About Your Nasal Cavity and Paranasal Sinus Surgery

This guide will help you get ready for your nasal cavity and paranasal sinus surgery 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.

Your Care Team

Doctor: ___________________________________________________________

Phone number: ____________________________________________________

Fax number: _______________________________________________________

Nurse: ____________________________________________________________

Your Caregiver

It’s important to choose a person to be your caregiver. They will learn about your surgery with you and help you care for yourself while you’re recovering after surgery. Write down your caregiver’s name below.

Caregiver: _________________________________________________________
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About Your Surgery

Your Nasal Cavity and Paranasal Sinuses

Your nasal cavity is a large, air-filled space above and behind your nose, in the middle of your face. It has 2 openings, called the nostrils, that warm and moisturize the air you breathe in.

Inside your nasal cavity, you have 4 types of paranasal sinuses, usually called sinuses (see Figure 1). Your sinuses are a group of hollow, air-filled spaces that surround your nasal cavity. These include:

- **Frontal sinuses**, which are located above your eyes.
- **Ethmoid sinuses**, which are located between your eyes.
- **Sphenoid sinuses**, which are located deep in your nasal cavity, behind your ethmoid sinuses.
- **Maxillary sinuses**, which are located on the sides of your nose.

Your nasal cavity and sinuses are covered with a layer of cells that make mucus and warm the air you breathe. They also affect how your voice sounds when you speak.

![Figure 1. Your paranasal sinuses](image)
Nasal Cavity and Sinus Surgery

Nasal cavity and sinus tumors are usually treated with surgery. The goal of the surgery is to remove the whole tumor and a small amount of normal tissue around it.

Your nasal cavity and sinuses are small areas that have many muscles, nerves, blood vessels, and other important structures. If any of these other structures need to be removed during your surgery, it can affect how you look and how you perform basic functions. Therefore, another goal of surgery is to help you look the same and be able to breathe, chew, talk, and swallow without difficulty after your surgery.

You will have many different providers working together before, during, and after your surgery. Depending on your surgery, your treatment team may include:

- Head and neck surgeon, plastic reconstructive surgeon, and neurosurgeon
- Radiation oncologist
- Medical oncologist
- Dentist
- Nurses
- Speech and swallowing therapist
- Clinical dietitian nutritionists
- Case managers
- Social workers

The different types of surgery are described below. Your doctor will talk with you about which surgery you're having. The type of surgery depends on the where the tumors are located, how big they are, and what other structures are involved.

Types of Nasal Cavity Surgery

- Some nasal cavity tumors can be removed with a surgery called **wide local excision**. This surgery removes the tumor and a small amount of normal tissue around it.

- Tumors that are located on your nasal turbinates (long, thin bones located on the inside walls of your nose) can be removed by a surgery called **medial maxillectomy**.

- Tumors that involve the tissue on the outside of your nose may be removed by removing part of your nose or your entire nose.

Types of Sinus Surgery

- Tumors that are small, noncancerous (not cancer), and involve only your ethmoid sinuses are removed with a surgery called **external ethmoidectomy**.

- Tumors that have grown into your maxillary sinus can be removed by a surgery called **maxillectomy**. The extent of the surgery depends on where the tumor is located and if it involves nearby tissue and structures.
During a maxillectomy, the following things may be partly or completely removed:

- Bone around your maxillary sinus
- Bone of your hard palate (roof of your mouth)
- Upper teeth on one side of your mouth
- Part of or your entire orbit (eye socket)
- Part of your cheekbone
- Part of the boney part of your upper nose

If part of your hard palate is removed, there may be an open connection between your nasal cavity and your oral cavity (mouth). Your dental surgeon will take impressions (make a mold of your upper mouth) before and the day of your surgery. They will put a temporary surgical obturator (plate) to close the opening in your palate during your surgery. This will help you speak and eat after surgery.

You will be discharged from the hospital with the temporary surgical obturator in place. About 2 weeks after your surgery, you will have an appointment with your dental surgeon to remove the surgical obturator. During this appointment, your dental surgeon will fit a removable obturator to your mouth. They will also give you instructions for cleaning and taking care of the obturator. You will have regular follow-up appointments with your dental surgeon to check the obturator and adjust the fit if needed.

- Tumors in your ethmoid, frontal, or sphenoid sinuses are removed by a surgery called craniofacial resection. This surgery involves removing the tumor through incisions (surgical cuts) on your face and skull. By accessing the tumor from two directions, your surgeons have a better chance of removing the entire tumor. This also helps decrease possible damage to your brain, nerves, and other major structures. You will have a head and neck surgeon, plastic surgeon, and neurosurgeon working together on your surgical team.

**Endoscopic Surgery**

This surgery uses endoscopes (thin, flexible, lighted tubes) that are put into your nose to reach your nasal cavity and sinuses. This surgery is used for tumors that are small and less involved with surrounding structures. It may also be used to treat sinus diseases that aren’t cancer.

**Lymph Node Removal**

Nasal cavity and sinus tumors sometimes spread to lymph nodes in your neck. Lymph nodes are removed through a surgery called neck dissection. Your surgeon will see if you need a neck dissection based on a medical exam and a computed tomography (CT) or magnetic resonance imaging (MRI) scan.

If you have lymph nodes removed, you will have a drainage tube in place while you’re in the hospital. Your nurses will keep track of the amount of drainage. Once the drainage is less than 20 to 30 milliliters (about ½ ounce) in 24 hours, the drain will be removed. This is usually 3 to 5 days after your surgery.
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.
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, your 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.

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. You and your caregiver will learn about your surgery from your doctor and nurse. After your surgery, your caregiver should be with you when you’re given your discharge instructions so they’re able to help you care for yourself at home. Your caregiver will also need to take you home after you’re discharged from (leave) the hospital.
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. 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 at least 1 mile (1.6 kilometers), 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.

10 Days Before Your Surgery

Stop Taking Vitamin E

If you take vitamin E, stop taking it 10 days before your surgery. Vitamin E can cause bleeding. For more information, read *Common Medications Containing Aspirin and Other Nonsteroidal Anti-inflammatory Drugs (NSAIDs)*, located in the “Educational Resources” section of this guide.

7 Days Before Your Surgery

Stop Taking Certain Medications

If you take aspirin, ask your doctor if you should keep taking it. Aspirin and medications that contain aspirin can cause bleeding. For more information, read *Common Medications Containing Aspirin and Other Nonsteroidal Anti-inflammatory Drugs (NSAIDs)*, located in the “Educational Resources” section of this guide.
Stop Taking Herbal Remedies and Other Dietary Supplements

Stop taking herbal remedies and other dietary supplements 7 days before your surgery. If you take a multivitamin, ask your doctor or nurse if you should keep taking it. For more information, read *Herbal Remedies and Cancer Treatment*, located in the “Educational Resources” section of this guide.

Watch a Virtual Tour

This video will give you an idea of what to expect when you come to Memorial Hospital (MSK’s main hospital) on the day of your surgery.

[www.mskcc.org/pe/day-your-surgery](http://www.mskcc.org/pe/day-your-surgery)

Days Before Your Surgery

Stop Taking Certain Medications

Stop taking nonsteroidal anti-inflammatory drugs (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 and Other Nonsteroidal Anti-inflammatory Drugs (NSAIDs)*, 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 remind you where to go. This will be one of the following locations:

- Surgical Day Hospital (SDH)
  1275 York Avenue (between East 67th and East 68th Streets)
  New York, NY 10065
  M Elevator to 2nd floor

- 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
Wash yourself with soap and water the night before your surgery.

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

Instructions for eating and drinking before your surgery

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

- Between midnight and up until 2 hours before your scheduled arrival time, you may drink a total of 12 ounces of water (see figure).

- Starting 2 hours before your scheduled arrival time, do not eat or drink anything. This includes water.

The Morning of Your Surgery

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.

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.

- Before you’re taken into the operating room, you will need to remove your hearing aids, dentures, prosthetic device(s), wig, and religious articles.

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What to Bring

- A button-down or loose-fitting top.
- 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

You will be asked to say and spell your name and birth date 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 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.

Get Ready for Your Surgery

Once your nurse has seen you, 1 or 2 visitors can keep you company as you wait for your surgery to start. When it’s time for your surgery, your visitor(s) will be taken to the waiting area. Your visitors should read Information for Family and Friends for the Day of Surgery, located in the “Educational Resources” section of this guide.

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 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) or Dermabond® (surgical glue) over your incisions. Your incisions may be covered with a bandage.

Your breathing tube is usually taken out while you’re still in the operating room.

The length of your surgery depends on which type of surgery and incisions you have. Your doctor will talk with you about what to expect before your surgery.
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.
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 IV pain medication while you’re in the PACU. You may 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)*. You can find it at www.mskcc.org/pe/pca, or you can ask your nurse.

**Tubes and Drains**

You will have 1 or more of the following:

- Drainage tubes near your incisions. These help drain fluid from the area to help your wounds heal.
- A Foley catheter through your urethra, into your bladder. This drains urine (pee) from your bladder.
- A face mask and humidifier. This helps keep your airways moist.
- A nasogastric (NG) feeding tube, if needed. This is a tube that goes through your nose, into your stomach. It’s used to give you nutrition. If you need a NG tube, it will be placed while you’re asleep during surgery and removed once you’re ready.
- Splints in your nose (Doyle splints). These help prevent scarring in your nose. They will be removed during your first appointment after surgery.

**Visitors**

Your visitors can see you briefly in the PACU, usually within 90 minutes after you arrive there. A member of the nursing staff will explain the guidelines to them.

**Moving to Your Hospital Room**

Depending on the type of surgery you had, you may stay in the PACU for a few hours or 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. A member of your healthcare team will tell you what to expect.

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.

While you’re in the hospital, your nurses will teach you how to care for yourself while you’re recovering from your surgery.

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. You can find it 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 IV line. You may 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, if needed.

