



About Your Low Anterior Resection (LAR) Surgery

This guide will help you get ready for your low anterior resection at MSK. It will also help you know what to expect as you recover.

Use this guide as a source of information in the days leading up to your surgery. Bring it with you on the day of your surgery. You and your care team will use it as you learn more about your recovery.

Your surgery

Surgery date: _____

Surgery location: Presurgical Center (PSC) on the 6th floor
1275 York Ave. (between East 67th and East 68th streets)
New York, NY 10065
Take the B elevator to the 6th floor.

Expected discharge date: _____

It's best to plan your ride home from the hospital ahead of time. This will help you keep from waiting for your ride after you're discharged from (leave) the hospital. For more information, read the section "Leaving the hospital."



Visit www.msk.org/pe/LAR to view this guide online.

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About your low anterior resection

Your digestive system

Understanding how your digestive system works can be helpful as you get ready for and recover from your surgery.

Your digestive system is made up of organs that break down food, absorb nutrients, and remove waste from your body (see Figure 1). They include your:

- Mouth
- Esophagus (food pipe)
- Stomach
- Small intestine
- Colon (large intestine)
- Rectum
- Anus

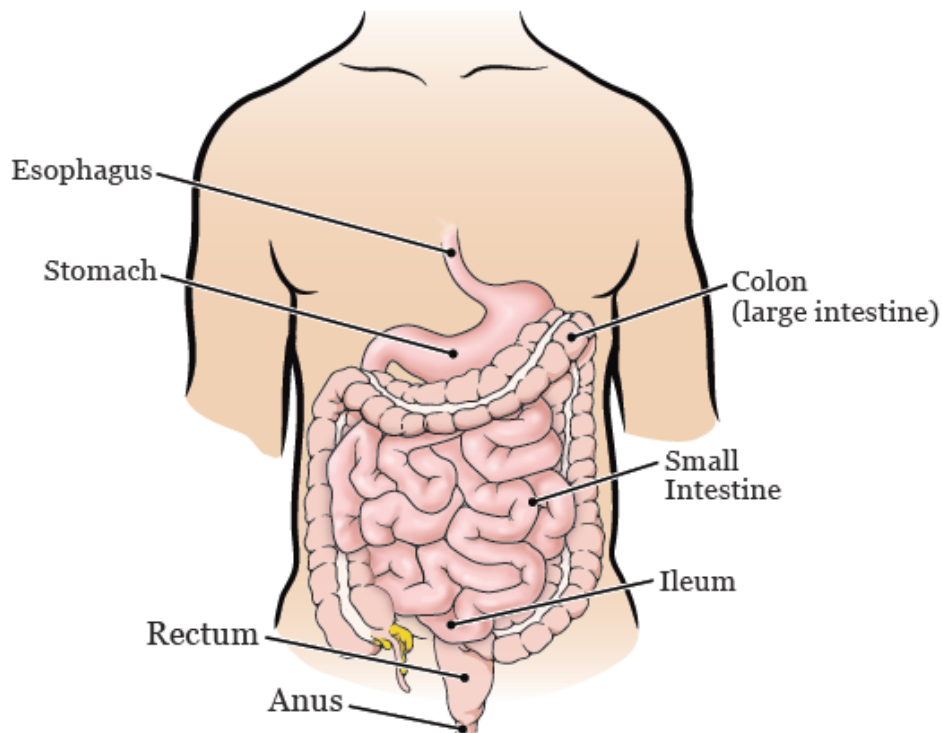


Figure 1. Your digestive system

After you chew and swallow your food, it moves into your esophagus. Your esophagus is a long, muscular tube that carries food from your mouth into your stomach. Once the food enters your stomach, it mixes with stomach acids. These acids start to digest (break down) the food.

When the food leaves your stomach, it moves into your small intestine. There, it continues to be digested, and many nutrients are absorbed. Anything that isn't absorbed is called waste.

The waste then moves to your colon, where some water is reabsorbed (taken back) into your body. The remaining waste enters the end of your colon, which is called your rectum. Your rectum serves as a holding area for the waste until it leaves your body through your anus.

Low anterior resection

LAR is a surgery that's done to treat rectal cancer. During LAR surgery, the part of your rectum with the cancer will be removed. The remaining part of your rectum will be reconnected to your colon. You'll be able to have bowel movements (poop) as usual once you recover from your surgery.

LAR surgery can be done using different techniques. Your surgeon will talk with you about which options are right for you. Depending on the type of surgery you have, your surgeon will make 1 or more incisions (surgical cuts) in your abdomen (belly).

- When 1 long incision is made on your abdomen, this is called open surgery. The part of your rectum that has the cancer will be removed through the incision.
- When several small incisions are made on your abdomen, this is called minimally invasive surgery. Small surgical tools and a video camera will be put into the incisions to remove the cancer. Some surgeons use a robotic device to assist with the surgery.

Once the part of your rectum with the cancer is removed, the remaining part of your rectum will be reconnected to your colon with tiny metal staples or sutures (stitches). The place where the 2 ends are reconnected is called an anastomosis.

LAR surgery usually takes about 4 hours.

Ileostomy

You might need to have an ileostomy for a short time after LAR surgery. An ileostomy is a small opening in your abdomen where bowel movements (poop) can leave your body (see Figure 2). The ileostomy will keep your bowel movements from passing through your colon and rectum. This lets the anastomosis heal.

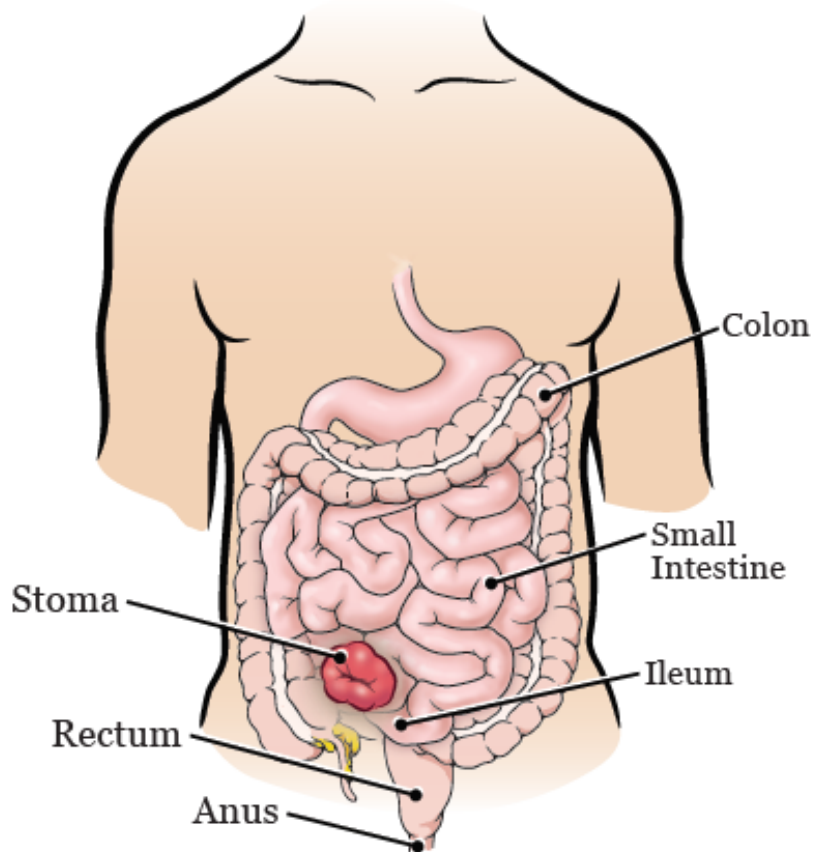


Figure 2. Ileostomy stoma

If you'll have an ileostomy, a part of your small intestine may be brought out through the opening in your abdomen during your surgery. The part of your intestine that's outside your body is called a stoma. Your stoma will be pink or red and look shiny and moist. Bowel movements and gas will leave your body through your stoma and go into a plastic pouch (bag) that covers your stoma.

Your surgeon will usually know before your surgery if you'll need a temporary ileostomy. But they'll make the final decision during your surgery.

