



Memorial Sloan Kettering
Cancer Center

PATIENT & CAREGIVER EDUCATION

About Your Neck Dissection Surgery

This guide will help you get ready for your neck dissection surgery at MSK. It will also help you understand what to expect during your recovery.

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

Your healthcare team

Doctor: _____

Nurse: _____

Phone number: _____

Fax number: _____

Your caregiver

It's important to choose a person to be your caregiver. They'll 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: _____



To view this guide online, visit
www.mskcc.org/pe/neck_dissection_surgery

Table of contents

About Your Surgery.....	3
Before Your Surgery.....	5
Getting ready for your surgery.....	6
Within 30 days of your surgery.....	8
7 days before your surgery	10
2 days before your surgery.....	10
1 day before your surgery.....	10
The day of your surgery	12
After Your Surgery	15
In the Post-Anesthesia Care Unit (PACU).....	16
In your hospital room	17
At home	19
When to call your healthcare provider.....	25
Support Services.....	27
MSK support services	28
External support services	30
Educational Resources.....	31
<i>How To Check if a Medicine or Supplement Has Aspirin, Other NSAIDs, Vitamin E, or Fish Oil</i>	
<i>Herbal Remedies and Cancer Treatment</i>	
<i>How to Use Your Incentive Spirometer</i>	
<i>Exercises After Your Neck Surgery</i>	

About Your Surgery

Head and neck cancer can spread to your lymph nodes. Lymph nodes are small oval or round glands along your lymphatic system. To make them easier to describe, the lymph nodes in your neck are divided into 5 levels (see Figure 1). The 5 levels are labeled using Roman numerals (I, II, III, IV, and V).

You may have a neck dissection if there is a high risk of the cancer spreading to the lymph nodes in your neck. This is a surgery to remove the lymph nodes in your neck area.

There are several types of neck dissections. The type you'll have depends on the cancer's location, and if it spread to your lymph nodes or to other structures in your neck. Sometimes your surgeon can tell which lymph nodes are affected by examining you. If this isn't possible, you may need to have a computed tomography (CT) scan or ultrasound of your neck so your surgeon can see the area better.

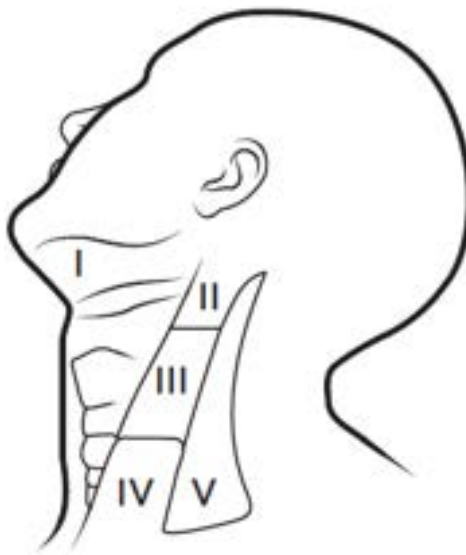


Figure 1. Levels of lymph nodes

In addition to the lymph nodes, other structures in your neck may need to be removed, including:

- The muscle on the side of the neck that helps you turn your head. If this muscle is removed, there will be an indent on that side of your neck. You'll still be able to move your neck without trouble.
- The nerve that allows you to raise your arm higher than your shoulder. Your surgeon will try to save this nerve. If it must be removed, you'll have trouble raising your arm above a 90-degree angle on the side the nerve was removed.
- A vein that collects blood from your brain, face, and neck. Removing this vein on one side of your neck won't cause any problems. Other veins in your neck will collect and circulate the blood on that side of your neck and face.
- A salivary gland in the upper part of your neck. Removing this gland won't cause any damage to your salivary function.

Notes _____

Before Your Surgery

The information in this section will help you get ready for your surgery. Read 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.

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

Notes _____

Getting ready for your surgery

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

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.