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 to help expand your lungs. Use it 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

For your first meal after your surgery, you will have only clear liquids. After that, you will slowly start following a puréed diet, and then a mechanical soft diet. For more information, read the resource *Eating Guide for Puréed and Mechanical Soft Diets*, located in the “Educational Resources” section of this guide.

If you have questions about your diet, ask to see a clinical dietitian nutritionist.
Caring for Your Tubes and Drains

A staff member will care for your tubes and drains while you’re in the hospital. If you will be leaving the hospital with tubes or drains, they will also teach you how to care for them so you can do it yourself at home. It may be helpful if your caregiver learns with you.

Showering

- If you have drainage tubes near your incision, you can shower, but don’t get the drainage tubes wet. A staff member will help you. You can take a normal shower 24 hours after your drainage tubes are removed.

- If you don’t have drainage tubes near your incision, don’t take a shower for first 48 hours after your surgery. You can take a sponge bath. A staff member will help you.

Planning for Your Discharge

Your nurse will teach you the self-care you will need to continue caring for yourself at home. This may involve irrigating your mouth and nose, if necessary. You will also learn exercises to prevent trismus. This is the inability to open your jaw that can develop from scarring or changes in the muscles around your jaw. For more information, read the resource *Preventing Trismus*, located in the “Educational Resources” section of this guide.

If you stay in the hospital for less than 1 week, you will leave the hospital with staples or stitches in your incision. They will be removed during a follow-up appointment after surgery. If you stay in the hospital for longer than 1 week, some or all of your staples or stitches will be removed before you leave.

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 and caregiver. 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. 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. You can find it online at www.mskcc.org/pe/avoid_falling, or you can ask your nurse.

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.
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.

- Exercise, if you can. Walking is an excellent form of exercise.
- Drink 8 to 10 (8-ounce) glasses (2 liters) of liquids daily, if you can.
- 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.
- Try to use the bathroom 5 to 15 minutes after meals. After breakfast is a good time to move your bowels. The reflexes in your colon are strongest at this time.

If these things don’t help, talk with your doctor or nurse. They may recommend an over-the-counter or prescription medication.

**Caring for Your Incision**

Your doctor or nurse will give you and your caregiver written instructions on how to care for your incisions before you leave the hospital.

If you go home with staples or stitches in your incision, your doctor will take them out during a follow-up appointment after surgery. If you had radiation therapy to the neck before your surgery, your staples or stitches will be removed 2 to 3 weeks after your surgery. If you didn’t have radiation therapy to your neck, they will be removed during your first appointment after surgery.

It’s okay to get your staples or stitches wet.
Eating and Drinking

Your healthcare team will tell you if you need to follow a special diet at home. If you have questions about your diet, ask to see a clinical dietitian nutritionist.

Nasal Changes After Sinus Surgery

If you had sinus surgery, you will have congestion (stuffiness) and drainage. This can come and go. Your doctor will help you manage these during your appointments after surgery.

You may have less of a sense of smell for some time after your surgery. This can also affect your sense of taste. But, these things will come back as you heal.

Nasal Precautions After Sinus Surgery

If you had a sinus surgery, follow the precautions below for the first 4 to 6 weeks after your surgery.

- Don’t put anything in your nose.
- Don’t drink through a straw.
- Don’t lower your head below your shoulders.
- Sneeze with your mouth open.
- Cough with your mouth open.

Your doctor will tell you if this applies to you.

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. For the first 4 to 6 weeks after your surgery:

- Don’t lift 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).

Doing aerobic exercise, such as walking and stair climbing, will help you gain strength and feel better. Walk at least 2 to 3 times a day for 20 to 30 minutes. You can walk outside or indoors at your local mall or shopping center.

It’s normal to have less energy than usual after your surgery. Recovery time is different for each person. Increase your activities each day as much as you can. Always balance activity periods with rest periods. Rest is an important part of your recovery.

Driving

Ask your doctor when you can drive. Most people can start driving again 1 week after surgery. Don’t drive while you’re taking pain medication that may make you drowsy. 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 had sinus or skull base surgery, don’t fly in a plane for 6 weeks after your surgery. Your healthcare team will tell you if this applies to you.

**Getting Your Test Results**

The tissue that was removed during your surgery will be examined by a pathologist after your surgery. The test results are usually ready in 1 week, but they can take longer depending on the tests that are done. Your doctor will discuss the results with you during your first follow-up appointment after your surgery.

**Follow-up Appointments**

Your doctor will talk with you about your long-term follow-up care. Your first appointment after your surgery will be about 7 to 10 days after you’re discharged from the hospital. During this visit, your nurse will teach you how to care for your nose and sinuses at home, if needed.

If you have a sinus surgery, you will have regular appointments with your MD during the first month after surgery. They will help keep your nose and sinuses clear which can help you heal and keep you comfortable.

You will have regular appointments with your dental team for several months after your surgery. If you have an obturator, they will adjust it as needed to help you be able to chew, swallow, and speak. If needed, a facial prosthesis will be made to help you look the same as you did before your surgery.

If needed, a speech pathologist from the Speech and Hearing Center will work with you. A speech pathologist treats:

- Voice loss
- Swallowing disorders
- Impaired speech

Your speech pathologist will help you regain as much of your speech and swallowing as possible.

If you have any questions or concerns, you can contact your doctor’s office at any time after you’ve been discharged from the hospital.

**Managing Your Feelings**

The diagnosis and treatment of cancer can be a very stressful event. For many, it can be overwhelming at times. Each person who receives a diagnosis of cancer copes in his or her own way. You and your family will almost certainly have ups and downs. Many say it helps to concentrate on the small improvements you will see as the days and weeks go by.
Your treatment may change your appearance. This can be especially upsetting. There are many resources to help you and your family during your recovery. Some are here at MSK and others are in your community. Ask your doctor, nurse, or social worker about options. You may also want to speak with a head and neck cancer survivor. This can be arranged through our Patient and Caregiver Support Program. Most people find it very reassuring to see someone who has been through what they are facing.

The Resources for Life After Cancer (RLAC) Program provides support and education for people who are finished with treatment. To learn more about the programs they offer, call 646-888-8106 or go to www.mskcc.org/experience/living-beyond-cancer/services-survivors.

Depression can occur at any time when you have a cancer diagnosis. It is important to recognize the symptoms. Help is available to treat and manage it. Signs of depression are:

- Feelings of helplessness and sadness lasting longer than usual
- Inability or difficulty to concentrate, carry out normal activities, or both
- Change in mood
- Change in sleep pattern
- Change in appetite

If you have any of these symptoms and they last more than 2 weeks, tell your doctor or nurse.

**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.

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**Contact your doctor or nurse if:**

- You have increased discomfort, redness, or both around your incision line.
- The skin around your incision is hot to the touch.
- You have drainage or accumulation of fluid from your incision site.
- You have shortness of breath
- You have new or increased swelling around your incision.

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.

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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 Education
www.mskcc.org/pe
Visit the Patient and Caregiver Education website to search our virtual library. There, you can find written educational resources, videos, and online programs.

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.

Virtual Programs
www.mskcc.org/vp
MSK’s Virtual Programs offer online education and support for patients and caregivers, even when you can’t come to MSK in person. Through live, interactive sessions, you can learn about your diagnosis, what to expect during treatment, and how to prepare for the various stages of your cancer care. Sessions are confidential, free, and led by expert clinical staff. If you’re interested in joining a Virtual Program, visit our website at www.mskcc.org/vp 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.

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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 and Other Nonsteroidal Anti-inflammatory Drugs (NSAIDs)

This information will help you identify medications that contain aspirin and other nonsteroidal anti-inflammatory drugs (NSAIDs). It’s important to stop these medications before many cancer treatments.

Aspirin, other NSAIDs (such as ibuprofen), and vitamin E can increase your risk of bleeding during cancer treatment. These medications affect your platelets, which are blood cells that clot to prevent bleeding.

Read the section “Examples of Medications” to see if your medications contain aspirin, other NSAIDs, or vitamin E.

If you take aspirin, medications that contain aspirin, other NSAIDs, or vitamin E, tell your doctor or nurse. They will tell you if you need to stop taking these medications before your treatment. You will also find instructions in the information about the treatment you’re having.

Before Your Surgery

If you’re having surgery, follow the instructions below.

- Stop taking medications that contain vitamin E 10 days before your surgery, or as directed by your doctor.
- Stop taking medications that contain aspirin 7 days before your surgery, or as directed by your doctor. If you take aspirin because you’ve had a problem with your heart or you’ve had a stroke, be sure to talk with your doctor.
before you stop taking it.

- Stop taking NSAIDs 48 hours before your surgery, or as directed by your doctor.

Examples of Medications

Medications are often called by their brand name, which can make it hard to know their ingredients. To help you identify medications that contain aspirin, other NSAIDs, and vitamin E, please review the lists below.

These lists include the most common products, but there are others. Check with your healthcare provider if you aren’t sure. *Always be sure your doctor knows all of the medications you’re taking, both prescription and over-the-counter (not prescription).*

<table>
<thead>
<tr>
<th>Common Medications that Contain 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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<td>ASA Enseals®</td>
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<td>ASA Suppositories®</td>
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<tr>
<td>Ascriptin® and Ascriptin A/D®</td>
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<td>Aspergum®</td>
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<tr>
<td>Common Medications that are NSAIDs that Don’t Contain Aspirin</td>
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<tr>
<td>Advil®</td>
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<tr>
<td>Bayer Migraine®</td>
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<tr>
<td>Aleve®</td>
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<tr>
<td>Anaprox DS®</td>
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<td>Ansaid®</td>
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<tr>
<td>Arthrotec®</td>
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<tr>
<td>Bayer Select Pain Relief Formula Caplets</td>
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<tr>
<td>Celebrex®</td>
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<td>Celecoxib</td>
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<td>Children’s Motrin®</td>
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### Products that Contain Vitamin E

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<tr>
<td>Amino-Opt-E</td>
<td>Aquavit</td>
<td>E-400</td>
<td>E complex-600</td>
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<tr>
<td>Aquasol E</td>
<td>D’alpha E</td>
<td>E-1000</td>
<td>Softgels</td>
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<td></td>
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<td>Vita-Plus E</td>
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Most multivitamins contain vitamin E. If you take a multivitamin, be sure to 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. However, talk with your doctor before taking acetaminophen if you’re getting chemotherapy.

