About Your Whipple Procedure

This guide will help you get ready for your Whipple procedure (pancreaticoduodenectomy) at Memorial Sloan Kettering (MSK). It will also help you understand what to expect during your recovery.

Read through this guide at least once before your surgery and use it as a reference in the days leading up to your surgery.

Bring this guide with you every time you come to MSK, including the day of your surgery. You and your healthcare team will refer to it throughout your care.
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About Your Surgery

The Whipple procedure is done to remove a tumor in the head of your pancreas, your ampulla, or the first part of your duodenum. These organs are located in the back of your abdomen (belly) behind your stomach and just above your small intestine (see Figure 1).

About Your Pancreas and Surrounding Organs

- Your **pancreas** makes enzymes that help digest the food you eat, including fats. It also makes insulin and glucagon, which are hormones that help regulate your blood sugar levels. Your pancreas has 3 parts: the tail, the body, and the head. The head of your pancreas is attached to your duodenum.

- Your **gallbladder** stores bile. Bile is a liquid that’s made in your liver that helps digest fats. When you eat food, your gallbladder sends stored bile to your duodenum to help with digestion.

- Your **common bile duct** is a small tube that carries bile from your liver to your gallbladder to be stored, then from your gallbladder to your duodenum when you eat.

- Your **ampulla** (also called the ampulla of Vater) is a small sac where your common bile duct and your pancreatic duct meet. It’s located outside your duodenum, near the head of your pancreas.

- Your **duodenum** is the first part of your small intestine. It’s directly attached to your stomach.

- Your **jejenum** is the second part of your small intestine.

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Figure 1. The pancreas and surrounding organs
Even though part of your pancreas will be removed during your surgery, there’s usually enough of it left after your surgery to make hormones (insulin and glucagon) and digestive enzymes.

- If your pancreas doesn’t make enough digestive enzymes after your surgery, you may have diarrhea. If this happens, you may need to take enzyme pills when you eat.

- If your pancreas doesn’t make enough insulin after your surgery, you may have high blood sugar. This is rare. If you do have high blood sugar after your surgery, your healthcare team will help you.

**About the Whipple Procedure**

The Whipple procedure is done using one large incision (surgical cut) in your abdomen. Sometimes, before making the large incision, your surgeon will make several small incisions and put a small video camera into your abdomen. They will use the camera to look at your organs to see if the cancer has spread outside of your pancreas. This is called a diagnostic laparoscopy.

If the cancer has spread, your surgeon may decide not to continue with your surgery. If the cancer hasn’t spread, your surgeon will make a large incision and continue with the Whipple procedure to try to remove the tumor.

During your surgery, your surgeon will remove the head of your pancreas, your duodenum, the end of your common bile duct closest to your duodenum, and your gallbladder. Sometimes, part of your stomach must also be removed.

After these organs are removed, your surgeon will connect the rest of your common bile duct and your remaining pancreas to your jejunum (see Figure 2). This is so the pancreatic enzymes and bile will flow into your small intestine, like they did before your surgery.

Your surgery will take about 4 hours.

![Figure 2. Your pancreas and surrounding organs after surgery](image-url)
The information in this section will help you get ready for your surgery. Read through this section when your surgery is scheduled and refer to it as your surgery date gets closer. It has important information about what you need to do before your surgery.

Write down your questions and be sure to ask your doctor or nurse.

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Getting Ready for Your Surgery

You and your healthcare team will work together to get ready for your surgery.

About Drinking Alcohol

The amount of alcohol you drink can affect you during and after your surgery. It’s important to talk with your healthcare providers about how much alcohol you drink. This will help us plan your care.

- If you stop drinking alcohol suddenly, it can cause seizures, delirium, and death. If we know you’re at risk for these complications, we can prescribe medications to help keep them from happening.

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

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

- Be honest with your healthcare providers about how much alcohol you drink.

- Try to stop drinking alcohol once your surgery is planned. If you develop a headache, nausea (feeling like you’re going to throw up), increased anxiety, or can’t sleep after you stop drinking, tell your healthcare provider right away. These are early signs of alcohol withdrawal and can be treated.

- Tell your healthcare provider if you can’t stop drinking.

- Ask your healthcare provider questions about drinking and surgery. As always, all of your medical information will be kept confidential.

Help us keep you safe during your surgery by telling us if any of the following statements apply to you, even if you aren’t sure.

- I take a blood thinner. Some examples are aspirin, heparin, warfarin (Coumadin®), clopidogrel (Plavix®), enoxaparin (Lovenox®), dabigatran (Pradaxa®), apixaban (Eliquis®), and rivaroxaban (Xarelto®). There are others, so be sure your healthcare provider knows all the medications you’re taking.

- I take prescription medications (medications prescribed by a healthcare provider), including patches and creams.

- I take over-the-counter medications (medications I buy without a prescription), including patches and creams.

- I take dietary supplements, such as herbs, vitamins, minerals, or natural or home remedies.

- I have a pacemaker, automatic implantable cardioverter-defibrillator (AICD), or other heart device.

- I have sleep apnea.

- I have had a problem with anesthesia (medication to make you sleep during surgery) in the past.

- I am allergic to certain medication(s) or materials, including latex.

- I am not willing to receive a blood transfusion.

- I drink alcohol.

- I smoke.

- I use recreational drugs.
About Smoking

If you smoke, you can have breathing problems when you have surgery. Stopping even for a few days before surgery can help. If you smoke, your nurse will refer you to our Tobacco Treatment Program. You can also reach the program by calling 212-610-0507.

About Sleep Apnea

Sleep apnea is a common breathing disorder that causes you to stop breathing for short periods of time while sleeping. The most common type is obstructive sleep apnea (OSA). With OSA, the airway becomes completely blocked during sleep. OSA can cause serious problems during and after surgery.

Please tell us if you have sleep apnea or if you think you might have it. If you use a breathing machine (such as a CPAP machine) for sleep apnea, bring it with you the day of your surgery.

About Enhanced Recovery After Surgery (ERAS)

ERAS is a program to help you get better faster after your surgery. As part of the ERAS program, it’s important to do certain things before and after your surgery.

Before your surgery, make sure you’re ready by doing the following things:

- **Read 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 doctor or nurse at your next appointment, or you can call your doctor’s office.

- **Exercise and follow a healthy diet.** This will help get your body ready for your surgery.

After your surgery, help yourself recover more quickly by doing the following things:

- **Read your recovery pathway.** This is a written educational resource that your nurse will give you. It has goals for your recovery and will help you know what to do and expect on each day during your recovery.

- **Start moving around as soon as you can.** The sooner you’re able to get out of bed and walk, the quicker you will be able to get back to your normal activities.

Within **30** Days of Your Surgery

Presurgical Testing (PST)

Before your surgery, you will have an appointment for presurgical testing (PST). The date, time, and location of your PST appointment will be printed on the appointment reminder from your surgeon's office.

You can eat and take your usual medications the day of your PST appointment.

During your appointment, you will meet with a nurse practitioner (NP) who works closely with anesthesiology staff (doctors and specialized nurses who will give you anesthesia during your surgery). Your NP will review your medical and surgical history with you. You will have tests, including an electrocardiogram (EKG) to check your heart rhythm, a chest x-ray, blood tests, and any other tests needed to plan your care. Your NP may also recommend that you see other healthcare providers.
Your NP will talk with you about which medications you should take the morning of your surgery.

It’s very helpful to bring the following things to your PST appointment:

- A list of all the medications you're taking, including prescription and over-the-counter medications, patches, and creams.
- Results of any tests done outside of MSK, such as a cardiac stress test, echocardiogram, or carotid doppler study.
- The name(s) and telephone number(s) of your healthcare provider(s).

**Identify Your Caregiver**

Your caregiver plays 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 from the hospital. They’ll also help you care for yourself at home.

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**For Caregivers**

Resources and support are available to help manage the responsibilities that come with caring for a person going through cancer treatment. For support resources and information, visit www.mskcc.org/caregivers or read A Guide for Caregivers (www.mskcc.org/pe/guide_caregivers).