- | | |
|--|--|
| <input type="checkbox"/> I take a blood thinner, such as: <ul style="list-style-type: none">○ Aspirin○ Heparin○ Warfarin (Jantoven® or Coumadin®)○ Clopidogrel (Plavix®)○ Enoxaparin (Lovenox®)○ Dabigatran (Pradaxa®)○ Apixaban (Eliquis®)○ Rivaroxaban (Xarelto®) | <input type="checkbox"/> I take dietary supplements, such as herbs, vitamins, minerals, or natural or home remedies. |
| | <input type="checkbox"/> I have a pacemaker, automatic implantable cardioverter-defibrillator (AICD), or other heart device. |
| | <input type="checkbox"/> I have sleep apnea. |
| | <input type="checkbox"/> I've had a problem with anesthesia (medication to make me sleep during surgery) in the past. |
| <p>There are others, so be sure your healthcare provider knows all the medications you're taking.</p> | <input type="checkbox"/> I'm allergic to certain medication(s) or materials, including latex. |
| <input type="checkbox"/> I take prescription medications (medications my healthcare provider prescribes), including patches and creams. | <input type="checkbox"/> I'm not willing to receive a blood transfusion. |
| <input type="checkbox"/> I take over-the-counter medications (medications I buy without a prescription), including patches and creams. | <input type="checkbox"/> I drink alcohol. |
| | <input type="checkbox"/> I smoke or use an electronic smoking device (such as a vape pen, e-cigarette, or Juul®). |
| | <input type="checkbox"/> I use recreational drugs. |

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 your medical information will be kept confidential.

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 healthcare provider 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 device (such as a CPAP device) for sleep apnea, bring it with you the day of your surgery.

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. You can also invite your caregiver to create their own account so they can see information about your care.

If you don't have a MyMSK account, you can visit my.mskcc.org, call 646-227-2593, or call your doctor's office for an enrollment ID to sign up. You can also watch our video *How to Enroll in MyMSK: Memorial Sloan Kettering's Patient Portal* (www.mskcc.org/pe/enroll_mymsk). For help, contact the MyMSK Help Desk by emailing mymsk@mskcc.org or calling 800-248-0593.

Within 30 days of your surgery

Presurgical Testing (PST)

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

During your PST appointment, you'll meet with a nurse practitioner (NP) who works closely with anesthesiology staff (specialized healthcare providers who will give you anesthesia during your surgery). Your NP will review your medical and surgical history with you. You may have tests, such as 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 helpful to bring the following things to your PST appointment:

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

Identify your caregiver

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



For caregivers

Resources and support are available to help manage the responsibilities that come with caring for a person going through cancer treatment. For support resources and information, visit www.mskcc.org/caregivers or read *A Guide for Caregivers*. You can find it online at www.mskcc.org/pe/guide_caregivers or ask your healthcare provider for a copy.

Complete a Health Care Proxy form

If you haven't already completed a Health Care Proxy form, we recommend you complete one now. If you've already completed one or have any other advance directives, bring them to your next appointment.

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.

Talk with your healthcare provider if you'd like to complete a health care proxy. You can also read the resources *Advance Care Planning* and *How to Be a Health Care Agent* for information about health care proxies, other advance directives, and being a health care agent. You can find them online at www.mskcc.org/pe/advance_care_planning and www.mskcc.org/pe/health_care_agent or ask your healthcare provider for a copy.

Do breathing and coughing exercises

Practice taking deep breaths and coughing before your surgery. Your healthcare provider will give you an incentive spirometer to help expand your lungs. For more information, read the resource *How to Use Your Incentive Spirometer*. You can find it online at www.mskcc.org/pe/incentive_spirometer or ask your healthcare provider for a copy.

Exercise

Try to do aerobic exercise every day. Aerobic exercise is any exercise that makes your heart beat faster, such as walking, swimming, or biking. If it's cold outside, use stairs in your home or go to a mall or shopping center. Exercising will help your body get into its best condition for your surgery and make your recovery faster and easier.