### Medications that Contain Acetaminophen

<table>
<thead>
<tr>
<th>Medications</th>
<th>Acetaminophen</th>
<th>Codeine</th>
<th>Aspirin-Free</th>
<th>Other Nonsteroidal Anti-inflammatory Drugs (NSAIDs)</th>
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<tbody>
<tr>
<td>Acephen®</td>
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<td>Di-Gesic®</td>
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<td>Norco®</td>
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<td>Tylenol®</td>
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<tr>
<td>Aceta® with Codeine</td>
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<td>Esgic®</td>
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<td>Panadol®</td>
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<tr>
<td>Tylenol® with Codeine No. 3</td>
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<tr>
<td>Acetaminophen with Codeine</td>
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<tr>
<td>Excedrin P.M.®</td>
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<td>Percocet®</td>
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<td>Vanquish®</td>
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<td>Aspirin-Free Anacin®</td>
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<td>Fiorcet®</td>
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<td>Repan</td>
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<td>Vicodin®</td>
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<td>Arthritis Pain Formula® Aspirin-Free</td>
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<tr>
<td>Lorcet®</td>
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<td>Roxicet®</td>
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<td>Wygesic®</td>
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<td>Darvocet-N 100®</td>
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<td>Lortab®</td>
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<td>Talacen®</td>
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<td>Zydone®</td>
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<td>Datril®</td>
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<tr>
<td>Naldegesic®</td>
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<td>Tempra®</td>
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### 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 1 day. It’s possible to take too much acetaminophen without knowing because it’s in many different medications.
Make sure to always read and follow the label on the product you’re taking. Acetaminophen is a very common ingredient found in over-the-counter and prescription 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.

<table>
<thead>
<tr>
<th>Common Abbreviations for Acetaminophen</th>
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<tbody>
<tr>
<td>APAP</td>
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<tr>
<td>Acetamin</td>
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</table>

Don’t take more than 1 medication that contains acetaminophen at a time without talking with a member of your healthcare team.
Eating Guide for Puréed and Mechanical Soft Diets

This information explains what you can eat while you're on a puréed or mechanical soft diet.

About Puréed and Mechanical Soft Diets

You may have to follow a puréed or mechanical soft diet if you:
  - Have trouble chewing or swallowing
  - Had mouth surgery
  - Have trouble moving or have lost feeling in parts of your mouth, such as your lips or tongue

If you're on a **puréed diet**, you will eat foods that you don’t need to chew, such as mashed potatoes and pudding. You can also blend or strain other foods to make them smoother. Liquids, such as broth, milk, juice, or water may be added to foods to make them easier to swallow.

If you're on a **mechanical soft diet**, you will eat foods that require less chewing than on a regular diet. You can eat foods with different textures and thicknesses, including chopped, ground, and puréed foods.

For more information about what to eat on a puréed or mechanical diet, read the “Puréed or Mechanical Soft Diet Guidelines” section of this resource.

If you're eating less than usual or losing weight, call your dietitian.

If you don’t know which diet is right for you, or have any questions, talk with your doctor or speech or swallowing specialist. You can also speak with a dietitian in the Department of Food and Nutrition by calling 212-639-7312.

Guide for Good Nutrition

Eat foods that have all the nutrients your body needs to keep you healthy. Your body needs:
  - Proteins
  - Carbohydrates
  - Fats
  - Fiber
  - Vitamins and minerals

Also, make sure that you drink plenty of liquids. Your goal should be to drink 8 (8-ounce) glasses of water a day. However, talk with your doctor or dietitian to find out if drinking more or less liquid would be right for you.

Protein

Protein helps your body build tissue and heal after surgery. Foods rich in protein include:
  - Meat
  - Fish
  - Poultry (chicken, turkey)
  - Milk, including dairy milk, or powdered milk
  - Cheese
• Yogurt (especially Greek yogurt)
• Eggs and egg whites
• Beans and bean purée
• Nuts and nut butters
• Soy products, such as soy milk, tofu, and edamame (soy beans)
• Protein powders
• Liquid nutritional supplements, such as Ensure®, Ensure Plus®, Boost®, or Boost Plus®

**Carbohydrates**

Carbohydrates are starches and sugars. They should make up at least half of the calories you eat. Most of the carbohydrates in your diet should come from:

• Starchy vegetables (potatoes, green peas, squash)
• Whole grains (oatmeal, brown rice)
• Cereals
• Breads
• Pasta

**Fat**

Fat is the most concentrated source of calories. For example, 1 teaspoon of oil has 45 calories while 1 teaspoon of sugar has 20 calories. Some fat in our diets is necessary and healthy. Fats are in:

• Meats
• Dairy
• Coconut and canned coconut milk or cream
• Nuts and nut butters
• Seeds
• Vegetable oils
• Avocados
• Olives
• Fried and sautéed foods
• Baked goods

Some fats are healthier for you than others. Unsaturated fats are healthier for you than saturated fats.

Unsaturated fats are found in:

• Olive oil
• Canola oil
• Peanut oil
• Fish oil
• Avocado

Saturated fats are found in:

• Meat
• Full-fat dairy products (whole milk, cheeses, heavy cream, cream cheese)
• Butter
• Coconut and coconut products, such as coconut oil
• Palm oil

Eating too much fat can make you gain weight. If your goal is to gain weight, try to eat healthier (unsaturated) fats. If you’re trying to lose weight, or are already at a healthy weight, choose low-fat foods when planning your meals.
Fiber

There are 2 kinds of fiber: soluble and insoluble. Soluble fiber is found in barley, oats, and in skinless fresh fruits. Soluble fiber can help make your bowel movements softer and slow your digestion.

Insoluble fiber is found in the skins of fruits and vegetables, legumes (beans, lentils), seeds, and whole grains. It's not broken down in your intestines and adds bulk to your bowel movements (stool). This can help you have more regular bowel movements. Even if fruits and vegetables are blended or juiced, the fiber is still there if the pulp hasn’t been removed.

It’s important to get enough of both kinds of fiber.

For more information about managing constipation, read the “Managing Symptoms and Side Effects Through Nutrition” section of Eating Well During and After Your Cancer Treatment.

Vitamins and minerals

Vitamins and minerals are found in all foods in different amounts. People who eat a well-balanced diet will most likely not need a vitamin supplement. Talk with your doctor if you’re thinking about taking a supplement.

Lactose

Lactose is a sugar found in milk and milk products, such as yogurt, cheese, and ice cream. Many people have trouble digesting lactose, which is called lactose intolerance. This may cause gas, cramping, or diarrhea (loose or watery bowel movements).

If this is a problem for you, you may want to try dairy products that have little or no lactose. You can look for low-lactose or lactose-free milk and cheese products in your supermarket’s dairy section. Lactaid® is a brand that has several of these products.

Many people are able to get nutrients from dairy products by eating cheese or yogurt. These foods have less lactose than milk or ice cream. You can also try the following non-dairy, lactose-free foods and beverages:

- Rice milk or cheese
- Soy products, such as soy milk, cheese, and yogurt
- Almond products, such as almond milk, cheese, or yogurt
- Tofu
## Puréed or Mechanical Soft Diet Guidelines

Here are some foods to include and avoid while you’re on a puréed or mechanical soft diet.

### Puréed diet

<table>
<thead>
<tr>
<th>Type of Food</th>
<th>Include</th>
<th>Avoid</th>
</tr>
</thead>
</table>
| **Milk and Dairy Products** | • Milk, smooth yogurt (plain or without fruit pieces), buttermilk, evaporated or condensed milk, milkshakes, and malts  
• Puréed cottage cheese, thin ricotta cheese, mild or processed cheeses melted into a sauce  
• Ice cream and frozen yogurt  
• Liquid nutritional supplements, such as Ensure or Carnation Breakfast Essentials  
• Smoothies made with bananas, peaches, or sorbets | • Solid cheeses, regular cottage cheese, farmer cheese, and pot cheese |
| **Vegetables**     | • Vegetable juices like V8 or tomato juice, puréed cooked vegetables, and baby food vegetables                                            | • All others, even well-cooked vegetables that don't require a lot of chewing |
| **Fruits**         | • Fruit juices and nectars (without pulp)  
• Smooth applesauce, puréed fruits, baby food fruit | • All others, including mashed banana and canned fruits |
| **Starches**       | • Cooked cereals, Cream of Wheat®, Farina®, Cream of Rice®  
• Smooth or blended oatmeal, baby oatmeal, or baby cereal  
• Hominy grits  
• Whipped or smooth mashed potatoes  
• Puréed pasta, puréed rice | • All others |
| **Meat or Meat Substitutes** | • Strained or puréed meat, fish, and poultry  
• Smooth chicken, tuna, and egg salad (no celery or onion)  
• Soufflés, hummus, and puréed beans | • All others, including scrambled, fried, poached, hard-boiled, and soft-boiled eggs |
| **Fats**           | • Butter, margarine, sour cream, cooking fats and oils, and gravies  
• Whipped toppings and heavy cream  
• Mashed or blended avocado with puréed foods items | • All others |
| **Soups**          | • Broth and bouillon  
• Soups with puréed or strained vegetables  
• Strained or puréed cream soups  
• Puréed chicken noodle or chicken and rice soup | • All others |
<table>
<thead>
<tr>
<th>Type of Food</th>
<th>Include</th>
<th>Avoid</th>
</tr>
</thead>
</table>
| Sweets and Desserts | • Smooth custards and puddings  
                   | • Sherbet, ice cream, and frozen yogurt  
                   | • Flavored fruit ices, popsicles, fruit whips, flavored gelatin  
                   | • Clear jelly, honey, sugar, and sugar substitutes  
                   | • All syrups (such as chocolate syrup and maple syrup)  
                   | • Mousse                                                                  | • All others, including anything made with coconuts, nuts, or whole fruits |
| Beverages         | • All beverages                                                       | • Any containing raw eggs                                               |
| Miscellaneous     | • Salt, pepper, ketchup, mustard, and mayonnaise  
                   | • Herbs and spices                                                      | • Nuts  
                   | • Liquid sauces, such as barbeque or teriyaki sauce                             | • Coconuts  
                   |                                                                                   | • Olives  
                   |                                                                                   | • Pickles  
                   |                                                                                   | • Seeds  
                   |                                                                                   | * Do not eat spicy or acidic foods if you have mouth sores. |

**Sample menu for a puréed diet**

Here are some examples of puréed diet options for each meal of the day. If you need help planning your meals, call the Department of Food and Nutrition to speak with a dietitian.