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**Complete a Health Care Proxy Form**

If you haven’t already completed a Health Care Proxy form, we recommend you complete one now. A health care proxy is a legal document that identifies the person who will speak for you if you can’t communicate for yourself. The person you identify is called your health care agent. For more information about health care proxies and other advance directives, read the resource Advance Care Planning. You can find it online at www.mskcc.org/pe/advance_care_planning, or you can ask your nurse.

If you’re interested in completing a Health Care Proxy form, talk with your nurse. If you have completed one already, or if you have any other advance directives, bring them to your next appointment.

**Do Breathing and Coughing Exercises**

Practice taking deep breaths and coughing before your surgery. You will be given an incentive spirometer to help expand your lungs. For more information, read How to Use Your Incentive Spirometer, located in the “Educational Resources” section of this guide. If you have any questions, ask your nurse or respiratory therapist.

**Exercise**

Try to do aerobic exercise every day. Examples of aerobic exercise include walking, swimming, or biking. If it's cold outside, use stairs in your home or go to a mall or shopping center. Exercising will help your body get into its best condition for your surgery and make your recovery faster and easier.
Follow a Healthy Diet
Follow a well-balanced, healthy diet before your surgery. If you need help with your diet, talk with your doctor or nurse about meeting with a clinical dietitian nutritionist.

Days Before Your Surgery

Follow Your Healthcare Provider’s Instructions for Taking Aspirin
If you take aspirin or a medication that contains aspirin, you may need to change your dose or stop taking it 7 days before your surgery. Aspirin can cause bleeding.

Follow your healthcare provider’s instructions. Don’t stop taking aspirin unless they tell you to. For more information, read Common Medications Containing Aspirin, Other Nonsteroidal Anti-inflammatory Drugs (NSAIDs), or Vitamin E, located in the “Educational Resources” section of this guide.

Stop Taking Vitamin E, Multivitamins, Herbal Remedies, and Other Dietary Supplements
Stop taking vitamin E, multivitamins, herbal remedies, and other dietary supplements 7 days before your surgery. These things can cause bleeding. For more information, read Herbal Remedies and Cancer Treatment, located in the “Educational Resources” section of this guide.

Days Before Your Surgery

Stop Taking Nonsteroidal Anti-inflammatory Drugs (NSAIDs)
Stop taking NSAIDs, such as ibuprofen (Advil®, Motrin®) and naproxen (Aleve®), 2 days before your surgery. These medications can cause bleeding. For more information, read Common Medications Containing Aspirin, Other Nonsteroidal Anti-inflammatory Drugs (NSAIDs), or Vitamin E, located in the “Educational Resources” section of this guide.

Day Before Your Surgery

Note the Time of Your Surgery
A staff member from the Admitting Office will call you after 2:00 PM the day before your surgery. If your surgery is scheduled for a Monday, they will call you on the Friday before. If you don’t get a call by 7:00 PM, please call 212-639-5014.

The staff member will tell you what time to arrive at the hospital for your surgery. Use the area to the right to write down your surgery date and scheduled arrival time.

| Surgery date: ____________ |
| Scheduled arrival time: ______ |
The staff member will also tell you where to go. This will be the following location:

Presurgical Center (PSC) on the 6th floor
1275 York Avenue (between East 67th and East 68th Streets)
New York, NY 10065
B elevator to 6th floor

**Shower With a 4% Chlorhexidine Gluconate (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. Use your normal shampoo to wash your hair. Rinse your head well.
2. Use your normal soap to wash your face and genital area. 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. Don’t 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 after your shower.
7. Don’t put on any lotion, cream, deodorant, makeup, powder, perfume, or cologne after your shower.

**Sleep**

Go to bed early and get a full night’s sleep.

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**Instructions for Eating Before Your Surgery**

*Do not eat anything after midnight the night before your surgery.*
This includes hard candy and gum.

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**The Morning of Your Surgery**

**Instructions for Drinking Before Your Surgery**

Finish the ClearFast preop® drink your healthcare provider gave you 2 hours before your scheduled arrival time. Do not drink anything else, including water.

*Do not drink anything starting 2 hours before your scheduled arrival time.*
This includes water.
Take Your Medications
If your doctor or NP told you to take certain medications the morning of your surgery, take only those medications with a sip of water. Depending on what medications you take and the surgery you're having, this may be all, some, or none of your usual morning medications.

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.
Don’t 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.
• Don’t wear any metal objects. Remove all jewelry, including body piercings. The equipment used during your surgery can cause burns if it touches metal.
• Don’t put on any lotion, cream, deodorant, makeup, powder, perfume, or cologne.
• Leave valuable items (such as credit cards, jewelry, and your checkbook) at home.
• If you’re menstruating (have your monthly period), use a sanitary pad, not a tampon. You’ll get disposable underwear, as well as a pad if needed.

What to Bring
☐ Sneakers that lace up. You may have some swelling in your feet. Lace-up sneakers can accommodate this swelling.
☐ Your breathing machine for sleep apnea (such as your CPAP machine), if you have one.
☐ Your portable music player, if you choose. However, someone will need to hold it for you when you go into surgery.
☐ Your Health Care Proxy form and other advance directives, if you have completed them.
☐ Your cell phone and charger.
☐ Only the money you may want for small purchases (such as a newspaper).
☐ A case for your personal items (such as eyeglasses, hearing aid(s), dentures, prosthetic device(s), wig, and religious articles), if you have one.
This guide. Your healthcare team will use this guide to teach you how to care for yourself after your surgery.

Where to Park

MSK’s parking garage is located on East 66th Street between York and First Avenues. If you have questions about prices, call 212-639-2338.

To reach the garage, turn onto East 66th Street from York Avenue. The garage is located about a quarter of a block in from York Avenue, on the right-hand (north) side of the street. There’s a tunnel that you can walk through that connects the garage to the hospital.

There are also other garages located on East 69th Street between First and Second Avenues, East 67th Street between York and First Avenues, and East 65th Street between First and Second Avenues.

Once You’re in the Hospital

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

You will be asked to state and spell your name and date of birth many times. This is for your safety. People with the same or a similar name may be having surgery on the same day.

Get Dressed for Surgery

When it’s time to change for surgery, you will get a hospital gown, robe, and nonskid socks to wear.

Meet With Your Nurse

You will meet with your nurse before surgery. Tell them the dose of any medications (including patches and creams) you took after midnight and the time you took them.

Your nurse may give you medication to help with pain after surgery. If they do, they will give you information about the medication before you take it.

Your nurse may also place an intravenous (IV) line into one of your veins, usually in your arm or hand. If your nurse doesn’t place the IV, your anesthesiologist will do it later once you’re in the operating room.
**Meet With Your Anesthesiologist**

Your anesthesiologist will:

- Review your medical history with you.
- Ask you if you’ve had any problems with anesthesia in the past, including nausea or pain.
- Talk with you about your comfort and safety during your surgery.
- Talk with you about the kind of anesthesia you will have.
- Answer your questions about your anesthesia.

Your doctor or anesthesiologist may also talk with you about placing an epidural catheter (thin, flexible tube) in your spine (back). An epidural catheter is another way to give you pain medication after your surgery.

**Get Ready for Your Surgery**

When it’s time for your surgery, you’ll need to remove your hearing aids, dentures, prosthetic device(s), wig, and religious articles, if you have them.

You will either walk into the operating room or be taken in on a stretcher. A member of the operating room team will help you onto the operating bed. Compression boots will be placed 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 will fall asleep. You will also get fluids through your IV line during and after your surgery.

**During Your Surgery**

After you’re fully asleep, a breathing tube will be placed through your mouth and into your windpipe to help you breathe. You will also have a urinary (Foley®) catheter placed to drain urine (pee) from your bladder.

Once your surgery is finished, your incision will be closed with staples or sutures (stitches). You may also have Steri-Strips™ (thin pieces of surgical tape) over your incision. Your incisions will be covered with a bandage.