If you'll have a temporary ileostomy, a wound, ostomy, and continence (WOC) nurse will help teach you how to care for it before and after your surgery. The ileostomy will be closed a few months after your surgery. Very few people need a permanent ileostomy.

Notes _____

Before your low anterior resection

This section will help you get ready for your surgery. Read it when your surgery is scheduled. Refer to it as your surgery gets closer. It has important information about what to do to get ready.



As you read this section, write down questions to ask your healthcare provider. You can use the space below.

Notes _____

Getting ready for your surgery

You and your care team will work together to get ready for your surgery. Help us keep you safe by telling us if any of these things apply to you, even if you're not sure.

- I take an anticoagulant (blood thinner), such as:
 - Aspirin
 - Heparin
 - Warfarin (Jantoven®, Coumadin®)
 - Clopidogrel (Plavix®)
 - Enoxaparin (Lovenox®)
 - Dabigatran (Pradaxa®)
 - Apixaban (Eliquis®)
 - Rivaroxaban (Xarelto®)
- I take an SGLT2 inhibitor, such as:
 - Canagliflozin (Invokana®)
 - Dapagliflozin (Farxiga®)
 - Empagliflozin (Jardiance®)
 - Ertugliflozin (Steglatro®)
- I take prescription medicine(s), including patches and creams. A prescription medicine is one you can only get with a prescription from your healthcare provider.
- I take over-the-counter medicine(s), including patches and creams. An over-the-counter medicine is one you can buy without a prescription.
- I take dietary supplements, such as herbs, vitamins, minerals, or natural or home remedies.

These are examples of medicines. There are others.

Be sure your healthcare provider knows all the medicines you're taking.

- I have a pacemaker, automatic implantable cardioverter-defibrillator (AICD), or other heart device.
- I have sleep apnea.
- I have had a problem with anesthesia (A-nes-THEE-zhuh) in the past. Anesthesia is medicine to make you sleep during a surgery or procedure.
- I'm allergic to certain medicines or materials, including latex.
- I'm not willing to receive a blood transfusion.
- I drink alcohol.
- I smoke or use an electronic smoking device, such as a vape pen or e-cigarette.
- I use recreational drugs, such as marijuana.

About drinking alcohol

It's important to talk with your healthcare providers about how much alcohol you drink. This will help us plan your care.

If you drink alcohol regularly, you may be at risk for problems during and after your surgery. These include bleeding, infections, heart problems, and a longer hospital stay.

If you drink alcohol regularly and stop suddenly, it can cause seizures, delirium, and death. If we know you're at risk for these problems, we can prescribe medicine to help prevent them.

Here are things you can do before surgery to keep from having problems.

- Be honest with us about how much alcohol you drink.
- Try to stop drinking alcohol once your surgery is planned. Tell us right away if you:
 - Get a headache.
 - Feel nauseous (like you're going to throw up).

- Feel more anxious (nervous or worried) than usual.
- Cannot sleep.

These are early signs of alcohol withdrawal and can be treated.

- Tell us if you cannot stop drinking.
- Ask us questions about drinking and surgery. We will keep all your medical information private, as always.

About smoking

If you smoke, you can have breathing problems when you have surgery. Stopping for even a few days before surgery can help.

We will refer you to our Tobacco Treatment Program if you smoke. You can also reach the program by calling 212-610-0507. To learn more, visit www.msk.org/tobacco

About sleep apnea

Sleep apnea is a common breathing problem. If you have sleep apnea, you stop breathing for short lengths of time while you're asleep. The most common type is obstructive sleep apnea (OSA). With OSA, your airway becomes fully blocked during sleep.

OSA can cause serious problems during and after surgery. Tell us if you have or think you might have sleep apnea. If you use a breathing device, such as a CPAP machine, bring it on the day of your surgery.

Using MyMSK

MyMSK (my.mskcc.org) is your MSK patient portal. You can use it to send and read messages from your care team, view your test results, see your appointment dates and times, and more. You can also invite your caregiver to make their own account so they can see information about your care.

If you do not have a MyMSK account, you can sign up at my.mskcc.org. You can get an enrollment ID by calling 646-227-2593 or your doctor's office.

Watch *How to Enroll in MyMSK: Memorial Sloan Kettering's Patient Portal* at www.msk.org/pe/enroll_mymsk to learn more. You can also contact the MyMSK Help Desk by emailing mymsk@mskcc.org or calling 800-248-0593.

About your MyMSK Goals to Discharge Checklist

After your surgery, you'll focus on getting well enough to leave the hospital. We'll send a Goals to Discharge Checklist to your MyMSK account to help you track how you're doing.

You can use your MyMSK Goals to Discharge Checklist to see the goals you need to meet before leaving the hospital. You can also update your progress throughout the day. Your updates send alerts to your surgical team about your progress.

To learn more, read *Frequently Asked Questions About the MyMSK Goals to Discharge Checklist*. You can ask for a printed copy or find it at www.msk.org/pe/goals_discharge_checklist

About Enhanced Recovery After Surgery (ERAS)

ERAS is a program to help you get better faster after your surgery. It's important to do certain things before and after your surgery as part of the ERAS program.

Before your surgery, make sure you're ready by:

- **Reading this guide.** It will help you know what to expect before, during, and after your surgery. If you have questions, write them down. You can ask your healthcare provider at your next visit or call their office.
- **Exercising and following a healthy diet.** This will help get your body ready for your surgery.

After your surgery, help yourself recover more quickly by:

- **Reading your recovery pathway.** This is an educational resource your healthcare provider will give you. It has goals for your recovery. It will help you know what to do and expect each day.
- **Starting to move around as soon as you can.** The sooner you get out of bed and walk, the quicker you can get back to your usual activities.

Within 30 days of your surgery

Presurgical testing (PST)

You'll have a PST appointment before your surgery. You'll get a reminder from your surgeon's office with the appointment date, time, and location. Visit www.msk.org/parking for parking information and directions to all MSK locations.

You can eat and take your usual medicine(s) the day of your appointment.

It's helpful to bring these things to your appointment:

- A list of all the medicines you're taking, including prescription and over-the-counter medicines, patches, and creams.
- Results of any medical tests done outside of MSK in the past year, if you have them. Examples include results from a cardiac stress test, echocardiogram, or carotid doppler study.
- The names and telephone numbers of your healthcare providers.

You'll meet with an advance practice provider (APP) during your PST appointment. They work closely with MSK's anesthesiology (A-nes-THEE-zee-AH-loh-jee) staff. These are healthcare providers with special training in using anesthesia during a surgery or procedure.

Your APP will review your medical and surgical history with you. You may have tests to plan your care, such as:

- An electrocardiogram (EKG) to check your heart rhythm.
- A chest X-ray.
- Blood tests.

Your APP may recommend you see other healthcare providers. They'll also talk with you about which medicine(s) to take the morning of your surgery.

Meet with a Wound, Ostomy, Contenance (WOC) Nurse

If you'll have a temporary ileostomy, you'll meet with a WOC nurse before your surgery. A WOC nurse is a registered nurse who specializes in wound and ostomy care. They'll teach you and your family how to care for your new colostomy and help you become more independent. A WOC nurse will also show you a colostomy bag so you can get familiar with it.

Identify your caregiver

Your caregiver has an important role in your care. Before your surgery, you and your caregiver will learn about your surgery from your healthcare providers. After your surgery, your caregiver will take you home when you're discharged. They'll also help you care for yourself at home.



For caregivers

Caring for a person going through cancer treatment comes with many responsibilities. We offer resources and support to help you manage them.

Visit www.msk.org/caregivers or read *A Guide for Caregivers* to learn more. You can ask for a printed copy or find it at www.msk.org/pe/guide_caregivers

Fill out a Health Care Proxy form

If you have not already filled out a Health Care Proxy form, we recommend you do now. If you already filled one out or have any other advance directives, bring them to your next appointment.

A health care proxy is a legal document. It says who will speak for you if you cannot communicate for yourself. This person is called your health care agent.

- To learn about health care proxies and other advance directives, read *Advance Care Planning for Cancer Patients and Their Loved Ones*. You can find it at www.msk.org/pe/advance_care_planning or ask for a printed copy.
- To learn about being a health care agent, read *How to Be a Health Care Agent*. You can find it at www.msk.org/pe/health_care_agent or ask for a printed copy.