<table>
<thead>
<tr>
<th>Meal or Snack</th>
<th>Puréed Diet</th>
</tr>
</thead>
</table>
| **Breakfast**       | • Fruit juice without pulp  
                   | • Puréed banana  
                   | • Cooked cereal with milk  
                   | • Puréed cooked egg  
                   | • Milk  
                   | • Coffee or tea                                                                  |
| **Mid-morning snack** | • Vanilla or flavored yogurt                                               |
| **Lunch**           | • Any puréed or strained soup  
                   | • Puréed chicken salad                                                      | • Nuts  
                   | • Puréed green beans                                                           | • Coconuts  
                   | • Puréed fruit                                                                  | • Olives  
                   | • Puréed rice                                                                   | • Pickles  
                   | • Tea with sugar                                                                | • Seeds  
                   |                                                                                   | * Do not eat spicy or acidic foods if you have mouth sores. |
| **Mid-afternoon snack** | • Ensure plus                                                              |
| **Dinner**          | • Puréed or strained soup  
                   | • Puréed meat or fish                                                      | • Nuts  
                   | • Mashed potato                                                                | • Coconuts  
                   | • Puréed vegetables with olive oil or butter                                   | • Olives  
                   | • Applesauce                                                                  | • Pickles  
                   |                                                                                   | • Seeds  
                   |                                                                                   | * Do not eat spicy or acidic foods if you have mouth sores. |
| **Evening Snack**   | • Vanilla Pudding                                                          |
Mechanical soft diet
You should moisten the following mechanical foods with a sauce, gravy or condiments.

<table>
<thead>
<tr>
<th>Type of Food</th>
<th>Include</th>
<th>Avoid</th>
</tr>
</thead>
</table>
| **Milk and Dairy Products** | • Milk, buttermilk, eggnog, yogurt (plain and with fruit), milkshakes, evaporated and condensed milk, and malts  
• Cottage cheese, soft cheeses (such as ricotta or farmer), pot cheese sauces, and grated and shredded cheeses  
• Ice cream and frozen yogurt  
• Liquid nutritional supplements, such as Ensure or Carnation Breakfast Essentials | • Hard cheeses and cheeses that have nuts and seeds in them. |
| **Vegetables**    | • Any well-cooked, diced vegetables, such as carrots, peas, green beans, beets, butternut or acorn squash, and wax beans moistened with a sauce or oil  
• Chopped or creamed spinach  
• Puréed vegetables  
• Baby food vegetables  
• Vegetable juices, such as V8 and tomato juice | • Raw vegetables  
• Stir-fried vegetables  
• Fried vegetables  
• Lettuce |
| **Fruits**        | • Ripe bananas  
• Any canned fruits  
• Any cooked fruits (without the skins), mashed or diced into small pieces  
• Applesauce, puréed fruits, and baby food fruits  
• Nectars and fruit juices | • Fresh fruits  
• Fruit skins  
• Fruits with pits  
• Dried fruits |
| **Starches**      | • Any diced soft breads, such as soft rolls, muffins, soft French toast, and pancakes – moisten these with butter and syrup  
• Dry cereal soaked in a small amount of milk  
• White or brown rice with a sauce or gravy  
• Casseroles  
• Cooked cereals, Cream of Wheat, Farina, Cream of Rice, oatmeal, hominy grits, and couscous  
• Diced soft pastas or noodles, pasta salad, pastina, orzecchiette, macaroni and cheese, and diced ravioli or tortellini  
• Soft whole grains (such as barley, farro) moistened with sauce or gravy  
• Mashed, baked, or creamed potatoes, and sweet potatoes | • Rye-crisps, dry crackers, popcorn, taco shells, and Melba toasts  
• Breads and muffins with seeds or nuts, pita bread, rye and pumpernickel breads, bagels, French or sourdough breads, and toast  
• Chow mein noodles  
• Any cakes or breads made with nuts, seeds, raisins, or dates  
• Kasha (buckwheat), wild rice, shredded wheat, and granola  
• Hash browns, fried potatoes, potato skins, and French fries |
<table>
<thead>
<tr>
<th>Type of Food</th>
<th>Include</th>
<th>Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>**Meat or Meat</td>
<td>• Ground, finely chopped tender meat or poultry with sauce or gravy</td>
<td>• Whole cuts or diced meat or poultry</td>
</tr>
<tr>
<td>Substitutes</td>
<td>• Soft chicken salad, creamed tuna salad (without celery), and egg salad</td>
<td>• Hot dogs, sausage, knockwurst, bratwurst, pork chops, steak, and bacon</td>
</tr>
<tr>
<td></td>
<td>(without celery)</td>
<td>• Fried fish</td>
</tr>
<tr>
<td></td>
<td>• Diced meat loaf, meatballs, salmon loaf, and croquettes</td>
<td>• Haddock, halibut, and tuna</td>
</tr>
<tr>
<td></td>
<td>• Casseroles</td>
<td>• Shellfish</td>
</tr>
<tr>
<td></td>
<td>• Diced baked or broiled fish (fillet of sole, roughy, flounder, and</td>
<td>• Chili with beans</td>
</tr>
<tr>
<td></td>
<td>salmon)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Well-cooked beans and tofu</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Scrambled eggs or diced hard-cooked eggs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Cheese quiche without the crust</td>
<td></td>
</tr>
<tr>
<td><strong>Fats</strong></td>
<td>• Butter, margarine, and cooking fats and oils</td>
<td>• Nuts (such as almonds, cashews, peanuts, and pecans)</td>
</tr>
<tr>
<td></td>
<td>• Gravy, whipped toppings, salad dressings, and mayonnaise</td>
<td>• Seeds</td>
</tr>
<tr>
<td></td>
<td>• Finely chopped olives</td>
<td>• Coconuts</td>
</tr>
<tr>
<td></td>
<td>• Avocado</td>
<td>• Whole olives</td>
</tr>
<tr>
<td></td>
<td>• Creamy nut butters</td>
<td>• Crunchy olives</td>
</tr>
<tr>
<td><strong>Soups</strong></td>
<td>• Broth and bouillon</td>
<td>• Any soups with chunks of meat or crunchy vegetables</td>
</tr>
<tr>
<td></td>
<td>• Soups with puréed or strained vegetables</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Strained or puréed cream soups</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Diced chicken noodle soup</td>
<td></td>
</tr>
<tr>
<td>**Sweets and</td>
<td>• Seedless jellies, honey, sugar, sugar substitutes, and syrup</td>
<td>• Any sweets and desserts with coconut, nuts, or dried fruits</td>
</tr>
<tr>
<td>Desserts**</td>
<td>• Ice cream, frozen yogurt, puddings, and custards</td>
<td>• Granola bars</td>
</tr>
<tr>
<td></td>
<td>• Pies (without crust), pastries, and cakes without seeds, nuts, or</td>
<td>• Pies with crust</td>
</tr>
<tr>
<td></td>
<td>dried fruits moistened with a milk or seedless jelly</td>
<td>• Chewy, crunchy, or hard candy</td>
</tr>
<tr>
<td></td>
<td>• Diced soft cookies moistened with milk</td>
<td>• Jelly or jam with seeds</td>
</tr>
<tr>
<td></td>
<td>• Mousse</td>
<td>• Crunchy cookies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Licorice, taffy, and caramel</td>
</tr>
<tr>
<td><strong>Drinks</strong></td>
<td>• Water, coffee, tea, carbonated drinks, hot cocoa, fruit punch, and</td>
<td>• Any drink with raw eggs</td>
</tr>
<tr>
<td></td>
<td>coconut water</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Gatorade®, Pedialyte®, Isopure® lemonade</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Miscellaneous</strong></td>
<td>• Salt, pepper, ketchup, mustard, and mayonnaise</td>
<td>* Do not eat spicy or acidic foods if you have mouth sores.</td>
</tr>
<tr>
<td></td>
<td>• Herbs and spices</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Jelly</td>
<td></td>
</tr>
</tbody>
</table>
Sample menu for a mechanical soft diet

Here are some examples of meals you can have when you’re on a mechanical soft diet. If you need help planning your meals, call the Department of Food and Nutrition to speak with a dietitian.