Your breathing tube is usually taken out while you’re still in the operating room.
The information in this section will tell you what to expect after your surgery, both during your hospital stay and after you leave the hospital. You will learn how to safely recover from your surgery.

Write down your questions and be sure to ask your doctor or nurse.

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In the Post-Anesthesia Care Unit (PACU)

When you wake up after your surgery, you will be in the Post-Anesthesia Care Unit (PACU).

A nurse will be monitoring your body temperature, pulse, blood pressure, and oxygen levels. You may be getting oxygen through a thin tube that rests below your nose or a mask that covers your nose and mouth. You will also have compression boots on your lower legs.

Pain Medication

You will get epidural or IV pain medication while you’re in the PACU.

- If you’re getting epidural pain medication, it will be put into your epidural space (the space in your spine just outside your spinal cord) through your epidural catheter.
- If you’re getting IV pain medication, it will be put into your bloodstream through your IV line.

You will be able to control your pain medication using a button called a patient-controlled analgesia (PCA) device. For more information, read Patient-Controlled Analgesia (PCA), located in the “Educational Resources” section of this guide.

 Tubes and Drains

You will have 1 or more of the tubes and drains below. Your doctor or nurse will talk with you about what to expect.

- You will 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. Your Foley catheter is usually removed 2 days after your surgery.
- You may have a nasogastric (NG) tube in your nose going into your stomach. This tube drains the fluid that naturally collects in your stomach. It will help keep you from vomiting (throwing up). If you have a NG tube, it’s usually removed the first day after surgery.
- You may have a drainage tube in your abdomen to drain fluid from the area. If you have this drainage tube, it’s usually removed a few days after surgery, but you may still have it when you’re discharged from the hospital. Read the “Caring for Your Tubes and Drains” section for more information.

Moving to Your Hospital Room

You will stay in the PACU overnight. After your stay in the PACU, you will be taken to your hospital room.

In Your Hospital Room

The length of time you’re in the hospital after your surgery depends on your recovery. Most people stay in the hospital for 6 days after having a Whipple procedure.

When you’re taken to your hospital room, you will meet one of the nurses who will care for you while you’re in the hospital. Soon after you arrive in your room, your nurse will help you out of bed and into your chair.
While you're in the hospital, your nurses will teach you how to care for yourself while you're recovering from your surgery. You can help yourself recover more quickly by doing the following things:

• **Read your recovery pathway.** Your nurse will give you a pathway with goals for your recovery, if you don't already have one. It will help you know what to do and expect on each day during your recovery.

• **Start moving around as soon as you can.** The sooner you're able to get out of bed and walk, the quicker you will be able to get back to your normal activities. A member of your care team will help you move around.

Read the resource *Call! Don’t Fall!* to learn about what you can do to stay safe and keep from falling while you’re in the hospital. It's located in the “Educational Resources” section of this guide.

**Managing Your Pain**

You will have some pain after your surgery. At first, you will get your pain medication through your epidural catheter or IV line. You will be able to control your pain medication using a PCA device. Once you're able to eat, you will get oral pain medication (medication you swallow).

Your doctor and nurse will ask you about your pain often and give you medication as needed. If your pain isn't relieved, tell your doctor or nurse. 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.

You will be given a prescription for pain medication before you leave the hospital. Talk with your doctor or nurse about possible side effects and when you should start switching to over-the-counter pain medications.

**Moving Around and Walking**

Moving around and walking will help lower your risk for blood clots and pneumonia. It will also help stimulate your bowels so you start passing gas and having bowel movements (pooping) again. Your nurse, physical therapist, or occupational therapist will help you move around.

**Exercising Your Lungs**

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

• Use your incentive spirometer 10 times every hour you're awake. For more information, read *How to Use Your Incentive Spirometer*, located in the “Educational Resources” section of this guide.

• Do coughing and deep breathing exercises. A member of your care team will teach you how to do these exercises.
Eating and Drinking

During your surgery, some of your digestive organs were moved or removed. After your surgery, your digestive system needs time to heal and adjust to the changes. You will slowly go back to drinking and eating. The table below is a guideline. Follow your healthcare team’s instructions.

<table>
<thead>
<tr>
<th>Days after surgery</th>
<th>Diet</th>
</tr>
</thead>
<tbody>
<tr>
<td>The day of surgery</td>
<td>Don’t eat or drink anything.</td>
</tr>
<tr>
<td>1 day after surgery</td>
<td>Start drinking sips of clear liquids.</td>
</tr>
<tr>
<td>2 days after surgery</td>
<td>Follow a clear liquid diet.</td>
</tr>
<tr>
<td>3 days after surgery</td>
<td>Start eating small amounts of solid foods.</td>
</tr>
<tr>
<td>4 days after surgery</td>
<td>Eat solid foods.</td>
</tr>
<tr>
<td>5 days after surgery</td>
<td>Eat solid foods.</td>
</tr>
<tr>
<td>6 days after surgery</td>
<td>Eat solid foods.</td>
</tr>
</tbody>
</table>

An inpatient clinical dietitian nutritionist will visit you in your hospital room to plan your diet with you before you’re discharged.

For more information about your diet and nutrition after your Whipple procedure, read *Eating After Your Gastric Bypass Surgery or Whipple Procedure*, located in the “Educational Resources” section of this resource.

Caring for Your Tubes and Drains

Your nurse will help you care for your tubes and drains while you’re in the hospital.

If you have a drainage tube in your abdomen, your healthcare team will keep track of how much fluid is draining from the tube. Once the amount is low enough, they will remove the tube. This usually happens a few days after surgery, but you may still have the drainage tube when you’re discharged from the hospital. Your healthcare team will tell you what to expect.

If you will still have the drainage tube when you’re discharged, your nurse will teach you how to care for it at home. They will also give you the supplies you will need. Your case manager may also arrange for a home care nurse to visit you at home to help you.

Showering

You will be able to shower on the first day after your surgery. A member of your care team will help you.

Leaving the Hospital

By the time you’re ready to leave the hospital, your incision will have started to heal. Before you leave the hospital, look at your incision with your nurse. Knowing what your incision looks like will help you notice any changes later.

On the day of your discharge, you should plan to leave the hospital around 11:00 AM. Before you leave, your doctor will write your discharge order and prescriptions. A nurse or pharmacist will review your medications with you. You will also get written discharge instructions. Your nurse will review these instructions 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 healthcare team will give you more information.

**At Home**

Read the resource *What You Can Do to Avoid Falling* to learn about what you can do to stay safe and keep from falling at home and during your appointments at MSK. It’s located in the “Educational Resources” section of this guide.

Your first appointment after surgery will be 10 to 14 days after you leave the hospital. Your nurse will give you instructions on how to make this appointment, including the phone number to call.

**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 medication. Some people have soreness, tightness, or muscle aches around their incision as they recover. This doesn’t mean that something is wrong. But, if it doesn’t get better, contact your doctor’s office.

Follow the guidelines below to help manage your pain at home.

- Take your medications as directed and as needed.
- Call your doctor if the medication prescribed for you doesn’t ease your pain.
- Don’t drive or drink alcohol while you’re taking prescription pain medication.
- As your incision heals, you will have less pain and need less pain medication. An over-the-counter pain reliever such as acetaminophen (Tylenol®) or ibuprofen (Advil®) will ease aches and discomfort.
  - Follow your doctor or nurse’s instructions for stopping your prescription pain medication.
  - Don’t take more acetaminophen than the amount directed on the bottle or as instructed by your doctor or nurse. Taking too much acetaminophen can harm your liver.
- Pain medication should help you resume your normal activities. Take enough medication to do your exercises comfortably. However, it’s normal for your pain to increase a little as you start to be more active.
- Keep track of when you take your pain medication. It works best 30 to 45 minutes after you take it. Taking it when your pain first begins is better than waiting for the pain to get worse.

Pain medication may cause constipation (having fewer bowel movements than what’s normal for you).
Managing Constipation

Talk with your nurse about how to manage constipation. You can also follow the guidelines below.