Talk with a member of your care team if you have questions about filling out a Health Care Proxy form.

Buy bowel prep supplies

You'll need to do a bowel prep (clear the stool from your body) before your surgery.

Your healthcare provider will give you a prescription for antibiotics to take as part of your bowel prep. You'll also need to buy these supplies:

- 1 (238-gram) bottle of polyethylene glycol (MiraLAX®). You can buy this at your local pharmacy. You don't need a prescription.
- 1 (64-ounce) bottle of a clear liquid. For examples of clear liquids, read the "Follow a clear liquid diet" section.
- Extra clear liquids to drink while you're following a clear liquid diet.

Buy acetaminophen (Tylenol®) and ibuprofen (Advil® or Motrin®)

Acetaminophen and ibuprofen are over-the-counter pain medicines. You'll use them after your surgery to help manage your pain at home.

It's helpful to buy these medicines ahead of time if you don't already have them. You can get them at your local pharmacy without a prescription.

7 days before your surgery

Follow your healthcare provider's instructions for taking aspirin

Aspirin can cause bleeding. If you take aspirin or a medicine that has aspirin, you may need to change your dose or stop taking it 7 days before your surgery. Follow your healthcare provider's instructions. **Do not stop taking aspirin unless they tell you to.**

To learn more, read *How To Check if a Medicine or Supplement Has Aspirin, Other NSAIDs, Vitamin E, or Fish Oil*. You can find it in the "Educational resources" section of this guide.

Stop taking vitamin E, multivitamins, herbal remedies, and other dietary supplements

Vitamin E, multivitamins, herbal remedies, and other dietary supplements can cause bleeding. Stop taking them 7 days before your surgery. If your healthcare provider gives you other instructions, follow those instead.

To learn more, read *Herbal Remedies and Cancer Treatment*. You can find it in the "Educational resources" section of this guide.

2 days before your surgery

Don't shave or wax your abdominal area starting 2 days before your surgery. This will lower your risk of getting an infection.

Stop taking nonsteroidal anti-inflammatory drugs (NSAIDs)

NSAIDs, such as ibuprofen (Advil and Motrin) and naproxen (Aleve®), can cause bleeding. Stop taking them 2 days before your surgery. If your healthcare provider gives you other instructions, follow those instead.

To learn more, read *How To Check if a Medicine or Supplement Has Aspirin, Other NSAIDs, Vitamin E, or Fish Oil*. You can find it in the “Educational resources” section of this guide.

1 day before your surgery

Follow a clear liquid diet

You'll need to follow a clear liquid diet the day before your surgery. A clear liquid diet includes only liquids you can see through. You can find examples in the “Clear liquid diet” table.

While you're following a clear liquid diet:

- Do not eat any solid foods.
- Try to drink at least 1 (8-ounce) cup of clear liquid every hour you're awake.
- Drink different types of clear liquids. Do not just drink water, coffee, and tea.

- Do not drink any liquids you can't see through, such as milk or smoothies.
- Do not drink sugar-free liquids unless you have diabetes and a member of your care team tells you to.

How to follow a clear liquid diet if you have diabetes

Ask the healthcare provider who manages your diabetes:

- What to do while you're following a clear liquid diet.
- If you need to change your dose of insulin or other diabetes medicine(s), if you take them.
- If you should drink sugar-free clear liquids.

Check your blood sugar level often while you're following a clear liquid diet.

If you have questions, talk with your healthcare provider.

Clear liquid diet

	OK to have	Do not have
Drinks	<ul style="list-style-type: none"> • Clear fruit juices, such as lemonade, apple, cranberry, and grape juices. • Soda, such as ginger ale, 7UP®, Sprite®, and seltzer. • Sports drinks, such as Gatorade® and Powerade®. • Black coffee or plain tea without any type of milk or cream. • Water, including carbonated (fizzy) and flavored water. • Clear nutritional drinks, such as Boost® Breeze, Ensure Clear™, Pedialyte®, and Diabetishield®. 	<ul style="list-style-type: none"> • Juices with pulp. • Nectars. • Smoothies or shakes. • Milk, cream, and other dairy products. • Nut milks, plant milks, non-dairy creamers, and other dairy alternatives. • Drinks with alcohol.

(table continued on next page)

	OK to have	Do not have
Soups	<ul style="list-style-type: none"> • Clear broth, bouillon, and consommé. 	<ul style="list-style-type: none"> • Anything with pieces of food or seasoning.
Sweets	<ul style="list-style-type: none"> • Gelatin, such as Jell-O®. • Flavored ices. • Hard candies, such as Life Savers®, lemon drops, and peppermints. 	<ul style="list-style-type: none"> • All other sweets.

Start your bowel prep

The morning of the day before your surgery, mix all 238 grams of MiraLAX with 64 ounces of clear liquid until the MiraLAX powder dissolves. After that, you can put the mixture in the refrigerator if you want to.

At 5 p.m. on the day before your surgery, start drinking the MiraLAX mixture. It will make you have bowel movements often, so make sure you're near a bathroom.

- Drink 1 (8-ounce) cup of the mixture every 15 minutes until it's gone.
- When you finish the MiraLAX mixture, drink 4 to 6 cups of clear liquids.
- Put zinc oxide ointment (such as Desitin®) on the skin around your anus after every bowel movement. This helps prevent irritation.

At 7 p.m. on the day before your surgery, take your antibiotics as instructed.

At 10 p.m. on the day before your surgery, take your antibiotics as instructed.

You can keep drinking clear liquids, but you don't have to.

Note the time of your surgery

A staff member will call you after 2 p.m. the day before your surgery. If your surgery is scheduled for a Monday, they'll call you the Friday before. If you do not get a call by 7 p.m., call 212-639-5014.

The staff member will tell you what time to get to the hospital for your surgery. They'll also remind you where to go. Visit www.msk.org/parking for parking information and directions to all MSK locations.

Shower with a 4% CHG solution antiseptic skin cleanser, such as Hibiclens®

4% CHG solution is a skin cleanser that kills germs for 24 hours after you use it. Showering with it before your surgery will help lower your risk of infection after surgery. Your nurse will give you a bottle to use before your surgery.

The night before your surgery, shower using a 4% CHG solution antiseptic skin cleanser.

1. Wash your hair with your usual shampoo and conditioner. Rinse your head well.
2. Wash your face and genital (groin) area with your usual soap. Rinse your body well with warm water.
3. Open the 4% CHG solution bottle. Pour some into your hand or a clean washcloth.
4. Move away from the shower stream. Rub the 4% CHG solution gently over your body from your neck to your feet. Do not put it on your face or genital area.
5. Move back into the shower stream to rinse off the 4% CHG solution. Use warm water.
6. Dry yourself off with a clean towel.

Do not put on any lotion, cream, deodorant, makeup, powder, perfume, or cologne after your shower.

Instructions for eating



Stop eating at midnight (12 a.m.) the night before your surgery. This includes hard candy and gum.

If your healthcare provider told you to stop eating earlier than midnight, follow their instructions. Some people need to fast (not eat) for longer before their surgery.

The day of your surgery

Instructions for drinking

Between midnight (12 a.m.) and 2 hours before your arrival time, only drink the liquids on the list below. Do not eat or drink anything else. Stop drinking 2 hours before your arrival time.

- Water.
- Clear apple juice, clear grape juice, or clear cranberry juice.
- Gatorade or Powerade.
- Black coffee or plain tea. It's OK to add sugar. Do not add anything else.
 - Do not add any amount of any type of milk or creamer. This includes plant-based milks and creamers.
 - Do not add honey.
 - Do not add flavored syrup.

If you have diabetes, pay attention to the amount of sugar in these drinks. It will be easier to control your blood sugar levels if you include sugar-free, low-sugar, or no added sugar versions of these drinks.

It's helpful to stay hydrated before surgery, so drink if you are thirsty. Do not drink more than you need. You will get intravenous (IV) fluids during your surgery.



Stop drinking 2 hours before your arrival time. This includes water.

Take your medicines as instructed

A member of your care team will tell you which medicines to take the morning of your surgery. Take only those medicines with a sip of water. Depending on what you usually take, this may be all, some, or none of your usual morning medicines.