<table>
<thead>
<tr>
<th>Meal or Snack</th>
<th>Mechanical Soft Diet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breakfast</strong></td>
<td>• Soft, diced peaches</td>
</tr>
<tr>
<td></td>
<td>• Cereal softened in milk</td>
</tr>
<tr>
<td></td>
<td>• Diced, soft pancakes with syrup and butter</td>
</tr>
<tr>
<td></td>
<td>• Scrambled eggs</td>
</tr>
<tr>
<td></td>
<td>• A soft butter roll cut into small pieces</td>
</tr>
<tr>
<td><strong>Mid-morning snack</strong></td>
<td>• Yogurt</td>
</tr>
<tr>
<td><strong>Lunch</strong></td>
<td>• Vegetable barley soup</td>
</tr>
<tr>
<td></td>
<td>• Chicken salad or egg salad</td>
</tr>
<tr>
<td></td>
<td>• Diced, well-cooked spinach</td>
</tr>
<tr>
<td></td>
<td>• Canned fruit cocktail</td>
</tr>
<tr>
<td><strong>Mid-afternoon snack</strong></td>
<td>• Ensure plus</td>
</tr>
<tr>
<td><strong>Dinner</strong></td>
<td>• Soup</td>
</tr>
<tr>
<td></td>
<td>• Baked fish filet (boneless) with sauce</td>
</tr>
<tr>
<td></td>
<td>• Diced, soft potatoes</td>
</tr>
<tr>
<td></td>
<td>• Diced, well-cooked broccoli with olive oil or butter</td>
</tr>
<tr>
<td></td>
<td>• Canned, diced pears</td>
</tr>
<tr>
<td><strong>Evening Snack</strong></td>
<td>• Rice Pudding</td>
</tr>
</tbody>
</table>
Planning Your Meals

Changing your eating habits can be hard. It’s best to plan ahead for meals. This can help make sure you have enough of the right foods to eat at mealtimes. Here are some questions to think about when planning your meals:

- Where will you be eating? (At home, a restaurant, work, someone else’s house)
- If you’re eating at a restaurant, can you call ahead and request special meals?
- Will you have a kitchen and refrigerator available? Can you boil water? Can you microwave? Can you use a blender or food processor?
- Can you carry a thermos with food already prepared and ready to eat?

Eating at home with family and friends

Most foods can be changed to meet your needs. For example, a portion of soup can be put aside, then strained or blended.

Many main dishes, such as noodles, stews, and casseroles, can be put into a blender with some liquid. You can use milk, gravy, tomato sauce, broth, juice, or water. Add liquid until the food is the right consistency.

Kitchen items to help prepare foods

Here are some items that you may find helpful to prepare your foods at home:

**Blender:** You can use a blender for all types of foods including meats, vegetables and fruits, but you may have to add liquid to make the food the right texture. Blenders are great for soups and shakes. However, they’re not always the best to use for making 1 portion.

**The Magic Bullet® and Nutribullet®:** These are small blenders that don’t take up a lot of space. The Vitamix® and Ninja® are other powerful blenders that can purée a variety of foods.

**Hand-held blender:** You can use a hand-held blender to quickly purée your favorite soups right in the pot. It can also be used to soften well-cooked foods in a small bowl for 1 or 2 portions.

**Food processor:** Food processors are useful for shredding, slicing, chopping, or blending foods. It comes in different sizes. If you often prepare just 1 portion of food, buy a small processor.

**Household mesh strainer or sieve:** You can use this to strain fruits and vegetables, but not meats. They are inexpensive, good to make 1 portion, and don’t need electricity. However, this method can be slow.

**Baby-food grinder:** This item can often be found in stores that sell baby clothes or furniture. They are good for all foods and require no liquid. The small ones are ideal for grinding 1 portion of food. They can be hand or battery-operated.

However, when using a baby-food grinder, food may not come out as smooth as some people may need. Ask your dietitian, doctor, or speech or swallowing therapist if it’s right for you.

Eating Out

Eat at restaurants that offer a variety of foods and that will cater to people on special diets. Many places will purée or prepare foods for your needs. Call ahead and speak to a manager or chef. You may be surprised at how helpful they will be. You may also want to order sides of broth, gravy, or milk to moisten your foods.
Here are some ideas of things you can order. Some of these may need to be mashed or blended for the puréed diet:

**Breakfast**

- Fruit and vegetable juices
- Fruits
- Hot cereal
- Cold cereal softened in milk (for mechanical soft diets)
- Scrambled eggs or chopped, hard-boiled eggs for mechanical soft diets
- Soft breads, such as muffins and pancakes, soaked in liquid to soften them for mechanical soft diets
- Coffee, tea, or hot chocolate

**Lunch and dinner**

- Fruit and vegetable juices
- Soups, which can be easily blended or strained in the restaurant. Egg drop soup is a good source of protein

**Main dishes**

- Ground meat products, such as hamburger patties, meatloaf, and meatballs
- Soft, flaky fish (such as fillet of sole, flounder, or tilapia) steamed, baked, or broiled
- Noodles and macaroni dishes, blended for puréed diets
- Soufflés
- Cottage cheese and soft fruit platters
- Sandwiches, such as tuna or egg salad on soft bread

**Vegetables**

- Baked or mashed potatoes
- Any soft cooked vegetables, such as cooked carrots
- Creamed spinach
- Vegetable soufflé
- Guacamole (some may be spicy)
- Hummus

**Desserts**

- Ice cream or frozen yogurt
- Gelatin desserts
- Milkshakes
- Mousse
- Puddings and custards
- Applesauce or other soft fruits
- Fruit sorbets

It's also possible to eat away from home, such as at work or at a friend's house. Here are some tips for taking food with you while you're away from home:

- Bring a food grinder or small food processor. If electricity is needed, make sure it's available where you're going.
- Buy a thermos. Make soup or hot cereal and carry it with you.
- Ask if there is a microwave where you're going. You can make food at home and freeze it in portion-sized, microwave-safe containers or Zip-Loc® bags. Bring the food with you in an insulated pack and heat it when you want to eat.
• Freeze soups or puréed foods in ice cube trays. Cover the tray with foil or plastic wrap to prevent freezer burn. When you're hungry, use 2 or 3 cubes for a small meal or snack, or more cubes for a larger meal.
• Fruit ices

Your Caloric Needs

Your caloric needs are the number of calories you need every day to maintain your weight. You get calories from food and drinks. Eating the number of calories your body needs can help you maintain your weight.

You can adjust the amount of calories you eat in order to reach your weight goal:

• If you need to gain weight, you can increase the number of calories you eat or drink.
• If you need to lose weight, you can decrease the number of calories you eat or drink.

Each person has needs a different number of calories. This is based on:

• Age
• Sex
• Height and weight
• Level of physical activity

Generally, people who are older or less active need fewer calories. Your doctor and dietitian can help you find out how many calories you need every day.

The easiest way to check if you're eating enough is to weigh yourself. Try to weigh yourself twice a week and write down how much you weigh. This will help you keep track of your weight loss or gain.

Tips for adding more calories to your diet

If you need to eat more calories, here are some easy tips:

• Eat small meals 6 to 8 times a day instead of 3 main meals.
• Add 2 to 4 tablespoons of canned coconut milk or cream to smoothies, shakes, cereals, or yogurts for extra calories. You can also add it to rice or diced chicken for extra calories, flavor, and moisture.
• Choose creamy soups rather than soups with clear broths.
• Have puddings and custards rather than gelatin desserts, such as Jell-O®.
• Add sauces, gravies, or extra vegetable oil to your meals.
• Drink apricot, pear, or peach fruit nectars. They are less acidic than other nectars.
• Drink fruit shakes or fruit smoothies made with yogurt or ice cream.
• Make ice cubes from milk or fruit nectar. Use these high-calorie ice cubes in smoothies or to keep your shakes cold. As they melt, they will add calories to your beverages.
• Drink high-calorie drinks, such as milkshakes, soy milkshakes, or pasteurized eggnog.
• Drink a liquid nutritional supplement, such as Ensure or Boost, instead of milk to make a nutritious, high-calorie milkshake.
• Add honey to smoothies, tea, yogurt, hot cereals, shakes, or ice cream.
• If you aren't on a low-fat diet, add sour cream, half and half, heavy cream, or whole milk to your foods. You can add it to mashed potatoes, sauces, gravies, cereals, soups, and casseroles.
• Add mayonnaise to your eggs, chicken, tuna, pasta, or potatoes to make a smooth, moist salad.
• Add avocado to dishes or smoothies.
• Add nut butters, such as peanut butter, to shakes and smoothies.

**Tips for adding more protein to your diet**

If you need to increase the amount of protein in your diet, here are some easy tips:

• Add tofu to cooked vegetables, soups, smoothies, or in place of chicken or meat if you’re having difficulty eating animal proteins.
• Add cooked eggs to your soups, broths, and cooked vegetables. Purée the cooked eggs, if needed.
• Use plain Greek yogurt in smoothies, cream sauces, or wherever you would use sour cream.
• Use a plain protein powder, such as a whey protein powder, in liquids and shakes.
• Add cheese (shredded or grated) to your soups, cooked eggs, vegetables, and starches.
  − For example, adding full-fat ricotta cheese can moisten a dish and add calories and protein. Add cottage cheese to smoothies, purées, or canned fruits.
• Use fortified milk (see recipe in the “Recipes” section) rather than regular milk to double the amount of protein in it. Use this milk in shakes, hot cereals, mashed potatoes, hot chocolate, or with instant puddings to create a high-protein, high-calorie dessert. You can also add non-fat dried milk powder alone to purées and smoothies to add more calories and protein.
• Grind some nuts with a coffee grinder and add to them to your smoothies, hot cereals, puddings, or yogurts.

**Liquid nutritional supplements**

If you can’t make your own shakes, there are many nutritional supplements that you can buy. Some are high calorie, ready-prepared drinks that have vitamins and minerals added to them. Others are powders that you can mix into other foods or drinks. Most are also lactose-free, which means that you can have them even if you’re lactose intolerant.

Check your local market or drug store to see if they carry any of the brands below. You can also order them online for home delivery.

<table>
<thead>
<tr>
<th>Liquid Nutritional Supplement</th>
<th>Calories</th>
<th>Protein (g)</th>
<th>Water (mL)</th>
<th>Lactose Free</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure (8 ounces)</td>
<td>220</td>
<td>9</td>
<td>196</td>
<td>Yes</td>
</tr>
<tr>
<td>Ensure Active Clear™ (10 ounces)</td>
<td>180</td>
<td>9</td>
<td>274</td>
<td>Yes</td>
</tr>
<tr>
<td>Ensure Plus™ (8 ounces)</td>
<td>350</td>
<td>13</td>
<td>180</td>
<td>Yes</td>
</tr>
<tr>
<td>Ensure Enlive (8 ounces)</td>
<td>350</td>
<td>20</td>
<td>180</td>
<td>Yes</td>
</tr>
<tr>
<td>Ensure Compact (4 ounces)</td>
<td>220</td>
<td>9</td>
<td>85</td>
<td>Yes</td>
</tr>
<tr>
<td>Ensure Pudding (4 ounces)</td>
<td>170</td>
<td>10</td>
<td>NA</td>
<td>Yes</td>
</tr>
<tr>
<td>Glucerna® (8 ounces)</td>
<td>200</td>
<td>10</td>
<td>200</td>
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<tr>
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### Managing Treatment Side Effects

During and after chemotherapy and radiation therapy, some people have side effects that make it hard to eat. Here are some tips to help you manage these side effects.

#### Taste changes

Food may taste different during and after chemotherapy or radiation therapy. In the weeks after finishing chemotherapy, your taste should slowly go back to normal. It may take a little longer for your taste to come back after radiation therapy.

Try some of these tips to deal with taste changes:

- Try different foods. You might find a new food that you like.
- Retry foods every week or 2 to see if the taste has returned.
- Eat fish, eggs, cheese, or milk instead of meat. These may taste better.
- Try different seasonings, including herbs and spices. Use salt if you aren’t on a low-salt diet.
- Adjust the sugar levels in the food to your taste.
- If the food you’re eating tastes metallic, use plastic utensils or glassware for cooking.
- Try cold foods or foods at room temperature.
- Marinate your foods in fruit nectars, duck sauce, or citrus juice.
- Take care of your mouth. Brush your teeth and tongue when you wake up, after each meal, and at bedtime.

#### Sore mouth

People who have had chemotherapy or radiation may have a sore mouth. If this is a problem for you, try the following:

- Eat mild foods, such as milks, custards, or puddings.

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<th>Protein (g)</th>
<th>Water (mL)</th>
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• Ask your doctor for a mouth spray to control pain while you eat.
• Do not eat foods that are:
  − Acidic, such as orange juice and tomato sauce.
  − Spicy
  − Salty
  − Too hot
  − Too cold
• Liquid or soft foods, such as soufflés or casseroles, may be easier to swallow than solid foods. Try foods with different textures to see what feels best.

**Dry mouth**

Eating can be hard when your mouth is dry and doesn’t make enough saliva. Try these tips:

- Choose soft, moist foods.
- Add gravies, sauces, applesauce, or other liquids to your foods. Have a spoonful of warm soup, or other liquid, between mouthfuls of food.
- Try foods made with gelatin, such as mousses. They slide down the throat more easily.
- Always carry a bottle of water with you. You can also try carrying a small, clean spray bottle filled with water. Spray water in your mouth throughout the day to keep it moist.
- Try eating sugar-free mints or sugar-free gum to make more saliva.
- If you’re having trouble maintaining your weight, drink liquids that have calories instead of water, such as fruit juices, fruit nectars, and liquid nutritional supplements (Ensure).

**Call Your Doctor if You:**

- Are coughing a lot during meals
- Get food stuck in your mouth or throat
- Have trouble breathing
- Have a lot of phlegm

**Recipes**

Many of these recipes came from people who were on these diets. We hope they are helpful.

For additional recipes, tips, and ideas, check out the book *Eat Well Stay Nourished*. It was written by Support for People with Oral and Head and Neck Cancer (SPOHNC). You can order it online at www.spohnc.org/recipe_resource_guide.php or by calling 800-377-0928.
Drinks
These are good drink options if you want to increase your calories. Try various fruits and juices.

---

**Fortified milk**

Use this recipe to increase the calorie and protein content of a glass of milk. Also, use it as a substitute for milk in your favorite recipes for soups or custards.

**Ingredients**
- 1 cup of non-fat dried milk powder
- 1 quart of skim or 1% milk (use whole milk if you need extra calories)

**Recipe**
1. Combine all the ingredients.
2. Stir well.

You can store any leftover fortified milk in your refrigerator.

---

**Milkshake**

**Ingredients**
- 1 cup of milk
- 1 cup of ice cream or frozen yogurt

**Recipe**
1. Put all the ingredients in a blender.
2. Blend well.

You can also add malted milk powder, syrups, nut butters, or fruits. Try other flavors and consistencies you may enjoy.

---

**Fruit Smoothie**

**Ingredients**
- ⅔ cup of vanilla yogurt
- ½ cup of fruit nectar
- ⅓ cup of chilled or frozen fruit of your choice
- 1 tablespoon of honey
- 4 ice cubes

**Recipe**
1. Put all the ingredients in a blender.
2. Blend until the mixture is smooth.

---

**Blender Breakfast**

This drink is easy to make and is full of calcium, vitamins, and fiber.

**Ingredients**
- 1 banana, peach, or nectarine, peeled and cut into chunks
- ½ cup of milk or fortified milk (you can also use ½ cup of low-fat yogurt instead)
- 1 teaspoon of sugar or honey
- 1 tablespoon of natural bran

**Recipe**
1. Put all the ingredients in a blender.
2. Blend until the mixture is smooth.
3. Pour into a tall glass.
Sauces

Use these sauces to moisten your foods and make them more tasty. Some are used in other recipes in this resource.

**Basic White Sauce**

**Ingredients**

- 1 cup of skim, 1%, whole, or fortified milk
- 2 tablespoons of any kind of oil or butter
- 2 to 3 tablespoons of flour

**Recipe**

1. Mix the flour and oil or butter in a saucepan.
2. Cook over low heat, stirring constantly until the mixture is smooth and bubbly.
3. Remove from heat.
4. Stir in the milk.
5. Boil for 1 minute, stirring constantly.
6. After a few minutes, it will begin to thicken. The more flour you add, the thicker the sauce will be.

You can also make a basic brown sauce, use \( \frac{3}{4} \) cup of low-sodium beef or chicken broth instead of milk.

Soups

Eating soup is a good way to get more liquid and vegetables in your diet. Try some of these recipes or change the ingredients to make it right for you.

If you’re on a puréed diet, you must put the soup through a blender or strainer. People on a mechanical soft diet can tolerate some of these soups without having to blend them.

**Creamy Soup**

This is a recipe for a basic creamy soup. Add whichever vegetables and spices you like.

**Ingredients**

- 1 cup of cooked Basic White Sauce (see recipe above)
- \( \frac{1}{2} \) cup of puréed vegetables or baby food vegetables
- Salt and pepper to taste

Follow the recipe for Basic White Sauce. Mix in the puréed vegetables. Add salt and butter to taste.

You can also try adding other cooked or puréed vegetables, such as green beans, carrots, broccoli, squash, peas, mushrooms, or asparagus. Try adding dill, garlic, thyme, onion, or celery.

**Vegetarian Creamy Tofu Soup**

**Ingredients**

- 2 ounces of tofu
- 8 ounces of creamy soup (see recipe above)

**Recipe**

1. Put all the ingredients in a blender.
2. Blend until the mixture is smooth.

**Avocado Soup**

**Ingredients**

- 1 ripe, medium avocado (flesh only)
- 1 small onion, cut up
- \( \frac{1}{2} \) teaspoon of salt
- 3 cups of chicken or vegetable broth
- 1 cup of yogurt
- 3 tablespoons of lemon juice (strained, if fresh)

Purée the avocado and onion with 1 cup of broth. Add the salt, remaining broth, and lemon juice, and mix for a few seconds. Then add the yogurt and sour cream and blend until smooth. Serve cold.
**Spa Vegetable Soup**

This is an easy way to make vegetable soup. You can change the vegetables as much as you like.

**Ingredients**
- 3 cups of chicken or vegetable broth
- 1 carrot, sliced
- 1 cup of broccoli florets
- 1 cup of cauliflower florets
- ½ cup of red cabbage, thinly sliced (or try spinach)
- 1 green onion, thinly sliced
- Salt and pepper to taste

**Recipe**
1. In a saucepan, bring the broth to a boil.
2. Add the carrot and simmer for 20 minutes.
3. Add the remaining vegetables and simmer until completely cooked through.
4. Place in a blender and purée.
5. Season with salt and pepper to taste.

You can also:
- Add other herbs and spices, as you want.
- Try adding tofu chunks to increase the amount of protein.
- Drizzle some olive oil into the soup as you purée it for extra calories.

**High-protein Oatmeal**

**Ingredients**
- 1 cup of cooked oatmeal, prepared as instructed on the package
- ½ cup of fortified milk
- 2 teaspoons of sugar, honey, or brown sugar
- 1 small jar of baby food bananas
- Cinnamon to taste (optional)

Mix all the ingredients together and serve hot.

**Soufflé**

This is appropriate for a puréed or mechanical soft diet.

**Ingredients**
- ¼ cup of butter
- ¼ cup of flour
- 1 ½ cup of milk or fortified milk
- ¼ teaspoon of salt
- ½ teaspoon of Worcestershire sauce (optional)
- 4 eggs, separated (yolks and whites in different bowls)
- ½ pound of low-fat cheddar cheese

**Recipe**
1. Preheat the oven to 350° F.
2. Melt the butter in a saucepan.
3. Stir in the flour until it’s well blended.
4. Remove from heat.
5. Add the milk and cook until thickened.
6. Turn off the heat.
7. Add the cheese and stir until melted.
8. Let the mixture cool.
9. Beat in the egg yolks one at a time.
10. In a separate bowl, whip the egg whites until they’re stiff.
11. Fold (mix gently, in small amounts at a time) the whipped egg whites into the sauce.
12. Pour the mixture into a 2-quart size casserole dish.
13. Bake for 30 to 45 minutes.
### Cottage Cheese Pie

This recipe is only for those on a mechanical soft diet.

**Ingredients**
- 3 medium eggs or egg substitute
- 2 sprigs of parsley, chopped
- 1 pound of cottage cheese
- 1 small onion, diced
- ½ cup of Parmesan cheese
- ½ cup of mozzarella cheese, diced or grated
- Salt and pepper to taste
- Cornmeal

**Recipe**
1. Preheat oven to 350° F.
2. Mix eggs, cottage cheese, onion, Parmesan cheese, mozzarella cheese, and parsley together in a bowl.
3. Grease a 9-inch glass pie pan with oil.
4. Sprinkle cornmeal lightly to cover the entire pan.
5. Pour the mixture into the pie pan.
6. Bake for 45 minutes.
7. Place a toothpick into the center of the pie. If it comes out dry, then it’s done.