- Go to the bathroom at the same time every day. Your body will get used to going at that time. But, if you feel like you need to go, don’t put it off.
- Exercise. Walking is an excellent form of exercise.
- Drink around 8 (8-ounce) glasses of liquids daily, if you can. Follow the instructions in the *Eating After Your Gastric Bypass Surgery or Whipple Procedure*, located in the “Educational Resources” section of this guide.

If you haven’t had a bowel movement in 2 days, call your doctor or nurse.

Managing Diarrhea

If your pancreas doesn’t make enough enzymes to digest your food, you may have diarrhea. If this happens, contact your doctor’s office. You may need to take enzyme pills when you eat. Your doctor or nurse will give you more information.

Caring for Your Incision

It’s normal for the skin below your incision to feel numb. This happens because some of your nerves were cut during your surgery. The numbness will go away over time.

The staples in your incision will be removed during your first appointment after surgery. This is usually about 2 weeks after you’re discharged. While the staples are in your incision, you may feel some tightness or a tugging feeling along your incision. This is normal. Doing gentle stretching can help.

If you go home with Steri-Strips on your incision, they will loosen and fall off by themselves. If they haven’t fallen off within 10 days, you can take them off.

If the area around your incision is red, puffy, or if you have any drainage from your incision, contact your doctor’s office.

Showering

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

When you shower, use soap to gently wash your incision. After you shower, pat the area dry with a clean towel. Don’t rub over your incision. Leave your incision uncovered, unless there’s drainage.

Don’t take tub baths until you discuss it with your doctor at your first appointment after your surgery.

Eating and Drinking

After your surgery, you may have a smaller appetite (desire to eat) or no appetite at all. You will probably feel full quickly after eating. These are expected and should get better over time.

If you find that your appetite isn’t good at first, try having meals that include your favorite foods and high-calorie foods. It’s important to get enough calories and protein to promote healing keep from losing weight. You should think of food as being as important as your medications.
Follow the eating and drinking guidelines in the resource *Eating After Your Gastric Bypass Surgery or Whipple Procedure*, located in the “Educational Resources” section of this guide. If you have any questions, you can reach a clinical dietitian nutritionist by calling 212-639-7312.

**Weight Changes**
Many people lose weight after their surgery. You may not get back to your pre-surgery weight for some time. Your goal should be to stay at your new weight. If you have questions or concerns about your weight, talk with a member of your healthcare team.

**Physical Activity and Exercise**
When you leave the hospital, your incision will look like it’s healed on the outside, but it won’t be healed on the inside.

- Don’t lift anything heavier than 5 pounds (2.3 kilograms) for at least 8 weeks after your surgery. Check with your doctor before you do any heavy lifting.
- Ask your doctor or nurse before starting strenuous exercises (such as jogging and tennis).

Doing aerobic exercise, such as walking and stair climbing, will help you gain strength and feel better. You can walk outside or indoors at your local mall or shopping center. Gradually increase the distance you walk. Climb stairs slowly, resting or stopping as needed. You can also keep doing your coughing and deep breathing exercises and using your incentive spirometer.

**Managing Fatigue**
Fatigue is having less energy or feeling more tired than usual. It’s normal to feel fatigued after your surgery. This may last for 6 to 8 weeks after surgery, but it will get better slowly over time. Try to increase your activity level every day to help manage your fatigue. Get up, get dressed, and walk. You may need a nap during the day, but try to stay out of bed as much as possible so you will sleep at night.

It’s important for you to go back to your usual activities after surgery. Spread them out over the course of the day. You can do light household tasks. Try washing dishes, preparing light meals, and other activities as you are able.

Your body is an excellent guide for telling you when you have done too much. When you increase your activity, monitor your body’s reaction. You may find that you have more energy in the morning or the afternoon. Plan your activities for times of the day when you have more energy.

**Driving**
While your incision is healing, you may not be able to twist your body as well as normal. This can make it hard for you to drive. You also shouldn’t drive if you’re taking pain medication that may make you drowsy. During your first appointment after surgery, your doctor will tell you if it’s safe for you to start driving again.

You can ride in a car as a passenger at any time after you leave the hospital.

**Going Back to Work**
Talk with your doctor or nurse about your job and when it may be safe for you to start working again. If your job involves lots of movement or heavy lifting, you may need to stay out a little longer than if you sit at a desk.
**Traveling**

If you’re traveling a long distance, try to get up once an hour to walk around. This will help prevent blood clots. Remember to drink around 8 (8-ounce) glasses of liquids every day, even when you’re traveling.

**Managing Your Feelings**

After surgery for a serious illness, you may have new and upsetting feelings. Many people say they felt weepy, sad, worried, nervous, irritable, and angry at one time or another. You may find that you can’t control some of these feelings. If this happens, it’s a good idea to seek emotional support.

The first step in coping is to talk about how you feel. Family and friends can help. Your nurse, doctor, and social worker can reassure, support, and guide you. It’s always a good idea to let these professionals know how you, your family, and your friends are feeling emotionally. Many resources are available to you and your family. Whether you’re in the hospital or at home, the nurses, doctors, and social workers are here to help you and your family and friends handle the emotional aspects of your illness.

**Using MyMSK**

MyMSK (my.mskcc.org) is your MSK patient portal account. You can use MyMSK to send and receive messages from your healthcare team, view your test results, see your appointment dates and times, and more.

If you don’t already have a MyMSK account, you can sign up by going to my.mskcc.org. For more information about signing up for a MyMSK account, watch our video *How to Enroll in the Patient Portal: MyMSK* at www.mskcc.org/pe/enroll_mymsk. You can also contact the MyMSK Help Desk by emailing mymsk@mskcc.org or calling 800-248-0593.
Contact your doctor or nurse if:

- You have a temperature of 100.5 °F (38 °C) or higher.
- You have chills.
- You have shortness of breath.
- The skin around your incision is warmer than normal.
- The skin around your incision is getting more red.
- The area around your incision is starting to swell.
- Swelling around your incision is getting worse.
- You have pus-like (thick, yellowish, or foul-smelling) drainage from your incision.
- You have any sudden increase in pain or new pain.
- You have nausea and vomiting.
- You have diarrhea.
- You have constipation that isn’t relieved within 2 days.
- You have any new or unexplained symptoms.
- You have any questions or concerns.

Monday through Friday from 9:00 AM to 5:00 PM, contact your doctor’s office.

After 5:00 PM, during the weekend, and on holidays, call 212-639-2000 and ask to speak to the doctor on call for your doctor.
This section contains a list of support services that may help you get ready for your surgery and recover safely.

Write down your questions and be sure to ask your doctor or nurse.
MSK Support Services

**Anesthesia**
212-639-6840
Call if you have questions about anesthesia.

**Blood Donor Room**
212-639-7643
Call for more information if you're interested in donating blood or platelets.

**Bobst International Center**
888-675-7722
MSK welcomes patients from around the world. If you're an international patient, call for help arranging your care.

**Chaplaincy Service**
212-639-5982
At MSK, our chaplains are available to listen, help support family members, pray, contact community clergy or faith groups, or simply be a comforting companion and a spiritual presence. Anyone can request spiritual support, regardless of formal religious affiliation. The interfaith chapel is located near Memorial Hospital's main lobby and is open 24 hours a day. If you have an emergency, please call the hospital operator and ask for the chaplain on call.

**Counseling Center**
646-888-0200
Many people find that counseling helps them. We provide counseling for individuals, couples, families, and groups, as well as medications to help if you feel anxious or depressed. To make an appointment, ask your healthcare provider for a referral or call the number above.

**Food Pantry Program**
646-888-8055
The food pantry program provides food to people in need during their cancer treatment. For more information, talk with your healthcare provider or call the number above.

**Integrative Medicine Service**
646-888-0800
Integrative Medicine Service offers patients many services to complement traditional medical care, including music therapy, mind/body therapies, dance and movement therapy, yoga, and touch therapy.

**Look Good Feel Better Program**
www.lookgoodfeelbetter.org
800-395-LOOK (800-395-5665)
This program offers workshops to learn things you can do to help you feel better about your appearance. For more information or to sign up for a workshop, call the number above or visit the program's website.