Shower with a 4% CHG solution antiseptic skin cleanser, such as Hibiclens

Shower with a 4% CHG solution antiseptic skin cleanser before you leave for the hospital. Use it the same way you did the night before.

Do not put on any lotion, cream, deodorant, makeup, powder, perfume, or cologne after your shower.

Things to remember

- Wear something comfortable and loose-fitting.
- If you wear contact lenses, wear your glasses instead. Wearing contact lenses during surgery can damage your eyes.

- Do not wear any metal objects. Take off all jewelry, including body piercings. The tools used during your surgery can cause burns if they touch metal.
- Leave valuable items at home.
- If you're menstruating (have your monthly period), use a sanitary pad, not a tampon. We'll give you disposable underwear and a pad if you need them.

What to bring

- A pair of loose-fitting pants, such as sweatpants.
- Brief-style underwear that's 1 to 2 sizes larger than you normally wear.
- Sneakers that lace up. You may have some swelling in your feet. Lace-up sneakers can fit over this swelling.
- Your breathing device for sleep apnea (such as your CPAP machine), if you have one.
- Your Health Care Proxy form and other advance directives, if you filled them out.
- Your cell phone and charger.
- Only the money you may want for small purchases, such as a newspaper.
- A case for your personal items, if you have any. Eyeglasses, hearing aids, dentures, prosthetic devices, wigs, and religious articles are examples of personal items.
- This guide. You'll use it to learn how to care for yourself after surgery.

Once you're in the hospital

When you get to the hospital, take the B elevator to the 6th floor. Check in at the desk in the PSC waiting room.

Many staff members will ask you to say and spell your name and birth date. This is for your safety. People with the same or a similar name may be having surgery on the same day.

We'll give you a hospital gown, robe, and nonskid socks to wear when it's time to change for surgery.



For caregivers, family, and friends

Read *Information for Family and Friends for the Day of Surgery* to help you know what to expect on the day of your loved one's surgery. You can ask for a printed copy or find it at www.msk.org/pe/info_family_friends

Meet with a nurse

You'll meet with a nurse before surgery. Tell them the dose of any medicines you took after midnight (12 a.m.) and the time you took them. Make sure to include prescription and over-the-counter medicines, patches, and creams.

Your nurse may place an intravenous (IV) line in one of your veins, usually in your arm or hand. If your nurse does not place the IV, your anesthesiologist (A-nes-THEE-zee-AH-loh-jist) will do it in the operating room.

Meet with an anesthesiologist

You'll also meet with an anesthesiologist before surgery. They will:

- Review your medical history with you.
- Ask if you've had any problems with anesthesia in the past, such as nausea or pain.

- Talk with you about your comfort and safety during your surgery.
- Talk with you about the kind of anesthesia you'll get.
- Answer your questions about your anesthesia.

Get ready for surgery

When it's time for your surgery, you'll take off your eyeglasses, hearing aids, dentures, prosthetic devices, wig, and religious articles.

You'll either walk into the operating room or a staff member will bring you there on a stretcher. A member of the operating room team will help you onto the operating bed. They'll put compression boots on your lower legs. These gently inflate and deflate to help blood flow in your legs.

Once you're comfortable, your anesthesiologist will give you anesthesia through your IV line and you'll fall asleep. You'll also get fluids through your IV line during and after your surgery.

During your surgery

After you're fully asleep, your care team will place a breathing tube through your mouth into your airway. It will help you breathe. They'll also place a urinary (Foley) catheter in your bladder. It will drain your urine (pee) during your surgery.

Once they finish your surgery, your surgeon will close your incisions with stitches, staples, Steri-Strips™ (thin pieces of surgical tape) or Dermabond® (surgical glue). They may also cover your incisions with a bandage.

Your care team will usually take out your breathing tube while you're still in the operating room.

Notes _____

After your low anterior resection

This section will help you know what to expect after your surgery. You'll learn how to safely recover from your surgery both in the hospital and at home.



As you read this section, write down questions to ask your healthcare provider. You can use the space below.

Notes _____

In the Post-Anesthesia Care Unit (PACU)

You'll be in the PACU when you wake up after your surgery. A nurse will be keeping track of your temperature, pulse, blood pressure, and oxygen levels. You may get oxygen through a tube resting below your nose or a mask over your nose and mouth. You'll also have compression boots on your lower legs.

Pain medicine

You'll get medicine to control your pain and keep you comfortable. There are different ways pain medicine can be given:

- **Epidural catheter:** Some people get pain medicine through an epidural catheter (thin, flexible tube in their spine).
- **Nerve block:** Some people get a nerve block before or during surgery. With a nerve block, your healthcare provider injects medicine into some of your nerves to reduce pain after surgery.
- **IV medicine:** Some people get pain medicine into a vein through their IV line.

You'll have 1 or more of these after your surgery. They're all effective ways to control your pain. Your healthcare provider will talk with you before choosing the best one(s) for you.

Tubes and drains

You'll have 1 or more of the tubes and drains below. Your healthcare providers will talk with you about what to expect.

- You'll have a Foley catheter in your urethra going into your bladder. This tube drains urine from your bladder so your care team can keep track of how much urine you're making.

- You'll have 1 or 2 drains in your lower abdomen. These drain extra fluid from the area. They're usually removed after a few days. If you'll go home with a drain, your nurse will show you how to care for it.

Moving to your hospital room

You'll stay in the PACU until you're awake and your pain is under control. Most people move to their hospital room after a few hours in the PACU, but some people stay in the PACU overnight for observation.

After your stay in the PACU, a staff member will take you to your hospital room.

In your hospital room

The length of time you're in the hospital after your surgery depends on your recovery and the exact surgery you had. Most people stay in the hospital for about 2 to 4 days. Your care team will tell you what to expect.

In your hospital room, you'll meet one of the nurses who will care for you during your stay. A nurse will help you out of bed and into your chair soon after you get there.

Your care team will teach you how to care for yourself while you're healing from your surgery. You can help yourself recover more quickly by:

- **Reading your recovery pathway.** We will give you a pathway with goals for your recovery if you do not already have one. It will help you know what to do and expect on each day during your recovery.
- **Starting to move around as soon as you can.** The sooner you get out of bed and walk, the quicker you can get back to your usual activities.

You can use your MyMSK Goals to Discharge Checklist to track your progress during your recovery. Read *Frequently Asked Questions About the MyMSK Goals to Discharge Checklist* to learn more. You ask for a printed copy or find it at www.msk.org/pe/goals_discharge_checklist

To learn what you can do to stay safe and keep from falling while you're in the hospital, read *Call! Don't Fall!* You can ask for a printed copy or find it at www.msk.org/pe/call_dont_fall

Managing your pain

You'll have some pain after your surgery. At first, you'll get your pain medicine through your epidural catheter, nerve block, or IV line.

Your healthcare providers will ask you about your pain often and give you medicine as needed. If your pain isn't relieved, tell one of your healthcare providers. It's important to control your pain so you can use your incentive spirometer and move around. Controlling your pain will help you recover better.

Many people find their pain is controlled with over-the-counter medicines alone. If you need stronger pain medicine in the hospital, one of your healthcare providers will give you a prescription before you leave. Talk with your healthcare providers about possible side effects and how to taper (slowly stop taking) your medicine.

Moving around and walking

Moving around and walking will help lower your risk for blood clots and pneumonia (lung infection). It will also help you start passing gas and having bowel movements (pooping) again.

Read your recovery pathway to learn about your specific moving and walking goals. Your nurse, physical therapist, or occupational therapist will help you move around, if needed.

To learn more about how walking can help you recover, read *Frequently Asked Questions About Walking After Your Surgery*. You can find it at www.msk.org/pe/walking_after_surgery or ask for a printed copy.

Exercising your lungs

It's important to exercise your lungs so they expand fully. This helps prevent pneumonia.

- Your nurse will give you an incentive spirometer. Use it 10 times every hour you're awake. Read *How to Use Your Incentive Spirometer* to learn more. You can find it at www.msk.org/pe/incentive_spirometer or ask for a printed copy.
- Do coughing and deep breathing exercises. A member of your care team will teach you how.

Eating and drinking

You'll slowly go back to eating solid foods starting the day after your surgery. Read your pathway and talk with your care team for more information.