### Quiche Custard

This is a puréed diet version.

**Ingredients**
- ¼ of an onion, chopped finely
- 1 tablespoon of butter
- 1 tablespoon of Parmesan cheese
- ¼ cup of milk, fortified milk, or soy milk
- ¼ cup of heavy cream
- 1 egg or egg substitute
- ¼ cup of cheese (swiss, cheddar, or mozzarella)
- Pinch of salt
- Pinch of nutmeg

**Recipe**
1. Preheat the oven to 350° F.
2. Sauté the onion in the butter until the butter melts.
3. Place onion, milk, cream, and egg in blender.
4. Blend until onions are puréed.
5. Place the cheeses into a small, greased casserole dish.
6. Pour egg mixture and seasonings over the cheese.
7. Place the casserole dish in a large pan with hot water.
8. Bake until the mixture sets, about 25 to 30 minutes.

### Main Dishes

### Sweet Potato Pie

This dish can be eaten as is by people on a mechanical soft diet. It must be mashed or puréed for those who are on a puréed diet.

**Ingredients**
- 1 ½ cups of cooked mashed sweet potatoes (or one 15-ounce can of pumpkin purée)
- 1 can of evaporated skim milk
- ½ teaspoon of nutmeg
- 1 teaspoon of cinnamon
- ½ cup of sugar (increase to 1 cup if you prefer a sweeter pie or want to add more calories)
- Cornmeal

**Recipe**
1. Preheat the oven to 350° F.
2. Mix the sweet potatoes (or pumpkin) with the evaporated milk and spices.
3. Add the sugar and mix.
4. Grease a 9-inch pie pan with oil.
5. Sprinkle the pan with cornmeal to cover it.
6. Shake off the extra cornmeal.
7. Bake for 45 minutes.
8. Place a toothpick into the center of the pie and pull it out. If it comes out dry, then it’s done.
### Lentil and Carrot Stew

**Ingredients**
- 6 ounces of dry lentils
- 3 cups of water
- 4 medium carrots, peeled, quartered lengthwise, and cut into 1-inch pieces (2 1/2 cups)
- 1 onion, diced
- 1 small stalk of washed, trimmed, and chopped celery (1/4 cup)
- 3 bay leaves
- 1 teaspoon of salt (optional)
- 1 bunch of fresh cilantro or parsley, washed
- 2 teaspoons of olive oil

**Recipe**
1. Sort the lentils and throw away any stones or damaged lentils.
2. Wash them in a sieve under cold water.
3. Drain out all the water.
4. Place the lentils in a large pot.
5. Add the water, carrots, onions, celery, bay leaves, and salt.
6. Remove the cilantro or parsley leaves and set them aside as a garnish.
7. Chop the stems and roots and add them to the pot.
8. Bring the mixture to a boil over high heat.
9. Reduce the heat to low, cover, and cook at a very gentle boil for 55 minutes.
10. Let the mixture cool.

If you're on a puréed diet, place it in a blender and process until smooth. Garnish with the cilantro or parsley leaves when serving.

### Chicken Tamale Pie

**Ingredients**
- 1/2 cup of cornmeal (or polenta)
- 2 cups of chicken broth
- 1 to 2 cups of cooked chicken, cut up
- 1 cup (8-ounce can) of tomato sauce
- Dash of garlic powder
- Dash of oregano
- Dash of thyme
- Grated Parmesan or Cheddar cheese

**Recipe**
1. Preheat the oven to 350° F.
2. Cook the cornmeal in the chicken broth until it's thick.
3. Cool it slightly and spread it into a greased casserole dish.
4. Grind or purée the chicken according to your needs.
5. Spread the chicken on top of the cornmeal mixture.
6. Season the tomato sauce with garlic, oregano, and thyme.
7. Spread the tomato sauce on top of the chicken.
8. Sprinkle cheese over the layer of tomato sauce.
9. Bake for 30 minutes or until the cheese melts.

### Meatloaf

**Ingredients**
- 1 1/2 pounds of lean ground beef or turkey
- 2 cloves of garlic, minced
- 1 cup of dry bread crumbs
- 1 egg, beaten
- 1/4 cup of minced onion
- 1 tablespoon of Worcestershire sauce
- 1 teaspoon of chopped parsley
- 2 tablespoons of tomato sauce
- 1 teaspoon of salt (optional)

**Recipe**
1. Preheat the oven to 350° F.
2. Mix all the ingredients thoroughly.
3. Spread the mixture in an ungreased 9 x 5 x 3-inch loaf pan.
4. Bake for 1 1/2 hours.

If you're on a puréed diet, you can place the cooked meat loaf in a blender with some liquid and blend it to the consistency you need.
Side Dishes

Winter Squash and Carrot Purée

Ingredients
- 1 butternut squash (3 pounds, cut in half, lengthwise with the seeds removed)
- 4 carrots, thinly sliced
- 1 clove of garlic, thinly sliced
- ¼ teaspoon of thyme
- 1 tablespoon of unsalted butter, cut into small pieces
- 2 cups of water
- Salt and pepper to taste

Recipe
1. Preheat the oven to 350° F.
2. Set the squash, cut side down, on a lightly oiled baking sheet.
3. Bake it for 45 minutes or until soft.
4. Combine the carrots, garlic, thyme, and water in a saucepan.
5. Cover and bring to a boil, then simmer over low heat for 20 minutes or until the carrots are tender.
6. Transfer the contents from the pan to a food processor and purée.
7. Scoop the squash out of its skin and purée it with the carrots.
8. Season with salt and pepper to taste.
9. Spread the purée on a buttered, shallow baking dish.
10. Dot with the butter.
11. Bake for 20 minutes or until hot and serve.

Lima Bean Purée

Ingredients
- 8 ounces of large, dry lima beans
- 3 cups of water or vegetable broth
- ½ teaspoon of salt
- 1 teaspoon (or more) of olive oil

Recipe
1. Sort the beans, throwing away any stones or damaged beans.
2. Wash the beans in a sieve under cold water and drain.
3. Place them in a saucepan or pot.
4. Add the water and salt.
5. Bring the mixture to a boil.
6. Cover, reduce the heat to low, and boil gently for 45 minutes, until the beans are very tender.
7. Transfer the mixture (there should be about 3 cups, including the liquid) to a food processor.
8. Add the oil and process for 20 to 30 seconds until very smooth.
9. You can also use your favorite beans or chickpeas in place of the lima beans.

Butternut Squash Purée

Ingredients
- 1 large butternut squash
- 1 tablespoon of maple syrup
- 1 teaspoon of butter or margarine

Recipe
1. Peel the squash and cut it into small pieces.
2. Boil until tender.
3. Mash the squash with a fork.
4. Mix the mashed squash with maple syrup and butter or margarine.

Desserts

Peach Sauce

Drain the syrup from any size can of peaches. Blend the peaches until they are smooth. Store in the refrigerator.

You can put this sauce over ice cream or frozen yogurt, or you can eat it on its own. Those on a mechanical soft diet can also use it to soften cakes.

Puréed Fresh Fruits

You can purée any fruit in a baby food grinder, blender, or food processor. Make sure to remove any peels, seeds or stems. Sprinkle apples with lemon juice to avoid browning. You can add cinnamon or mix a few different kinds of fruit together for a fruit punch flavor.
Ricotta Cherry Mousse

Ingredients
- 1 pound (2 cups) of ricotta cheese
- 3 tablespoons of sifted powdered sugar
- ¼ teaspoon of almond extract
- 1 teaspoon of vanilla extract
- 2 cups of dark cherries, sliced, with pits removed (or use frozen unsweetened cherries if fresh ones are not available)
- ½ cup of semisweet chocolate chips, ground to a coarse meal in a blender

Recipe
1. Put the ricotta in a medium-size mixing bowl.
2. Beat the ricotta with an electric mixer at high speed for about 3 minutes.
3. Slowly add sugar.
4. Stir in the extracts.
5. Cover and chill.
6. Fifteen minutes before you serve the mousse, fold in the cherries.

Serve it topped with the ground chocolate.

Peaches and Cream

Ingredients
- 1 banana
- 1 peach
- ½ cup of ice cubes
- 2 tablespoons of plain yogurt
- Peach nectar

Recipe
1. Place the banana, peach, ice cubes, and yogurt into a blender.
2. Blend until smooth.
3. Add enough peach nectar to reach the 16-ounce mark on the blender.
4. Blend until smooth.

For more information about puréed and mechanical soft diets, speak to a dietician, or call the Department of Food and Nutrition at 212-639-7312.
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 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 difficulty 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 anesthesia or sedation.

**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 does not cover all herbal remedies or possible side effects. Speak with your healthcare provider if you have any questions or concerns.
For more information about herbs and botanicals, visit the Memorial Sloan Kettering (MSK) Integrative Medicine Service website at www.aboutherbs.com.
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 Spirometer](image)

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.

How To Use Your Incentive Spirometer

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

Please visit mskcc.org/pe/incentive_spirometer 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 are using your incentive spirometer, make sure to breathe through your mouth. If you breathe through your nose the incentive spirometer will not work properly. You can plug 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.

- If the indicator does not stay between the arrows, you are 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 spiromter. This will be your goal next time.

Repeat these steps every hour that you are awake.

Cover the mouthpiece of the incentive spiromter when you are not using it.
Information for Family and Friends for the Day of Surgery

This information explains what to expect on the day your friend or family member is having surgery at Memorial Sloan Kettering’s (MSK) main hospital.

Before the Surgery

After arriving at the hospital, the patient will be asked to provide contact information for the person who will be meeting with the surgeon after the surgery. This is the same person who will get updates from the nurse liaison during the surgery. If the patient is having an outpatient procedure, they will also be asked to provide contact information for the person who will be taking them home.