**MSK Library**
library.mskcc.org
212-639-7439
You can visit our library website or speak with the library reference staff to find more information about your specific cancer type. You can also visit LibGuides on MSK's library website at libguides.mskcc.org.
Patient and Caregiver Support Program
212-639-5007
You may find it comforting to speak with a cancer survivor or caregiver who has been through a similar treatment. Through our Patient and Caregiver Support Program, you're able to speak with former patients and caregivers. These conversations may take place in person, over the phone, or through email.

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 if you have 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 Nursing Office
212-639-6892
You may request private nurses or companions. Call for more information.

Resources for Life After Cancer (RLAC) Program
646-888-8106
At MSK, care doesn’t end after active treatment. The RLAC Program is for patients and their families who have finished treatment. This program has many services, including seminars, workshops, support groups, counseling on life after treatment, and help with insurance and employment issues.

Sexual Health Programs
Cancer and cancer treatments can have an impact on your sexual health. MSK’s Sexual Health Programs can help you take action and address sexual health issues before, during, or after your treatment.

• Our Female Sexual Medicine and Women’s Health Program helps women who are dealing with cancer-related sexual health challenges, including premature menopause and fertility issues. For more information, or to make an appointment, call 646-888-5076.

• Our Male Sexual and Reproductive Medicine Program helps men who are dealing with cancer-related sexual health challenges, including erectile dysfunction. For more information, or to make an appointment, call 646-888-6024.

Social Work
212-639-7020
Social workers help patients, family, and friends deal with issues that are common for people with cancer. They provide individual counseling and support groups throughout the course of treatment and can help you communicate with children and other family members. Our social workers can also help refer you to community agencies and programs, as well as financial resources if you’re eligible.

Tobacco Treatment Program
212-610-0507
If you want to quit smoking, MSK has specialists who can help. Call for more information.

For more online information, visit the “Cancer Types” section of www.mskcc.org.
External Support Services

**Access-A-Ride**
web.mta.info/nyct/paratran/guide.htm  
877-337-2017  
In New York City, the MTA offers a shared ride, door-to-door service for people with disabilities who aren’t able to take the public bus or subway.

**Air Charity Network**
www.aircharitynetwork.org  
877-621-7177  
Provides travel to treatment centers.

**American Cancer Society (ACS)**
www.cancer.org  
800-ACS-2345 (800-227-2345)  
Offers a variety of information and services, including Hope Lodge, a free place for patients and caregivers to stay during cancer treatment.

**Cancer and Careers**
www.cancerandcareers.org  
A resource for education, tools, and events for employees with cancer.

**CancerCare**
www.cancercare.org  
800-813-4673  
275 Seventh Avenue (Between West 25th & 26th Streets)  
New York, NY 10001  
Provides counseling, support groups, educational workshops, publications, and financial assistance.

**Cancer Support Community**
www.cancersupportcommunity.org  
Provides support and education to people affected by cancer.

**Caregiver Action Network**
www.caregiveraction.org  
800-896-3650  
Provides education and support for those who care for loved ones with a chronic illness or disability.

**Corporate Angel Network**
www.corpangelnetwork.org  
866-328-1313  
Offers free travel to treatment across the country using empty seats on corporate jets.

**Gilda’s Club**
www.gildasclubnyc.org  
212-647-9700  
A place where men, women, and children living with cancer find social and emotional support through networking, workshops, lectures, and social activities.
Good Days
www.mygooddays.org
877-968-7233
Offers financial assistance to pay for copayments during treatment. Patients must have medical insurance, meet the income criteria, and be prescribed medication that is part of the Good Days formulary.

Healthwell Foundation
www.healthwellfoundation.org
800-675-8416
Provides financial assistance to cover copayments, health care premiums, and deductibles for certain medications and therapies.

Joe's House
www.joeshouse.org
877-563-7468
Provides a list of places to stay near treatment centers for people with cancer and their families.

LGBT Cancer Project
www.lgbtcancer.org
Provides support and advocacy for the LGBT community, including online support groups and a database of LGBT-friendly clinical trials.

LIVESTRONG Fertility
www.livestrong.org/we-can-help/fertility-services
855-744-7777
Provides reproductive information and support to cancer patients and survivors whose medical treatments have risks associated with infertility.

National Cancer Institute
www.cancer.gov
800-4-CANCER (800-422-6237)

National Cancer Legal Services Network
www.nclsn.org
Free cancer legal advocacy program.

National LGBT Cancer Network
www.cancer-network.org
Provides education, training, and advocacy for LGBT cancer survivors and those at risk.

Needy Meds
www.needymeds.org
Lists Patient Assistance Programs for brand and generic name medications.

NYRx
www.nyrxplan.com
Provides prescription benefits to eligible employees and retirees of public sector employers in New York State.

Partnership for Prescription Assistance
www.pparx.org
888-477-2669
Helps qualifying patients without prescription drug coverage get free or low-cost medications.
Patient Access Network Foundation
www.panfoundation.org
866-316-7263
Provides assistance with copayments for patients with insurance.

Patient Advocate Foundation
www.patientadvocate.org
800-532-5274
Provides access to care, financial assistance, insurance assistance, job retention assistance, and access to the national underinsured resource directory.

RxHope
www.rxhope.com
877-267-0517
Provides assistance to help people get medications that they have trouble affording.
This section contains the educational resources that were referred to throughout this guide. These resources will help you get ready for your surgery and recover safely after surgery.

Write down your questions and be sure to ask your doctor or nurse.

Notes
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Call! Don’t Fall!

This information describes what you can do to keep from falling and stay safe while you’re in the hospital. Being in the hospital can make you weak. Follow these guidelines to avoid falling.

- Call for help every time you need to get out of bed or up from a chair.
- Don’t go to the bathroom alone.
- Don’t bend over. If you drop something, call for help.
- Don’t lean on furniture that has wheels, such as your bedside table, over-bed table, or IV pole.
- Wear safe, supportive shoes. Examples include shoes with laces and slippers with nonskid soles. Don’t wear shoes or slippers with an open back.
- Call for help right away if you see any spills on the floor.
- Use the grab bars in the bathroom and railings in the hallways.
- If you have glasses or hearing aid(s), wear them when you’re awake.
- Let us know what you will need near you. Help us make sure we have:
  - Placed your call button where you can reach it
  - Placed items you may need (such as your phone, books, or glasses) where you can reach them
  - Turned on a night light before it gets dark
  - Raised the top bedrail to keep you safe
  - Removed any clutter from around your bedside and chairside
Common Medications Containing Aspirin, Other Nonsteroidal Anti-inflammatory Drugs (NSAIDs), or Vitamin E

This information will help you identify medications that contain aspirin, other NSAIDs, or vitamin E. It’s important to stop taking these medications before many cancer treatments. They affect your platelets (blood cells that clot to prevent bleeding) and can increase your risk of bleeding during treatment.

Other dietary supplements (such as other vitamins and herbal remedies) can also affect your cancer treatment. For more information, read the resource Herbal Remedies and Cancer Treatment (www.mskcc.org/pe/herbal_remedies).

Instructions Before Your Surgery

If you take aspirin, other NSAIDs, or vitamin E, tell your healthcare provider. They’ll tell you if you need to stop taking it. You’ll also find instructions in the information about your treatment. Read the “Examples of Medications” section to see if your medications contain aspirin, other NSAIDs, or vitamin E.

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 medication that contains aspirin, you may need to change your dose or stop taking it 7 days before your surgery. Follow your healthcare provider’s instructions. Don’t stop taking aspirin unless your healthcare provider tells you to.
If you take vitamin E or a supplement that contains vitamin E, stop taking it 7 days before your surgery or as directed by your healthcare provider.

If you take an NSAID or a medication that contains an NSAID, stop taking it 48 hours (2 days) before your surgery or as directed by your healthcare provider.

**Examples of Medications**

Medications are often called by their brand name. This can make it hard to know their ingredients. The lists below can help you identify medications that contain aspirin, other NSAIDs, or vitamin E.