Your healthcare provider will give you dietary guidelines to follow after your surgery. A clinical dietitian nutritionist will visit you in your hospital room to go over these guidelines with you before you leave the hospital.

Caring for your temporary ileostomy

If you have a temporary ileostomy, your nurses, WOC nurse, or both will check your stoma every day. You'll have a bag in place to collect the stool that comes out of your stoma.

Your WOC nurse will visit you in your hospital room to teach you how to care for your ileostomy. To learn more, read *Caring for Your Ileostomy or Colostomy*. You can ask for a printed copy or find it at www.msk.org/pe/caring_ileostomy_colostomy.

Leaving the hospital

By the time you're ready to leave the hospital, your incision will have started to heal. Before you leave, look at your incision with one of your healthcare providers. Knowing what it looks like will help you notice any changes later.

On the day of your discharge, plan to leave the hospital between 8 a.m. and 11 a.m. Before you leave, your healthcare provider will write your discharge order and prescriptions. You'll also get written discharge instructions. One of your healthcare providers will review them with you before you leave.

If your ride isn't at the hospital when you're ready to be discharged, you may be able to wait in the Patient Transition Lounge. A member of your care team will give you more information.

At home

Read *What You Can Do to Avoid Falling* to learn what you can do to keep from falling at home and during your appointments at MSK. You can find it at www.msk.org/pe/avoid_falling or ask for a printed copy.

Filling out your Recovery Tracker

We want to know how you're feeling after you leave the hospital. To help us care for you, we'll send questions to your MyMSK account. We'll send them every day for 10 days after you're discharged. These questions are known as your Recovery Tracker.

Fill out your Recovery Tracker every day before midnight (12 a.m.). It only takes 2 to 3 minutes to complete. Your answers to these questions will help us understand how you're feeling and what you need.

Based on your answers, we may reach out to you for more information. Sometimes, we may ask you to call your surgeon's office. You can always contact your surgeon's office if you have any questions.

To learn more, read *About Your Recovery Tracker*. You can find it at www.msk.org/pe/recovery_tracker or ask for a printed copy.

Managing your pain

People have pain or discomfort for different lengths of time. You may still have some pain when you go home and will probably be taking pain medicine. Some people have soreness, tightness, or muscle aches around their incisions as they recover. This doesn't mean that something is wrong. If it doesn't get better, contact your healthcare provider.

Follow these guidelines to help manage your pain at home.

- Take your medicine(s) as directed and as needed.
- Call your healthcare provider if the medicine prescribed for you does not help your pain.
- Do not drive or drink alcohol while you're taking prescription pain medicine. Some prescription pain medicines can make you drowsy (very sleepy). Alcohol can make the drowsiness worse.

- You'll have less pain and need less pain medicine as your incision heals. An over-the-counter pain reliever will help with aches and discomfort. Acetaminophen (Tylenol) and ibuprofen (Advil or Motrin) are examples of over-the-counter pain relievers.
 - Follow your healthcare provider's instructions for stopping your prescription pain medicine.
 - Do not take too much of any medicine. Follow the instructions on the label or from your healthcare provider.
 - Read the labels on all the medicines you're taking. This is very important if you're taking acetaminophen. Acetaminophen is an ingredient in many over-the-counter and prescription medicines. Taking too much can harm your liver. Do not take more than one medicine that has acetaminophen without talking with a member of your care team.
- Pain medicine should help you get back to your usual activities. Take enough to do your activities and exercises comfortably. You may have a little more pain as you start to be more active.
- Keep track of when you take your pain medicine. It works best 30 to 45 minutes after you take it. Taking it when you first have pain is better than waiting for the pain to get worse.

Some prescription pain medicines, such as opioids, may cause constipation. Constipation is when you poop less often than usual, have a harder time pooping, or both.

Caring for your incisions

It's normal for the skin below your incisions to feel numb. This happens because some of your nerves were cut during your surgery, even if you had a nerve-sparing procedure. The numbness will go away over time.

Check your incisions every day for any signs of infection until your healthcare provider tells you they're healed. Call your healthcare provider if you develop any of the following signs of an infection:

- Redness
- Swelling
- Increased pain
- Warmth at the incision site
- Foul-smelling or pus-like drainage from your incision
- A fever of 100.5 °F (38 °C) or higher

To keep from getting an infection, don't let anyone touch your incisions. Clean your hands with soap and water or an alcohol-based hand sanitizer before you touch your incisions.

If you go home with staples or sutures in your incisions, your healthcare provider will take them out during one of your appointments after surgery. It's OK to get them wet. If you go home with Steri-Strips or Dermabond on your incisions, they'll loosen and peel off by themselves. If they haven't come off after about 14 days, you can take them off.

Showering

Shower every day. Taking a warm shower is relaxing and can help ease muscle aches. You'll also clean your incision when you shower.

Take off your bandages before you shower. Gently wash your incisions with a fragrance-free, liquid soap. Don't scrub or use a washcloth on your incisions. This could irritate them and keep them from healing.

When you're finished with your shower, gently pat your incisions with a clean towel. Let them air dry completely before getting dressed. If there's no drainage, leave your incisions uncovered.

Don't take tub baths or go swimming until your healthcare provider says it's OK.

Caring for your temporary ileostomy

If you have a temporary ileostomy, your WOC nurse will teach you how to care for it after your surgery. For more information, read *Caring for Your Ileostomy or Colostomy*. You can ask for a printed copy or find it at www.msk.org/pe/caring_ileostomy_colostomy

Mucus discharge is common for people with an ostomy. You may pass mucus that may also appear as a bowel movement.

Preventing dehydration

It's very important to stay well-hydrated while you have a temporary ileostomy. You can become dehydrated if the amount of stool you're making is more than what you eat or drink.

Drink 8 to 10 (8-ounce) cups of liquids every day. Call your doctor if you have any of the following signs or symptoms of dehydration:

- Feeling very thirsty
- Dry mouth
- Dry skin
- Fatigue (feeling more tired or having less energy than usual)
- Loss of appetite
- Feeling dizzy when you stand
- Headache
- Leg cramps

Signs of a bowel obstruction

While you have a temporary ileostomy, you're at risk for having a bowel obstruction. A bowel obstruction happens when your intestine is partly or completely blocked. The blockage keeps food, liquids, and gas from moving through your intestines normally. The blockage can be caused by food, scar tissue, or a twist in your intestine.

Call your healthcare provider if you have any of the following signs or symptoms of a bowel obstruction:

- Tender and bloated stomach.
- Inability to pass gas or stool.
- Abdominal cramping.
- Less or no output from your ileostomy.
- Nausea or vomiting.

Managing changes in bowel function

The information in this section is for people who:

- Don't have a temporary ileostomy.
- Have had their temporary ileostomy reversed.

Your rectum is a storage tank for stool (poop). You had surgery to remove part of it, so now this tank is smaller. This means that it can't hold as much stool. You may have a lot of small bowel movements because your rectum can't hold a lot of stool. Over time, your rectum will stretch and be able to hold more stool. This process can take several months to years.

For the first few weeks after your surgery, you may have a lot of bowel movements. This is because the lower part of your colon hasn't been used in a while. It will take time for your body to recover.

After your surgery, your bowel movements may:

- Be more frequent.
- Happen several times an hour, several times a week.
- Happen every other day.
- Not feel complete. After having a bowel movement, you may still feel like you have to go.

You also may:

- Feel a strong sense of urgency to have a bowel movement.

- Have trouble telling the difference between having a bowel movement and passing gas.

If you also had radiation therapy, your rectum may be stiff. It will not be able to stretch and hold stool as well as before your surgery. This is usually temporary.

Tips for managing frequent bowel movements

If you're having multiple bowel movements a day, you may need to follow a bland diet for a few days.

While you're following a bland diet, avoid:

- Dairy products, including milk, cheese, and ice cream
- Coffee
- Chocolate
- Spicy foods
- Fried foods
- Gravies and cream sauces
- High-fat deli meats
- Greasy meats, such as sausage and bacon
- Fruit juices
- Sugar-free foods

Following the BRAT diet can also help control frequent bowel movements.