Once the patient is checked in, they will go to the Presurgical Center (PSC) to be examined before surgery. Sometimes, they may need to wait before they are admitted to the PSC.

In the PSC, the nurse will do an exam. One person can come along to the PSC, but other visitors should wait in the waiting area. If the patient wants, other visitors may join them when the nurse has finished the exam.

When the operating room (OR) is ready, a member of the surgical team will come to escort the patient into the OR. They will prepare the patient for surgery, which can take 15 to 90 minutes. Then, the surgery will begin.

Please remember the following:

- **Do not bring food or drinks to the waiting area.** Patients are not allowed to eat or drink before their surgery or procedure.

- Our patients are at high risk for infection. Please do not visit if you have any cold or flu symptoms (fever, sneezing, sniffles, or a cough). We may ask you
to wear a mask if there are any concerns about your health.

- If the patient brought any valuables, such as a cell phone, iPod, or iPad, please keep them safe for them during surgery.
- Sometimes, surgeries may be delayed. We make every effort to tell you when this happens.

**During the Surgery**

After the patient is taken to the OR, please wait in the main lobby on the 1st floor, where you will be updated by the nurse liaison. While you’re waiting, here are some things you can do:

- Food and drinks are available in the cafeteria and gift shop. You can also bring your own food and eat it in the cafeteria.
- The coat-check room is located at the bottom of the escalator on the ground level. It’s open Monday through Friday from 11:00 am to 4:00 pm.
- Wireless Internet access is available in most areas of the hospital. The wifi network name is MSK_guest. You can also use the computers in the room off the main lobby.
- Please be courteous and mindful of others while using your cell phone. Use the designated area to accept and make calls on your cell phone. It may be useful to bring your phone charger to the hospital.
- The Mary French Rockefeller All Faith Chapel is an interfaith chapel located in room M106 near the main lobby on the 1st floor. It’s open at all times for meditation and prayer.
- The Patient Recreation Pavilion is open daily from 9:00 am to 8:00 pm for patients and their visitors. Children are allowed in the pavilion as long as they are supervised by an adult. The pavilion has arts and crafts, a library, an outdoor terrace, and scheduled entertainment events. To get to the pavilion, take the M elevators to the 15th floor.

**Surgery updates**

A nurse liaison will keep you updated on the progress of surgery. They will:

- Give you information about the patient.
• Prepare you for your meeting with the surgeon.

• Arrange for you to visit the patient in the Post Anesthesia Care Unit (PACU).

To contact the nurse liaison:

• From inside the hospital, use a hospital courtesy phone. Dial 2000 and ask for beeper 9000. Please be patient, as this can take up to 2 minutes.


• Ask the information desk staff to contact the nurse liaison for you.

**After the Surgery**

**Meeting with the surgeon**

When the patient’s surgery is completed, we will call you and ask you to return to the concierge desk to tell you where to go to meet with the surgeon.

After you have met with the surgeon, return to the concierge desk and tell them that you have finished your consultation.

**Visiting the patient in the PACU**

After surgery, the patient will be taken to the PACU. It can take up to 90 minutes before the patient is ready to have visitors. You can use this time to take a walk or just relax in the waiting area until the patient is ready to see you.

When the patient is able to have visitors, a staff member will take you to the PACU for one brief visit. No one is allowed to stay overnight with the patient in the PACU, except for caregivers of pediatric patients.

Please follow these guidelines before your visit:

• Silence your cell phone.

• Apply an alcohol-based hand sanitizer (such as Purell®) before entering. There are hand sanitizer stations located throughout the hospital.

• Do not bring food or flowers into the PACU.

Please remember that only a limited number of visitors can go into the PACU. This is to keep the area quiet and allow the patients to rest and receive care.
While visiting in the PACU

- Speak quietly.
- Respect other patients’ privacy by staying at the bedside of your friend or family member.
- If any PACU patient needs special nursing attention, we may ask you to leave or to delay your visit.

The nurse will update you with the plan of care for the patient, such as whether the patient is staying overnight and when they will be moved to an inpatient room. If the patient is staying overnight, you may visit them again in the PACU. If the patient is going home the same day, a caregiver must take them home.

After your visit, a staff member will escort you back from the PACU.

We will give you a card with the PACU phone number. Please choose one person to call for updates.
Preventing Trismus

This information will help you prevent trismus during and after your surgery or radiation therapy.

The Structure of Your Jaw

Your jaw is made up of a pair of bones that form the framework of your mouth and teeth (see Figure 1). Your upper jaw is called the maxilla and your lower jaw is called the mandible. Your mandible connects to your skull at the temporomandibular joint (TMJ).

Many muscles and nerves around the jaw work together to open and close your mouth. Most people are able to open their mouth 35 to 55 millimeters, which is about the width of 3 fingers (see Figure 2).
Figure 2. Normal width of an open mouth

**Trismus**

Trismus is a condition in which someone has difficulty opening their mouth. Trismus can occur anytime during, right after, or even years after your treatment. It can develop:

- If you have a tumor that involves the bones, muscles, and nerves that open the mouth.
- After surgery to the head and neck.
- After radiation therapy to the head and neck.

You may develop fibrosis (scarring) as the tissues begin to heal from surgery. Fibrosis can also build up years after radiation therapy.

When you can’t open your mouth well, it is hard for your doctor to examine this area. You may also have problems:

- Cleaning your mouth and teeth. This may lead to bad breath, cavities, and infections.
- Chewing and swallowing. This can make it difficult for you to eat and drink.
- Talking
• Kissing
• Having a breathing tube placed, if you ever need general anesthesia (medication to make you sleep during a surgery or procedure).
• Having routine dental treatment.

Once trismus develops, it is very hard to treat. That is why it is important to prevent trismus and to treat it as early as possible.

How to Prevent Trismus

There are 4 ways to help prevent trismus. Even if you don’t have any symptoms, you should do the following to prevent problems:

• Massage your jaw muscles.
• Exercise your jaw muscles.
• Maintain good posture.
• Maintain good oral hygiene.

There are a number of exercises described below. During the exercises, breathe normally and do not hold your breath. If any of these exercises cause pain, numbness, or tingling, stop them right away and call your doctor or nurse. If you have had surgery, check with your doctor or nurse before you begin these exercises.

Massage Your Jaw Muscles (Masseter Muscle)

Place your index and middle finger on your cheek bone. Run your fingers down over your masseter muscle, which ends at your bottom jaw (see Figure 3). As you move your fingers, find points that feel tender or tight. Massage these areas with your fingers in a circular direction for 30 seconds. Do this 2 to 3 times a day.

To keep your jaw muscles relaxed all the time, avoid clenching your jaw when you are stressed or out of habit.

Exercise Your Jaw Muscles

Use a mirror for these exercises to help you do them correctly. These movements should give you a good stretch, but not cause pain. Do these
exercises 2 to 3 times a day.

**Active range of motion and stretching exercises**

Sit or stand. Hold your head still while doing these exercises.

1. Open your mouth as wide as you can, until you can feel a good stretch but no pain (see Figure 4). Hold this stretch for _____ seconds.

![Figure 4. Mouth open wide](image)

2. Move your jaw to the left (see Figure 5). Hold this stretch for 3 seconds.

![Figure 5. Jaw moved to the left](image)

3. Move your jaw to the right (see Figure 6). Hold this stretch for 3 seconds.
4. Move your lower jaw in a circle. Make 5 circles in each direction.

**Passive stretching exercise**

1. Place 1 thumb on your top teeth in the middle of your jaw.

2. Place the pointer (index) finger of your other hand on your bottom teeth, in the middle of your jaw.

3. Open your mouth with your fingers, but do not bite down or resist (see Figure 7). Let your fingers do all of the work. Hold this stretch for ____ seconds.
Maintain Good Posture
Good posture means sitting and standing with your ears, shoulders, hips, knees, and ankles aligned. To maintain good posture, you need to keep your neck and shoulders strong and flexible (see Figure 8). The exercises listed below will help you do this. **Do these exercises twice a day.**

![Figure 8. Maintaining good posture](image)

**Neck stretch**
Sit or stand with your arms at your side. Hold each stretch for 30 seconds.

1. Bend your head forward (see Figure 9).
2. Bend your head backwards (see Figure 10).

3. Rotate your head to the right (see Figure 11).
4. Rotate your head to the left (see Figure 12).

Figure 12. Head rotated to the left

5. Bring your left ear to your left shoulder (see Figure 13).

Figure 13. Head bent to the left

6. Bring your right ear to your right shoulder (see Figure 14).

Figure 14. Head bent to the right
Chin tuck

1. Sit or stand with your arms at your side.
2. While looking forward, tuck your chin.
3. Pull your head back to line up your ears with your shoulders (see Figure 15). Hold this position for 3 seconds.
4. Do this exercise 10 times slowly.

Shoulder blade pinch

1. Sit or stand with your arms at your side. Tuck your chin, as described in the chin tuck exercise above.
2. Pinch your shoulder blades together as tightly as possible (see Figure 16).
3. Hold this position for 3 seconds.
4. Do this exercise 10 times slowly.

Maintain Good Oral Hygiene
• Brush your teeth and tongue when you wake up, after each meal, and at bedtime.

• If you have removable dentures or a dental prosthesis, take it out and clean it each time you clean your mouth. Do not sleep with these devices in your mouth.

• Floss your teeth once daily at bedtime.

**If You Develop Tightness When Opening Your Mouth**

The earlier you start treatment for trismus, the easier it will be to restore your jaw function. If you notice any tightening in your jaw, call your doctor or nurse right away. They can refer you to:

• Speech and swallowing specialists and physical therapists. They can help you maintain and restore your ability to open your mouth. They use many techniques, such as exercise, stretching, and massage. They may also recommend special devices to help you open your mouth.

• Rehabilitation doctors. They will evaluate how well you can open your mouth. They may give you medication for pain or spasms (sudden intense cramping in your muscle) or suggest other treatments to help you.