Follow a healthy diet

Follow a well-balanced, healthy diet before your surgery. If you need help with your diet, talk with your healthcare provider about meeting with a clinical dietitian nutritionist.

7 days before your surgery

Follow your healthcare provider's instructions for taking aspirin

If you take aspirin or a medication that contains aspirin, you may need to change your dose or stop taking it 7 days before your surgery. Aspirin can cause bleeding.

Follow your healthcare provider's instructions. **Don't stop taking aspirin unless they tell you to.** For more information, read *How To Check if a Medicine or Supplement Has Aspirin, Other NSAIDs, Vitamin E, or Fish Oil*. You can find it in the "Educational Resources" section of this guide.

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

Stop taking vitamin E, multivitamins, herbal remedies, and other dietary supplements 7 days before your surgery. These things can cause bleeding. For more information, read the resource *Herbal Remedies and Cancer Treatment*. You can find it in the "Educational Resources" section of this guide.

2 days before your surgery

Stop taking nonsteroidal anti-inflammatory drugs (NSAIDs)

Stop taking NSAIDs, such as ibuprofen (Advil® and Motrin®) and naproxen (Aleve®), 2 days before your surgery. These medications can cause bleeding. For more information, read *How To Check if a Medicine or Supplement Has Aspirin, Other NSAIDs, Vitamin E, or Fish Oil*. You can find it in the "Educational Resources" section of this guide.

1 day before your surgery

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'll call you on the Friday before. If you don't get a call by 7:00 PM, call 212-639-5014.

The staff member will tell you what time to arrive at the hospital for your surgery. They'll also remind you where to go. This will be one of the following locations:

Presurgical Center (PSC) on the 2nd floor
1275 York Avenue (between East 67th and East 68th Streets)
New York, NY 10065
Take the M Elevator to the 2nd floor

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

Instructions for eating and drinking: 8 hours before your arrival time



- **Stop eating 8 hours before your arrival time, if you have not already.**
 - Your healthcare provider may tell you to stop eating earlier. If they do, follow their instructions.
- **8 hours before your arrival time, do not eat or drink anything except these clear liquids:**
 - Water.
 - Soda.
 - Clear juices, such as lemonade, apple, and cranberry juices. Do not drink orange juice or juices with pulp.
 - Black coffee or tea (without any type of milk or creamer).
 - Sports drinks, such as Gatorade®.
 - ClearFast CF(Preop)® or Ensure® Pre-Surgery clear carbohydrate drink.
 - Gelatin, such as Jell-O®.
 - You can keep having these until 2 hours before your arrival time.

The day of your surgery

Remember, starting 8 hours before your arrival time, do not eat or drink anything except the things listed earlier.

Instructions for drinking before your surgery



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

Take your medicines as instructed

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

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 tools used during your surgery can cause burns if they touch metal.
- Don't wear any lotion, cream, deodorant, makeup, powder, perfume, or cologne.
- Leave valuable items at home.
- If you're menstruating (have your monthly period), use a sanitary pad, not a tampon. You'll get disposable underwear, as well as a pad if needed.

What to bring

- Your breathing device for sleep apnea (such as your CPAP device), if you have one.
- Your Health Care Proxy form and other advance directives, if you 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 your eyeglasses, hearing aid, dentures, prosthetic device, wig, and religious articles), if you have one.
- This guide. Your healthcare team will use it to teach you how to care for yourself after surgery.

Where to park

MSK's parking garage is 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 about a quarter of a block in from York Avenue, on the right-hand (north) side of the street. There's a tunnel you can walk through that connects the garage to the hospital.

There are also other garages 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

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

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

Meet with a nurse

You'll meet with a nurse before surgery. Tell them the dose of any medications you took after midnight (including prescription and over-the-counter medications, patches, and creams) and the time you took them.

Your nurse may place an intravenous (IV) line in one of your veins, usually in your arm or hand. If your nurse doesn't place the IV, your anesthesiologist will do it in the operating room.

Meet with an anesthesiologist

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

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

Get ready for your surgery

When it's time for your surgery, you'll need to remove your hearing aids, dentures, prosthetic devices, wig, and religious articles, if you have them. You'll either walk into the operating room or a staff member will bring you there a stretcher. A member of the operating room team will help you onto the operating bed and place compression boots on your lower legs. These gently inflate and deflate to help blood flow in your legs.

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

During your surgery

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.

Notes _____

After 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'll learn how to safely recover from your surgery.

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

Notes _____

In the Post-Anesthesia Care Unit (PACU)

When you wake up after your surgery, you'll be in the PACU. A nurse will be keeping track of 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'll also have compression boots on your lower legs.

Pain medication

You'll have some pain after your surgery. At first, you'll get your pain medication through your IV line. Once you're able to follow a regular diet, you'll get oral pain medication (medication you swallow).

Tubes and drains

Depending on the amount of lymph nodes removed, you may have a ReliaVac® (see Figure 2) or Jackson-Pratt® (see Figure 3) drain placed in your neck. This will drain fluid from around your incision and keep fluid from collecting under your skin. The drain doesn't hurt. Your healthcare providers will empty it regularly.

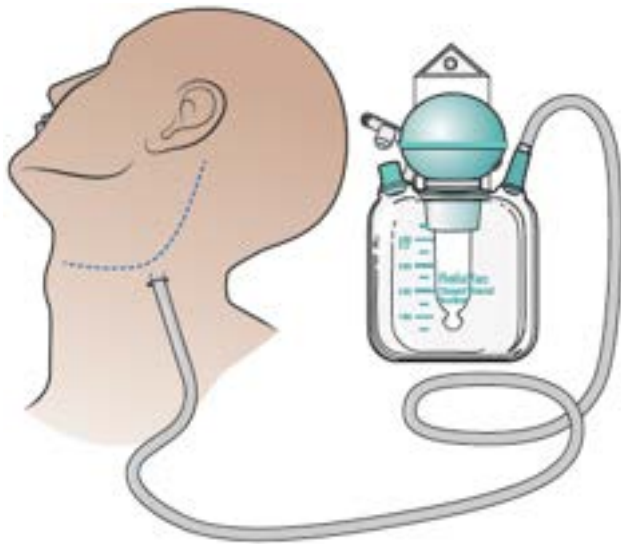


Figure 2. ReliaVac® drain

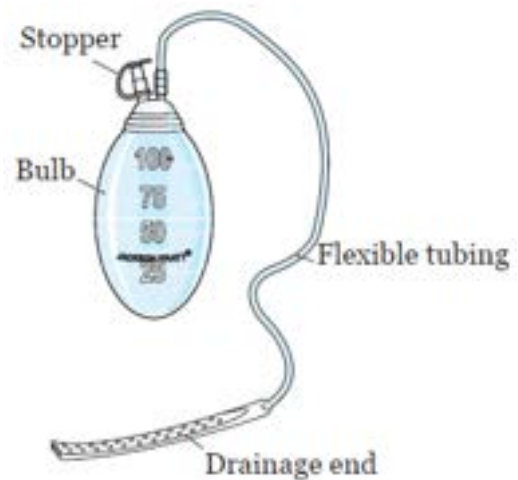


Figure 3. Jackson-Pratt® drain

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, a staff member will take you to your hospital room.

In your hospital room

The length of time you're in the hospital after your surgery depends on your recovery. Most people stay in the hospital for 3 to 5 days.

When you're taken to your hospital room, you'll meet one of the nurses who will care for you while you're in the hospital. Soon after you arrive in your room, your nurse will help you out of bed and into your chair.

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

Managing your pain

You'll have some pain after your surgery. At first, you'll get your pain medication through your IV line. Once you're able to eat, you'll get oral pain medication (medication you swallow). If you also had surgery in your oral cavity or a free flap surgery, you'll be able to control your pain medication using a PCA device.

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

You'll get a prescription for pain medication before you leave the hospital. Talk with your healthcare provider about possible side effects and when to 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 (lung infection). It will also help you start passing gas and having bowel movements (pooping) again. Your nurse, physical therapist, or occupational therapist will help you move around, if needed.

Read the resource *Call! Don't Fall!* to learn what you can do to stay safe and keep from falling while you're in the hospital. You can ask your healthcare provider for a copy or find it online at www.mskcc.org/pe/call_dont_fall

Exercising your lungs

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

- Use your incentive spirometer 10 times every hour you're awake. For more information, read the resource *How to Use Your Incentive Spirometer*. You can find it online at www.mskcc.org/pe/incentive_spirometer or ask your healthcare provider for a copy.
- Do coughing and deep breathing exercises. A member of your care team will teach you how.

Eating and drinking

For your first meal after your surgery, you'll have only clear liquids. After that, you'll slowly start eating solid food.

If you have questions about your diet, ask to see a clinical dietitian nutritionist.

Caring for your tubes and drains

Your healthcare provider will remove your ReliaVac or Jackson-Pratt drain when the amount of drainage is steadily decreasing to less than 25 to 30 milliliters (about 1 ounce) in 24 hours. This is usually 3 to 5 days after surgery.

Some people may go home with the drain in place. If this is the case, your nurse will teach you how to care for it before you leave the hospital. For more information, read the resource *Caring for ReliaVac Drain* or *Caring for Your Jackson-Pratt Drain*. You can find it online at www.mskcc.org/pe/reliavac or ask your healthcare provider for a copy.

It's helpful if your caregiver also learns how to care for your ReliaVac or Jackson-Pratt drain. This will make it easier for them to help you care for yourself if you have to go home with it.

Removing staples and sutures

If you stay in the hospital for longer than 1 week, your healthcare provider will remove some or all of your staples or sutures before you leave.

If you stay in the hospital for less than 1 week, your healthcare provider will remove your staples or sutures during your first appointment after surgery.

If you go home with Steri-Strips, they'll loosen and fall off or peel off by themselves. If they are still on during your first appointment after surgery, your healthcare provider will remove them.

If you had radiation therapy to the neck before your surgery, your staples or sutures may stay in place for 2 to 3 weeks.

Showering

You can shower 24 hours after your drain is removed from your neck. Remove the bandage that was placed. When showering, don't let the water from your shower head hit your incision directly. Rather, allow the soap and water to run over your incision. Don't rub the area around your incision. After you shower, pat the area dry with a clean towel.

If you still have drainage tubes in, don't shower until your healthcare provider removes your drain.

Leaving the hospital

Before you leave, look at your incision with one of your healthcare providers. Knowing what it looks like will help you notice any changes later.

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

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

At home

Read the resource *What You Can Do to Avoid Falling* to learn 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 ask your healthcare provider for a copy.

Filling out your Recovery Tracker

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

Fill out your Recovery Tracker every day before midnight (12:00 AM). It only takes 2 to 3 minutes to complete. Your answers to these questions will help us understand how you're feeling and what you need.

Based on your answers, we may reach out to you for more information or ask you to call your surgeon's office. You can always contact your surgeon's office if you have any questions. For more information, read *About Your Recovery Tracker*. You can find it online at www.mskcc.org/pe/recovery_tracker or ask your healthcare provider for a copy.

Managing your pain

People have pain or discomfort for different lengths of time. You may still have some pain when you go home and will probably be taking pain medication. Some people have soreness, tightness, or muscle aches around their incision for 6 months or longer. This doesn't mean something is wrong.

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

- Take your medications as directed and as needed.
- