood thinner shots (if ordered) <input type="checkbox"/> Maybe home

Appendix 4. Patient Calendar Before Surgery

	In the Weeks Before Surgery	Date: _____ / _____ / _____ Day Before Surgery	Date: _____ / _____ / _____ Surgery Start Time: _____ am _____ pm
Diet	<input type="checkbox"/> Eat a high-protein, high-carbohydrate diet starting 2 to 4 weeks before your surgery	Throughout the day, finish drinking these (if ordered): <input type="checkbox"/> PEG or SUPREP bowel prep <input type="checkbox"/> 2 (20 ounce) Gatorades (not red) <input type="checkbox"/> Stay hydrated – drink clear liquids only	<input type="checkbox"/> Clear liquids only up to 3 hours before surgery <input type="checkbox"/> Nothing by mouth after taking pills and Gatorade 3 hours before surgery time
Skin Care	<input type="checkbox"/> Shower or bathe every day	<input type="checkbox"/> Shower or bathe <input type="checkbox"/> Do not shave	<input type="checkbox"/> Shower with chlorhexidine soap in the morning <input type="checkbox"/> Do not shave
Activity	<input type="checkbox"/> Stay active <input type="checkbox"/> Follow your exercise plan with moderate, vigorous and muscle-strengthening exercises	<input type="checkbox"/> Stay active	<input type="checkbox"/> Stay active
Other Treatments	<input type="checkbox"/> Practice stress-reducing habits such as guided imagery	<input type="checkbox"/> Anti-nausea: At noon take 1 tablet of Zofran <input type="checkbox"/> Bowel prep: At noon start drinking SURPREP or PEG Bowel Prep <input type="checkbox"/> 1 pm: Take 2 tablets metronidazole and 2 tablets neomycin <input type="checkbox"/> 4 pm: Take 2 tablets metronidazole and 2 tablets neomycin <input type="checkbox"/> 10 pm: Take 2 tablets metronidazole and 2 tablets neomycin	

Appendix 5. Office and Phone Call Appointments

Appointment/calls	Location	Date:	Time:
Northwestern Memorial Hospital Pre-op Clinic (7 to 30 days before surgery) 312.926.4566	Lavin Family Pavilion 259 East Erie Street, 17th Floor		
Stoma site marking (If needed) 312.695.6868	Lavin Family Pavilion 259 East Erie Street, 16th Floor		
Pre-op phone call from surgeon's office Phone call only. No new information.	Your home	1 day before surgery:	Between 8 am and 11 am
Pre-op phone call from Same-Day Surgery desk To let you know your arrival time and surgery start time.	Your home	1 day before surgery:	Between 2 pm and 5 pm
Surgery You will get a call from the Same-Day Surgery desk staff the day before surgery with the exact surgery time and place.	Northwestern Memorial Hospital surgery check-in location:	Surgery date:	Surgery check in:
Post-op phone call from surgeon's office	Your home	4 days after surgery:	Between 8 am and 11 am
Follow-up appointment with surgeon 312.695.6868	Lavin Family Pavilion 259 East Erie Street, 16th Floor		
Other (as needed)			

Appendix 6. Enhanced Recovery Pathway for Bowel Surgery Pharmacy Shopping List

Prescription medications:

- Polyethylene glycol 3350 Bowel Prep kit and 4 liter jug
or
SUPREP bowel prep kit
(Take as directed 1 day before surgery)
- Metronidazole 500 milligram (mg) tablets — 6 tablets
(Take as directed 1 day before surgery)
- Zofran 4 mg tablet — 1 tablet
(Take as directed 1 day before surgery)
- Neomycin 500 mg tablets — 6 tablets
(Take as directed on the day before surgery)

Over-the-counter supplies:

- 2 (20-ounce) bottles Gatorade (not red)
(Use as directed the day before surgery)
- 4% chlorhexidine soap (4 ounce bottle)
(Use as directed the morning of surgery)
- Chewing gum — 2 packs
(Use after surgery)

Please speak with your pharmacist or call your surgeon's office with any questions.