The BRAT diet is made up mostly of:

- Bananas (B)
- White rice (R)
- Applesauce (A)
- Toast (T)

Drinking black tea can also help.

Tips for managing soreness

You may have soreness around your anus from frequent bowel movements. If you do:

- Soak in warm water 2 to 3 times a day.
- Apply zinc oxide ointment (Desitin) to the skin around your anus after every bowel movement. This helps prevent irritation.
- Don't use harsh toilet paper. You can use a nonalcohol wipe (such as a moistened flushable wipe) instead.
- If your healthcare provider prescribes medicine, take it as directed.

Changes in urinary function

The nerves that control urination are also in your pelvis. There's a small chance you may have changes in urinary function after your surgery. Your surgeon will do everything they can to protect these nerves. A small number of people lose urinary control for a short time after surgery.

If this happens to you, you may need to use a catheter for a longer time after your surgery. Permanent loss of urinary control is uncommon. Your surgeon will talk with you about this risk. You can also speak to your other healthcare providers.

Physical activity and exercise

When you leave the hospital, your incisions may look like they're healed on the outside, but they will not be healed on the inside. For the first 6 weeks after your surgery:

- Don't lift, push, or pull anything heavier than 10 pounds (about 4.5 kilograms).
- Don't do any strenuous activities (such as jogging and tennis).

- Don't play any contact sports (such as football).

Walking is a good way to increase your endurance. You can walk outside or indoors at your local mall or shopping center. You can also climb stairs, but try to limit how often you do this for the first week you're home. Don't go out by yourself until you're sure of what you can do.

It's common to have less energy than usual after surgery. Recovery time is different for everyone. Do more activity each day as much as you can. Always balance activity periods with rest periods. But if you can't sleep at night, it may be a sign you're resting too much during the day.

Driving

Driving may cause discomfort while you're healing because you use your abdominal muscles (abs) when you brake. Ask your healthcare provider when you can drive. Don't drive while you're taking pain medicine that may make you drowsy. You can ride in a car as a passenger at any time after you leave the hospital.

Sexual activity

Your healthcare provider will tell you when you can start having sexual activity.

The nerves that control sexual function are in your pelvis. You may worry they'll be damaged after your surgery. Surgeons at MSK have special training to lower this risk. Only a small number of people have changes in sexual function after their surgery. If you have any concerns about sexual function, talk with your healthcare provider.

Going back to work

Talk with your healthcare provider about your job. They'll tell you when it may be safe for you to start working again based on what you do. If you

move around a lot or lift heavy objects, you may need to stay out a little longer. If you sit at a desk, you may be able to go back sooner.

Getting your test results

After your surgery, the tumor and the tissue around it will be sent to a pathologist. Your test results will be ready about 7 to 10 business days after your surgery. Your surgeon will talk with you about the results of the tests and whether they recommend any additional treatments.

Follow-up appointments

Your first appointment after your surgery will be 1 to 3 weeks after you're discharged from the hospital. Call your surgeon's office to schedule it.

It's important to go to all your follow-up appointments after your surgery. You can call your healthcare provider if you have questions between these appointments.

Managing your feelings

You may have new and upsetting feelings after a surgery for a serious illness. Many people say they felt weepy, sad, worried, nervous, irritable, or angry at one time or another. You may find that you cannot control some of these feelings. If this happens, it's a good idea to seek emotional support. Your healthcare provider can refer you to MSK's Counseling Center. You can also reach them by calling 646-888-0200.

The first step in coping is to talk about how you feel. Family and friends can help. We can also reassure, support, and guide you. It's always a good idea to let us know how you, your family, and your friends are feeling emotionally. Many resources are available to you and your family. We're here to help you and your family and friends handle the emotional aspects of your illness. We can help no matter if you're in the hospital or at home.

When to call your healthcare provider



Call your healthcare provider if:

- You have a fever of 100.5 °F (38.0 °C) or higher.
- You have pain in your abdomen, nausea, and vomiting.
- You have any of these signs of infection in your incision:
 - Redness
 - Swelling
 - Increased pain
 - Warmth at the incision site
 - Foul-smelling or pus-like drainage
- You have trouble urinating (peeing).
- You have pain at your incision that isn't eased by pain medicine.
- You're bleeding from your rectum.
- You don't have any output for 2 hours (if you have an ileostomy).
- You have any of these signs and symptoms of dehydration:
 - Excessive thirst
 - Dry mouth or skin
 - Fatigue
 - Loss of appetite
 - Feeling dizzy when you stand
 - Headache
 - Leg cramps
- You have any questions or concerns.

Monday through Friday from 9 a.m. to 5 p.m., call your healthcare provider's office. After 5 p.m., during the weekend, and on holidays, call 212-639-2000. Ask to speak to the person on call for your healthcare provider.

Ostomy support services

The Ostomy Association

www.ostomy.org

Wound Ostomy Continence Organization

www.wocn.org

Go to this website to find a CWOCN in your area. The website also has information on resources, suppliers of ostomy products, and support groups.

MSK support services

Admitting Office

212-639-7606

Call if you have questions about your hospital admission, such as asking for a private room.

Anesthesia

212-639-6840

Call if you have questions about anesthesia.

Blood Donor Room

212-639-7643

Call for information if you're interested in donating blood or platelets.

Bobst International Center

332-699-7968

We welcome patients from around the world and offer many services to help. If you're an international patient, call for help arranging your care.

Counseling Center

www.msk.org/counseling

646-888-0200

Many people find that counseling helps them. Our Counseling Center offers counseling for individuals, couples, families, and groups. We can also prescribe medicine to help if you feel anxious or depressed. Ask a member of your care team for a referral or call the number above to make an appointment.

Food Pantry Program

646-888-8055

We give food to people in need during their cancer treatment. Talk with a member of your care team or call the number above to learn more.

Integrative Medicine Service

www.msk.org/integrativemedicine

Our Integrative Medicine Service offers many services to complement (go along with) traditional medical care. For example, we offer music therapy, mind/body therapies, dance and movement therapy, yoga, and touch therapy. Call 646-449-1010 to make an appointment for these services.

You can also schedule a consultation with a healthcare provider in the Integrative Medicine Service. They'll work with you to make a plan for creating a healthy lifestyle and managing side effects. Call 646-608-8550 to make an appointment for a consultation.

MSK Library

library.mskcc.org

212-639-7439

You can visit our library website or call to talk with the library reference staff. They can help you find more information about a type of cancer. You can also visit the library's Patient and Health Care Consumer Education Guide at libguides.mskcc.org/patienteducation

Nutrition Services

www.msk.org/nutrition

212-639-7312

Our Nutrition Service offers nutritional counseling with one of our clinical dietitian nutritionists. Your clinical dietitian nutritionist will talk with you about your eating habits. They can also give advice on what to eat during and after treatment. Ask a member of your care team for a referral or call the number above to make an appointment.

Patient and Community Education

www.msk.org/pe

Visit our patient and community education website to search for educational resources, videos, and online programs.

Patient Billing

646-227-3378

Call if you have questions about preauthorization with your insurance company. This is also called preapproval.

Patient Representative Office

212-639-7202

Call if you have questions about the Health Care Proxy form or concerns about your care.

Perioperative Nurse Liaison

212-639-5935

Call if you have questions about MSK releasing any information while you're having surgery.

Private Duty Nurses and Companions

917-862-6373

You can request private nurses or companions to care for you in the hospital and at home. Call to learn more.

Rehabilitation Services

www.msk.org/rehabilitation

Cancers and cancer treatments can make your body feel weak, stiff, or tight. Some can cause lymphedema (swelling). Our physiatrists (rehabilitation medicine doctors), occupational therapists (OTs), and physical therapists (PTs) can help you get back to your usual activities.

- **Rehabilitation medicine doctors** diagnose and treat problems that affect how you move and do activities. They can design and help coordinate your rehabilitation therapy program, either at MSK or somewhere closer to home. Call Rehabilitation Medicine (Physiatry) at 646-888-1929 to learn more.
- An **OT** can help if you're having trouble doing usual daily activities. For example, they can recommend tools to help make daily tasks easier. A **PT** can teach you exercises to help build strength and flexibility. Call Rehabilitation Therapy at 646-888-1900 to learn more.