These lists include the most common products, but there are others. **Make sure your healthcare provider always knows all the prescription and over-the-counter (not prescription) medications you’re taking, including patches and creams.**

<table>
<thead>
<tr>
<th>Common Medications Containing Aspirin</th>
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<tbody>
<tr>
<td>Aggrenox®</td>
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<tr>
<td>Alka Seltzer®</td>
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<tr>
<td>Anacin®</td>
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<tr>
<td>Arthritis Pain Formula</td>
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<tr>
<td>Arthritis Foundation Pain Reliever®</td>
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<tr>
<td>ASA Enseals®</td>
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<tr>
<td>ASA Suppositories®</td>
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<tr>
<td>Ascriptin® and Ascriptin A/D®</td>
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<tr>
<td>Aspergum®</td>
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<tr>
<td>Asprimox®</td>
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<tr>
<td>Tablets and Caplets</td>
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<td>-----------------------------------------------------------------------------------</td>
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<tr>
<td><strong>Axotal®</strong> Excedrin® Migraine Norwich® Aspirin Tenol-Plus®</td>
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<tr>
<td><strong>Azdone®</strong> Fiorgen® PAC® Analgesic Tablets Trigesic®</td>
</tr>
<tr>
<td><strong>Bayer® (most formulations)</strong> Fiorinal® (most formulations) Orphengesic® Talwin® Compound</td>
</tr>
<tr>
<td><strong>BC® Powder and Cold formulations</strong> Fiortal® Painaid® Vanquish® Analgesic Caplets</td>
</tr>
<tr>
<td><strong>Bufferin® (most formulations)</strong> Gelpirin® Panasal® Wesprin® Buffered Buffets II®</td>
</tr>
<tr>
<td><strong>Buffex®</strong> Gensan® Persistin® ZORprin®</td>
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<tr>
<td><strong>Bayer® Select Pain Relief Formula Caplets</strong> Ibufrofen Nabumetone Toradol®</td>
</tr>
<tr>
<td><strong>Celebrex®</strong> Indomethacin Nalfon® Treximet®</td>
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<tr>
<td><strong>Celecoxib</strong> Indocin® Naproxen Vicoprofen®</td>
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<tr>
<td><strong>Children’s Motrin®</strong> Ketoprofen Napsyn® Vimovo®</td>
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<tr>
<td><strong>Clinoril®</strong> Ketorolac Nuprin® Voltaren®</td>
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<tr>
<td><strong>Daypro®</strong> Lodine® Orudis®</td>
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<tr>
<td><strong>Diclofenac</strong> Meclofenamate Oxaprozin</td>
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</table>
Most multivitamins contain vitamin E. If you take a multivitamin, check the label.

**About Acetaminophen**

Acetaminophen (Tylenol®) is generally safe to take during your cancer treatment. It doesn't affect platelets, so it won't increase your chance of bleeding. But, talk with your healthcare provider before taking acetaminophen if you’re getting chemotherapy.

<table>
<thead>
<tr>
<th>Medications Containing Acetaminophen</th>
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<tbody>
<tr>
<td>Acephen®</td>
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<tr>
<td>Aceta® with Codeine</td>
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<tr>
<td>Acetaminophen with Codeine</td>
</tr>
<tr>
<td>Aspirin-Free Anacin®</td>
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<tr>
<td>Arthritis Pain Formula® Aspirin-Free</td>
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<tr>
<td>Datril®</td>
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<tr>
<td>Di-Gesic®</td>
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<tr>
<td>Endocet®</td>
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<tr>
<td>Esgic®</td>
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<tr>
<td>Excedrin P.M.®</td>
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<tr>
<td>Fiorcet®</td>
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<tr>
<td>Lorcet®</td>
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<td>Lortab®</td>
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<tr>
<td>Naldegesic®</td>
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<td>Norco®</td>
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<td>Panadol®</td>
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<td>Percocet®</td>
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<td>Primlev®</td>
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<td>Repan®</td>
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<td>Roxicet®</td>
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<tr>
<td>Talacen®</td>
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<tr>
<td>Tempra®</td>
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<tr>
<td>Tylenol®</td>
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<tr>
<td>Vanquish®</td>
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<tr>
<td>Vicodin®</td>
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<tr>
<td>Wygesic®</td>
</tr>
<tr>
<td>Xartemis XR®</td>
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<tr>
<td>Xodol®</td>
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<tr>
<td>Zydone®</td>
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</tbody>
</table>

**Read the labels on all your medications**

Acetaminophen is safe when used as directed. But, there’s a limit to how much you can take in a day. It’s possible to take too much without knowing because it’s in many different prescription and over-the-counter medications. It’s often an ingredient in pain relievers, fever reducers, sleep aids, and cough, cold, and allergy
medications.

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

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Name</th>
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<tbody>
<tr>
<td>APAP</td>
<td>AC Acetaminop</td>
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<tr>
<td>Acetamin</td>
<td>Acetam Acetaminoph</td>
</tr>
</tbody>
</table>

Always read and follow the label on the product you’re taking. Don’t take more than 1 medication that contains acetaminophen at a time without talking with a member of your healthcare team.

If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit [www.mskcc.org/pe](http://www.mskcc.org/pe) to search our virtual library.
Eating After Your Gastric Bypass Surgery or Whipple Procedure

This information describes the dietary (eating and drinking) guidelines you will need to follow after your gastric bypass (gastrojejunostomy) or Whipple procedure (pancreaticoduodenectomy). It also describes how to monitor your bowel movements for changes after your surgery.

Your clinical dietitian nutritionist will review this information with you before you leave the hospital. If you have any questions or concerns, or are losing weight after you leave the hospital, call 212-639-7071 to set up an appointment with your clinical dietitian nutritionist.

Dietary Guidelines

After your surgery, the amount of food you can eat at once and the time it takes for food to leave your stomach may change. Because of this, you may need to change the way you eat.

Follow the guidelines below. You can also use the sample menus at the end of this resource to plan your meals.

**Eat smaller meals more often**

After surgery, you may feel full more quickly when you eat.

If this happens to you, or if you have nausea or indigestion, try eating smaller meals more often. For example, try eating 6 half-size meals instead of 3 main meals each day. This will allow you to eat the same amount of food overall, but in smaller portions that will be easier to digest.

You may be able to eat larger portions as time passes.
**Drink enough liquids**

Try to drink around 8 (8-ounce) glasses of liquids each day. This will help you keep from getting dehydrated.

Drink most of your liquids between meals, at least 1 hour before or after you eat. Drink only 4 ounces (½ cup) of liquids with each meal. This will help you have more space in your stomach for food.

**Chew your food well**

Chew your food well to help your body digest your meals more quickly and easily.

**Avoid foods that cause gas**

If you’re having bloating or fullness, it may help to avoid foods and drinks that can cause gas. Examples include:

- Broccoli
- Cabbage
- Brussels sprouts
- Cauliflower
- Fruits that aren’t ripe
- Carbonated drinks, such as sodas or seltzer water

Try avoiding these things for the first month after your surgery. If you’re not having symptoms after that time, you can try adding them back to your diet one at a time to see if you can tolerate them.

**Eat slowly**

Eat slowly to avoid feeling uncomfortable due to overeating. You will know when you’re full.
Include protein in your diet

After surgery, your body needs more protein to help you heal. Good protein sources include:

- Lean beef cuts
  - Eye round roast
  - Top round roast
  - Bottom round roasts
  - Steaks
  - Top sirloin steak
- Chicken or turkey with the skin removed
- Fish
- Low-fat dairy products
- Eggs

Start with low-fat foods

Eat low-fat foods right after your surgery. You eat less fat by following the guidelines below.

- Trim any visible fat from meats.
- Bake or broil foods instead of frying them.
- Use only a pat of butter or margarine on toast.
- Avoid heavy gravies and cream sauces.
- Limit “regular” (not labelled low-fat) snack chips, croissants, doughnuts, and rich desserts like pound cake or cakes with frostings
- Stay away from processed meats like hot dogs, sausage, bacon, and bologna, unless they’re labelled “low-fat”.