Resources for Life After Cancer (RLAC) Program

646-888-8106

At MSK, care does not end after your treatment. The RLAC Program is for patients and their families who have finished treatment.

This program has many services. We offer seminars, workshops, support groups, and counseling on life after treatment. We can also help with insurance and employment issues.

Sexual Health Programs

Cancer and cancer treatments can affect your sexual health, fertility, or both. MSK's sexual health programs can help you before, during, or after your treatment.

- Our **Female Sexual Medicine and Women's Health Program** can help with sexual health problems such as premature menopause or fertility

issues. Ask a member of your MSK care team for a referral or call 646-888-5076 to learn more.

- **Our Male Sexual and Reproductive Medicine Program** can help with sexual health problems such as erectile dysfunction (ED). Ask a member of your care team for a referral or call 646-888-6024 to learn more.

Social Work

www.msk.org/socialwork

212-639-7020

Social workers help patients, families, and friends deal with common issues for people who have cancer. They provide individual counseling and support groups throughout your treatment. They can help you communicate with children and other family members.

Our social workers can also help refer you to community agencies and programs. If you're having trouble paying your bills, they also have information about financial resources. Call the number above to learn more.

Spiritual Care

212-639-5982

Our chaplains (spiritual counselors) are available to listen, help support family members, and pray. They can contact community clergy or faith groups, or simply be a comforting companion and a spiritual presence. Anyone can ask for spiritual support. You do not have to have a religious affiliation (connection to a religion).

MSK's interfaith chapel is located near Memorial Hospital's main lobby. It's open 24 hours a day. If you have an emergency, call 212-639-2000. Ask for the chaplain on call.

Tobacco Treatment Program

www.msk.org/tobacco

212-610-0507

If you want to quit smoking, MSK has specialists who can help. Call to learn more.

Virtual Programs

www.msk.org/vp

We offer online education and support for patients and caregivers. These are live sessions where you can talk or just listen. You can learn about your diagnosis, what to expect during treatment, and how to prepare for your cancer care.

Sessions are private, free, and led by experts. Visit our website to learn more about Virtual Programs or to register.

External support services

There are many other services available to help you before, during, and after your cancer treatment. Some offer support groups and information. Others can help with transportation, lodging, and treatment costs.

Visit www.msk.org/pe/external_support_services for a list of these support

Notes _____

Educational resources

This section lists the educational resources mentioned in this guide. It also has copies of the resources that are most important for you to read. They will help you get ready for your surgery and recover after your surgery.



As you read these resources, write down questions to ask your healthcare provider. You can use the space below.

Notes _____

These are the educational resources mentioned in this guide. You can find them online or ask a member of your care team for a printed copy.

- ***A Guide for Caregivers*** (www.msk.org/pe/guide_caregivers)
- ***Common Questions About MSK's Recovery Tracker***
(www.msk.org/pe/recovery_tracker)
- ***Advance Care Planning for Cancer Patients and Their Loved Ones***
(www.msk.org/pe/advance_care_planning)
- ***Call! Don't Fall!*** (www.msk.org/pe/call_dont_fall)
- ***Caring for Your Ileostomy or Colostomy***
(www.msk.org/pe/caring_ileostomy_colostomy)
- ***Frequently Asked Questions About the MyMSK Goals to Discharge Checklist*** (www.msk.org/pe/goals_discharge_checklist)
- ***Frequently Asked Questions About Walking After Your Surgery***
(www.msk.org/pe/walking_after_surgery)
- ***Herbal Remedies and Cancer Treatment***
(www.msk.org/pe/herbal_remedies)
- ***How to Be a Health Care Agent*** (www.msk.org/pe/health_care_agent)
- ***How To Check if a Medicine or Supplement Has Aspirin, Other NSAIDs, Vitamin E, or Fish Oil*** (www.msk.org/pe/check-med-supplement)
- ***How to Enroll in MyMSK: Memorial Sloan Kettering's Patient Portal***
(www.msk.org/pe/enroll_mymsk)
- ***How to Use Your Incentive Spirometer***
(www.msk.org/pe/incentive_spirometer)
- ***Information for Family and Friends for the Day of Surgery***
(www.msk.org/pe/info_family_friends)
- ***Patient-Controlled Analgesia (PCA)*** (www.msk.org/pe/pca)
- ***What You Can Do to Avoid Falling*** (www.msk.org/pe/avoid_falling)



PATIENT & CAREGIVER EDUCATION

Herbal Remedies and Cancer Treatment

This information explains herbal remedies and how they can affect your treatment.

About Herbal Remedies

Herbal remedies are any herbs, botanical (plant-based) supplements, or dietary supplements you take for their health benefits. These may come as tablets, capsules, powders, teas, liquid extracts, and fresh or dried plants.

Some herbal remedies can help prevent or manage side effects of cancer or your treatment. The herbal remedies that can help you depend on what symptoms you have and what treatment you're getting.

Even though herbal remedies can feel safe, they may not all be safe. Herbal remedies do not go through the same testing as prescription medications to make sure they work and are safe.

Some herbal remedies may be harmful. This is because they can:

- Affect how your other medications work.
- Raise or lower your blood pressure.
- Thin your blood and increase your risk of bleeding.
- Keep radiation therapy from working as well as it should.
- Change how your body reacts to sedation (medication to make you calmer) or general anesthesia (medication to make you sleepy).

Talk with your healthcare provider about any herbal remedies or other

supplements you are taking. They can provide an open and safe space to talk about these products.

For more information about herbs and supplements, visit www.aboutherbs.com or call MSK's Integrative Medicine Service at 646-608-8550.

Stop taking herbal remedies before your treatment

Stop taking herbal remedies and other dietary supplements 7 days (1 week) before you:

- Have surgery.
- Start chemotherapy.
- Start radiation therapy.
- Have certain procedures. Your healthcare provider will let you know if you need to stop taking herbal remedies before your procedure.

Herbal remedies and other dietary supplements can cause bleeding and affect your treatment. Follow your healthcare provider's instructions for when to restart taking herbal remedies.

You can still use some herbs in your food and drinks, such as using spices in cooking and drinking tea. Herbal remedies are stronger than the herbs you cook with.

Common Herbal Remedies and Their Effects

These are some commonly used herbs and their side effects on cancer treatments.

Echinacea (EH-kih-NAY-shuh)

- Can cause rare but serious allergic reactions, such as a rash or trouble breathing.
- Can keep medications that weaken your immune system from working as well as they should.

Garlic

- Can lower your blood pressure and cholesterol levels.
- Can increase your risk of bleeding.

Gingko (also known as Gingko biloba)

- Can increase your risk of bleeding.

Ginseng (JIN-seng)

- Can keep sedation or general anesthesia from working as well as they should.
- Can increase your blood pressure.
- Can increase your risk of bleeding.
- Can lower your blood glucose (sugar) level.

Turmeric (TER-mayr-ik)

- Can keep chemotherapy from working as well as it should.

St. John's Wort

- Can keep some medications from working as well as they should.
- Can make your skin more sensitive to radiation or laser treatment.

Valerian (vuh-LEER-ee-un)

- Can make sedation or general anesthesia affect you more than they should.

Herbal formulas

- Herbal formulas contain many different herbs and dosages.
- Stop taking these products 7 days (1 week) before treatment. Do not start taking herbal formulas again until your healthcare provider tells you it is safe.

This information does not cover all herbal remedies or possible side effects. Talk with your healthcare provider if you have any questions or concerns.

Contact Information

- To schedule a consultation with a healthcare provider in Integrative Medicine, call 646-608-8550.
- To make an appointment for Integrative Medicine Service's therapies, classes, and workshops, call 646-449-1010.

For more information, visit www.mskcc.org/IntegrativeMedicine or read *Integrative Medicine Therapies and Your Cancer Treatment* (www.mskcc.org/pe/integrative_therapies).

For more resources, visit www.mskcc.org/pe to search our virtual library.

Herbal Remedies and Cancer Treatment - Last updated on May 5, 2022

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PATIENT & CAREGIVER EDUCATION

How To Check if a Medicine or Supplement Has Aspirin, Other NSAIDs, Vitamin E, or Fish Oil

This information will help you check if your medicines or dietary supplements have aspirin, other NSAIDs, vitamin E, or fish oil as an active ingredient. NSAID stands for nonsteroidal anti-inflammatory drug.

It's important to stop taking these medicines and supplements before many cancer treatments. They affect your platelets (blood cells that clot to prevent bleeding) and can raise your risk of bleeding.

Other dietary supplements, such as vitamins and herbal remedies, can also affect your cancer treatment. Read *Herbal Remedies and Cancer Treatment* (www.mskcc.org/pe/herbal_remedies) to learn more.

Make sure your healthcare provider always knows all the prescription and over-the-counter medicines and supplements you're taking. This includes patches and creams.

A prescription medicine is one you can only get with a prescription from your healthcare provider. An over-the-counter medicine is one you can buy without a prescription.

What is an active ingredient?

An active ingredient is the part of a medicine or supplement that makes it work. Some medicines and supplements have just one active ingredient. Others have more. For example:

- Ibuprofen is the active ingredient in Advil® and Motrin®. Ibuprofen is an NSAID.
- Naproxen is the active ingredient in Aleve®. Naproxen is an NSAID.
- Acetaminophen is the active ingredient in Tylenol®.
- Aspirin, acetaminophen, and caffeine are the active ingredients in Excedrin®.

Generic medicines sometimes use their active ingredient as their name. But people often call medicines and supplements by a brand name, even if they're generic. This can make it hard to know their active ingredients.

How to find a medicine or supplement's active ingredients

You can always find the active ingredients by reading the label.

Over-the-counter medicines

Over-the-counter medicines list their active ingredients in the "Drug Facts" label (see Figure 1). Active ingredients are always the first thing on the Drug Facts label.

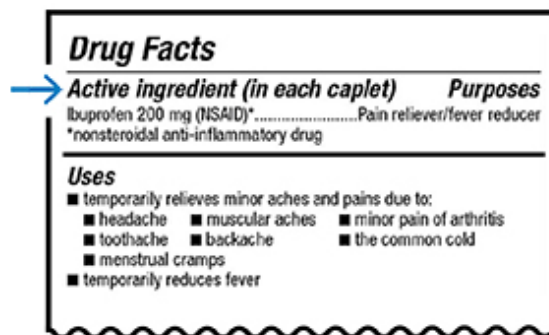


Figure 1. Active ingredients on an over-the-counter medicine label

Prescription medicines

Prescription medicines list their active ingredients on the label. Their active ingredients and their generic name are the same thing.

Labels often look different depending on which pharmacy you use. Here’s an example of where to find a medicine’s active ingredients (generic name) on a label from MSK’s pharmacy (see Figure 2).

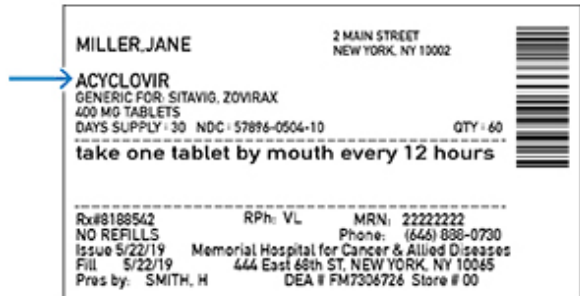


Figure 2. Active ingredients on a prescription medicine label

Dietary supplements

Dietary supplements list their active ingredients in the “Supplement Facts” label (see Figure 3). The active ingredients always have an amount per serving and % daily value included.

	Amount Per Serving	% Daily Value
Vitamin A (as retinyl acetate and 50% as beta-carotene)	5000 IU	100%
Vitamin C (as ascorbic acid)	60 mg	100%
Vitamin D (as cholecalciferol)	400 IU	100%
Vitamin E (as di-alpha tocopheryl acetate)	90 IU	100%
Thiamin (as thiamin mononitrate)	1.5 mg	100%
Riboflavin	1.7 mg	100%
Niacin (as niacinamide)	20 mg	100%
Vitamin B ₆ (as pyridoxine hydrochloride)	2.0 mg	100%
Folate (as folic acid)	400 mcg	100%
Vitamin B ₁₂ (as cyanocobalamin)	6 mcg	100%
Biotin	30 mcg	10%
Pantothenic Acid (as calcium pantothenate)	10 mg	100%

Other ingredients: Gelatin, lactose, magnesium stearate, microcrystalline cellulose, FD&C Yellow No. 6, propylene glycol, propylparaben, and sodium benzoate.

Figure 3. Active ingredients on a supplement label

Active ingredients to look for

If your medicine or supplement has any of these active ingredients, you may need to stop taking it before, during, or after your cancer treatment or surgery. Follow your care team's instructions.

Active ingredients to look for		
<ul style="list-style-type: none">• Acetylsalicylic acid• Alpha-linolenic acid (ALA)• Aspirin• Acetaminophen*• Celecoxib• Diclofenac• Diflunisal• Docosahexaenoic acid (DHA)• Eicosapentaenoic acid (EPA)	<ul style="list-style-type: none">• Etodolac• Fish oil• Fenoprofen Flurbiprofen• Ibuprofen• Indomethacin• Ketoprofen• Ketorolac• Meclofenamate• Mefenamic acid• Meloxicam	<ul style="list-style-type: none">• Nabumetone• Naproxen• Omega-3 fatty acids• Omega-6 fatty acids• Oxaprozin• Piroxicam• Sulindac• Tolmetin• Vitamin E

* The full name acetaminophen isn't always written out. Look for the common abbreviations listed below, especially on prescription pain relievers.

Common abbreviations for acetaminophen		
<ul style="list-style-type: none">• APAP• Acetamin	<ul style="list-style-type: none">• AC• Acetam	<ul style="list-style-type: none">• Acetaminop• Acetaminoph

About acetaminophen (Tylenol)

In general, acetaminophen is safe to take during cancer treatment. It doesn't affect platelets. That means it will not raise your chance of bleeding. If you're getting chemotherapy, talk with your healthcare provider before taking acetaminophen.

There is a limit to how much acetaminophen you can take in a day. Always follow the instructions from your care team or on the medicine's label.

Acetaminophen is in many different prescription and over-the-counter medicines. It's possible to take too much without knowing. **Always read the label on the medicines you take.** Do not take more than 1 medicine that has acetaminophen at a time without talking with a member of your care team.

Instructions before your cancer treatment

Tell your healthcare provider if you take aspirin, other NSAIDs, vitamin E, or fish oil. They'll tell you if you need to stop taking it. You'll also find instructions in the information about your treatment.

Before your surgery

Follow these instructions if you're having surgery or a surgical procedure. **If your healthcare provider gives you other instructions, follow those instead.**

- If you take aspirin or a medicine that has aspirin, you may need to change your dose or stop taking it 7 days before your surgery. Follow your healthcare provider's instructions. **Do not stop taking aspirin unless your healthcare provider tells you to.**
- If you take vitamin E, fish oil, or a supplement that has vitamin E or fish oil, stop taking it 7 days before your surgery or as directed by your healthcare provider.
- If you take an NSAID or a medicine that has an NSAID, stop taking it 48 hours (2 days) before your surgery or as directed by your healthcare provider.

Before your radiology procedure

Follow these instructions if you're having a radiology procedure (including Interventional Radiology, Interventional Mammography, Breast Imaging, and General Radiology). **If your healthcare provider gives you other instructions, follow those instead.**

- If you take aspirin or a medicine that has aspirin, you may need to stop taking it 5 days before your procedure. Follow your healthcare provider's instructions. **Do not stop taking aspirin unless your healthcare provider tells you to.**
- If you take an NSAID or a medicine that has an NSAID, you may need to stop taking it 24 hours (1 day) before your procedure. Follow your healthcare provider's instructions.

Before and during your chemotherapy

Chemotherapy can lower your platelet count, which can increase your risk of bleeding. No matter if you're just starting chemotherapy or have been getting it, talk with your healthcare provider before taking aspirin, other NSAIDs, vitamin E, or fish oil.

If you have any questions, contact a member of your care team directly. If you're a patient at MSK and you need to reach a provider after 5 p.m., during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

How To Check if a Medicine or Supplement Has Aspirin, Other NSAIDs, Vitamin E, or Fish Oil - Last updated on November 29, 2023

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