You can gradually increase the amount of fat in your diet to an amount that you can tolerate. See the section below called “Monitor Your Bowel Movements for Changes” for more information.
Monitor Your Bowel Movements for Changes

Problems with fat absorption

Some people have problems absorbing fat after their surgery. This may cause weight loss or make it harder for your body to absorb some vitamins.

You may not be absorbing all the fats you’re eating if you’re having any of the following symptoms:

- Frequent bowel movements
- Bowel movements that float
- Bowel movements that are very light in color, frothy, greasy, or foul smelling

If you have any of these symptoms, ask your doctor if you need to take pancreatic enzyme medication. An example is pancrelipase (Zenpep®). You can take these medications with your meals to help with digestion.

Lactose intolerance

Lactose intolerance is not being able to digest lactose. Lactose is a sugar found in dairy products. Some people become lactose intolerant after surgery. If you have gas, bloating, or diarrhea after you eat foods with lactose, you may have lactose intolerance.

Milk, ice cream, and soft cheeses (such as cottage cheese) have a lot of lactose. Hard cheeses like cheddar and Parmesan have lower amounts of lactose. Some people with mild lactose intolerance can tolerate these lower lactose foods.

There are also medications available that can help you digest lactose. One example is lactase (Lactaid®)

Sometimes, lactose intolerance after surgery will go away. You can try having dairy again in a few months to see if it has improved.

Dumping syndrome

Dumping syndrome is when you have diarrhea (loose bowel movements) after having large amounts of sweets, such as:

- Sugar, honey, and syrup
- Regular (not diet) soda and fruit juices
- Cakes, cookies, and candies

If you think you have dumping syndrome, limit or avoid sugary foods or drinks and try diluting juices with water.

If you have dumping syndrome, it’s especially important to take steps to keep from getting dehydrated.

- Limit your intake of liquids to only 4 ounces during meals.
- Drink more liquids between meals, at least 1 hour before or after a meal.

**Sample Menus**

The sample menus at the end of this resource have 6 small meals with 4 ounces of liquid at each meal and 8 ounces of liquid between meals. Soup also counts as a liquid.

The menus include solid foods. If you’re on a mechanical soft (diced food) diet when you go home, ask your doctor when you can start eating solid foods again. For more information, read the resource *Eating Guide for Puréed and Mechanical Soft Diets* (www.mskcc.org/pe/pureed_mechanical_soft_diets).

Many of the foods on the menus aren’t sugar-free. Use sugar-free or “light” yogurt in place of regular yogurt, limit fruit juices, and dilute fruit juices with water if you:

- Have diabetes
- Have high blood sugar
- Are having dumping syndrome

Foods with an asterisk (*) have lactose. If you’re lactose-intolerant, try lactose-free milk (such as Lactaid) in place of regular milk. You can also take lactase tablets or drops to help you digest dairy products.
<table>
<thead>
<tr>
<th>Meal Time</th>
<th>Sample Menu 1</th>
<th>Sample Menu 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td>• ¾ cup of corn flakes</td>
<td>• 1 scrambled egg</td>
</tr>
<tr>
<td>7:30 AM</td>
<td>• ½ cup of milk*</td>
<td>• 1 slice of toast</td>
</tr>
<tr>
<td></td>
<td>• ½ of a banana</td>
<td>• 1 teaspoon of margarine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ½ cup of orange juice</td>
</tr>
<tr>
<td>9:00 AM</td>
<td>• ½ cup juice mixed with ½ cup water</td>
<td>• 1 cup of tomato juice</td>
</tr>
<tr>
<td>Snack</td>
<td>• ½ cup of cottage cheese*</td>
<td>• 1 tablespoon of peanut butter</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>• ½ cup of canned fruit</td>
<td>• 3 graham crackers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ½ cup of milk*</td>
</tr>
<tr>
<td>11:30 AM</td>
<td>• 1 cup of whole milk*</td>
<td>• ½ cup juice mixed with ½ cup water</td>
</tr>
<tr>
<td>Lunch</td>
<td>• ½ cup of chicken soup</td>
<td>• ½ of a roast beef sandwich with lettuce and tomato</td>
</tr>
<tr>
<td>12:30 PM</td>
<td>• ½ of a turkey and cheese sandwich with lettuce and tomato</td>
<td>• 2 teaspoons of mayonnaise</td>
</tr>
<tr>
<td></td>
<td>• 2 teaspoons of mayonnaise</td>
<td>• ½ cup of milk*</td>
</tr>
<tr>
<td>2:00 PM</td>
<td>• 1 cup of tomato juice</td>
<td>• 1 cup of broth</td>
</tr>
<tr>
<td>Snack</td>
<td>• Fruit yogurt*</td>
<td>• ½ cup of tuna salad</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>• ½ cup of cranberry juice</td>
<td>• 6 saltine crackers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ½ cup of pineapple juice</td>
</tr>
<tr>
<td>4:30 PM</td>
<td>• ½ cup juice mixed with ½ cup water</td>
<td>• ½ cup juice mixed with ½ cup water</td>
</tr>
<tr>
<td>Dinner</td>
<td>• 2 ounces of baked chicken</td>
<td>• 2 ounces of baked fish</td>
</tr>
<tr>
<td>5:30 PM</td>
<td>• 1 small baked potato with sour cream*</td>
<td>• ½ cup of rice</td>
</tr>
<tr>
<td></td>
<td>• ½ cup of cooked carrots</td>
<td>• ½ cup of green beans</td>
</tr>
<tr>
<td></td>
<td>• ½ cup of lemonade</td>
<td>• 2 teaspoons of margarine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ½ cup of apple juice</td>
</tr>
<tr>
<td>7:00 PM</td>
<td>• 1 cup of water</td>
<td>• 1 cup of water</td>
</tr>
<tr>
<td>Snack</td>
<td>• 1 ounce of cheddar cheese*</td>
<td>• ¼ cup of cottage cheese</td>
</tr>
<tr>
<td>8:00 PM</td>
<td>• 6 saltine crackers</td>
<td>• 1 slice of bread</td>
</tr>
<tr>
<td></td>
<td>• ½ cup of apple juice</td>
<td>• ½ cup of cranberry juice</td>
</tr>
<tr>
<td>9:30 PM</td>
<td>• ½ cup juice mixed with ½ cup water</td>
<td>• ½ cup juice mixed with ½ cup water</td>
</tr>
</tbody>
</table>
Herbal Remedies and Cancer Treatment

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

One week before you have surgery or start chemotherapy or radiation therapy, you must stop taking any herbal or botanical (plant-based) home remedies or other dietary supplements. This is because they can:

- Interact with your other medications.
- Increase or lower your blood pressure.
- Thin your blood and increase your risk of bleeding.
- Make radiation therapy less effective.
- Increase the effects of sedation or anesthesia (medications to make you sleepy).

You can continue to use herbs in your food and drinks, such as using spices in cooking and drinking tea. However, you must stop taking herbal supplements before your treatment. Herbal supplements are stronger than the herbs you would use in cooking.

Common Herbal Supplements and Their Effects

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

Echinacea
- Can cause an allergic reaction, such as a rash or trouble breathing.
- Can lower the effects of medications used to weaken the immune system.

**Garlic**

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

**Gingko (also known as *Gingko biloba*)**

- Can increase your risk of bleeding.

**Ginseng**

- Can lower the effects of sedation or anesthesia.
- Can increase your risk of bleeding.
- Can lower your blood glucose (sugar) level.

**Turmeric**

- Can make chemotherapy less effective.

**St. John’s Wort**

- Can interact with medications given during surgery.
- Can make your skin more sensitive to radiation or laser treatment.

**Valerian**

- Can increase the effects of sedation or anesthesia.

**Herbal formulas**

- Herbal formulas contain different herbs. We don’t know their side effects. You must also stop taking these products 1 week before treatment. Do not start taking herbal formulas again until your doctor tells you it’s safe.
This information doesn’t cover all herbal remedies or possible side effects. Talk with your healthcare provider if you have any questions or concerns.
How to Use Your Incentive Spirometer

This information will help you learn how to use your incentive spirometer.

About Your Incentive Spirometer

An incentive spirometer is a device that will expand your lungs by helping you to breathe more deeply and fully. The parts of your incentive spirometer are labeled in Figure 1.

Figure 1. Incentive Spiromter
Use your incentive spirometer after your surgery and do your deep breathing and coughing exercises. This will help keep your lungs active throughout your recovery and prevent complications such as pneumonia.

If you have an active respiratory infection (such as pneumonia, bronchitis, or COVID-19) do not use the device when other people are around.

**How To Use Your Incentive Spirometer**

Here is a video demonstrating how to use your incentive spirometer:

[Please visit www.mskcc.org/pe/incentive_spirometer_video to watch this video.]

**Setting up your incentive spirometer**

The first time you use your incentive spirometer, you will need to take the flexible tubing with the mouthpiece out of the bag. Stretch out the tubing and connect it to the outlet on the right side of the base (see Figure 1). The mouthpiece will be attached to the other end of the tubing.

**Using your incentive spirometer**

When you’re using your incentive spirometer, make sure to breathe through your mouth. If you breathe through your nose, the incentive spirometer won’t work properly. You can hold your nose if you have trouble.

If you feel dizzy at any time, stop and rest. Try again at a later time.

To use your incentive spirometer, follow the steps below.

1. Sit upright in a chair or in bed. Hold the incentive spirometer at eye level.
   - If you had surgery on your chest or abdomen (belly), hug or hold a pillow to help splint or brace your incision (surgical cut) while you’re using the incentive spirometer. This will help decrease pain at your incision.

2. Put the mouthpiece in your mouth and close your lips tightly around it. Slowly
breathe out (exhale) completely.

3. Breathe in (inhale) slowly through your mouth as deeply as you can. As you take the breath, you will see the piston rise inside the large column. While the piston rises, the indicator on the right should move upwards. It should stay in between the 2 arrows (see Figure 1).

4. Try to get the piston as high as you can, while keeping the indicator between the arrows.
   o If the indicator doesn’t stay between the arrows, you’re breathing either too fast or too slow.

5. When you get it as high as you can, hold your breath for 10 seconds, or as long as possible. While you’re holding your breath, the piston will slowly fall to the base of the spirometer.

6. Once the piston reaches the bottom of the spirometer, breathe out slowly through your mouth. Rest for a few seconds.

7. Repeat 10 times. Try to get the piston to the same level with each breath.

8. After each set of 10 breaths, try to cough, holding a pillow over your incision, as needed. Coughing will help loosen or clear any mucus in your lungs.

9. Put the marker at the level the piston reached on your incentive spirometer.
Patient-Controlled Analgesia (PCA)

This information will help you understand what patient-controlled analgesia (PCA) is and how to use your PCA pump.

About PCA

PCA helps you control your pain by letting you give yourself pain medication. It uses a computerized pump to send pain medication into your vein (called an IV PCA) or into your epidural space (epidural PCA), which is near your spine (see Figure 1). Whether you have an IV PCA or an epidural PCA depends on what you and your doctor decide is right for you.

PCA isn’t right for everyone. Some people may not be able to use a PCA pump. Before you get a PCA pump, tell your doctor if you have weakness in your hands or think you may have trouble pushing the PCA button. You should also tell your doctor if you have sleep apnea. This may affect the way we prescribe your medication.

Using the PCA Pump

To give yourself pain medication, press the button attached to the pump when you
have pain (see Figure 1). The pump will send a safe dose of the medication that your doctor has prescribed.

Only you should push the PCA button. **Family and friends should never push the button.**

The pump can be programmed to give you medication in 2 ways:

- **As needed.** You get your pain medication only when you press the button. It won’t let you get more medication than prescribed. The pump is set to allow only a certain number of doses per hour.

- **Continuous.** You get your pain medication at a constant rate all the time. This can be combined with the “as needed” way. This lets you take extra doses safely if you’re having pain.

Tell your doctor if the PCA isn’t helping with your pain. You should also tell your doctor if your pain changes, gets worse, feels different than before, or if you feel pain in a new place. Your doctor may change the medication to one that may work better for you.

**Side Effects**

Pain medication you get through a PCA can have side effects. Tell your healthcare provider if you have any of these problems:

- Constipation (having fewer bowel movements than usual)
- Nausea (feeling like you’re going to throw up)
- Vomiting (throwing up)
- Dry mouth
- Itching
- Changes in your vision, such as seeing things that aren’t there
- Drowsiness, dizziness, or confusion
- Weakness, numbness, or tingling in your arms or legs
What You Can Do to Avoid Falling

This information describes what you can do to keep from falling when you come for your appointments at Memorial Sloan Kettering (MSK). It also describes how you can keep from falling while you’re at home.

About Falls

Falls can be very harmful, but there are many ways you can prevent them. Falls can delay your treatment and can make your hospital stay longer. They can also cause you to need more tests, such as magnetic resonance imaging (MRI). Ongoing cancer treatment may also increase your chances of falling and getting hurt.

Things That Can Make You Fall

Anyone can fall, but some things make you more likely to fall. You’re at higher risk for falling if you:

- Are 60 years old or older
- Have fallen before
- Are afraid of falling
- Feel weak, tired, or forgetful
- Have numbness or tingling in your legs or feet
- Have trouble walking or are unsteady
- Can’t see well
- Can’t hear well
- Feel dizzy, lightheaded, or confused
• Use a walker or cane
• Have depression (strong feelings of sadness) or anxiety (strong feelings of worry or fear)
• Have had a recent surgery with anesthesia (medication that makes you sleep)
• Take certain medications, such as:
  ○ Laxatives (pills to cause a bowel movement)
  ○ Diuretics (water pills)
  ○ Sleeping pills
  ○ Medications to prevent seizures
  ○ Some medications for depression and anxiety
  ○ Pain medications, such as opioid medications
  ○ Intravenous (IV) fluids (fluids into your vein)
  ○ Any medication that makes you feel sleepy or dizzy

How to Avoid Falling During Your MSK Appointments

The following are tips to help you stay safe and avoid falling while you’re at MSK:

• Come to your appointment with someone who can help you get around.
• If you use an assistive device such as a wheelchair or cane, bring it to your appointment.
• Wear safe, supportive shoes. Examples include shoes that have a low heel height, a thin, firm midsole, a slip-resistant sole, and laces or Velcro® to close the shoe. Don’t wear shoes with an open back. For more information on choosing safe shoes, read the resource How to Choose Safe Shoes to Prevent Falling (www.mskcc.org/pe/safe_shoes).
• Ask a member of our staff, such as a security guard or person at the front desk, for help while you’re at MSK. They can also bring you a wheelchair to use
during your appointment.

- Have someone help you while you’re in the dressing room or bathroom. If you don’t have anyone with you, tell the person at the reception desk. They will find a nurse to help you.

- Use the grab bars while you’re in the bathroom.

- When getting up after lying down, sit at the side of the bed or exam table before you stand up

- When getting up after sitting, don’t rush and take your time to stand up, so you don’t lose your balance.

- If you feel dizzy or weak, tell someone. If you’re in a bathroom, look for a call bell that you can use to call for help.

**How to Avoid Falling at Home**

The following are tips to help you stay safe and avoid falling at home:

- Set up your furniture so that you can walk around without anything blocking your way.

- Use a nightlight or keep a flashlight close to you at night.

- Remove rugs and other loose items from your floor. If you have a rug covering a slippery floor, make sure the rug doesn’t have any loose or fringed edges.

- If your bathroom isn’t close to your bedroom (or wherever you spend most of your time during the day), get a commode. A commode is a type of portable toilet that you can put anywhere in your home. Place it nearby so you don’t have to walk to the bathroom.

- Put grab bars and handrails next to your toilet and inside your shower. Never use towel racks to pull yourself up. They aren’t strong enough to hold your weight.

- Put anti-slip stickers on the floor of your tub or shower.

- Buy a shower chair and a hand-held shower head so you can sit while taking a shower.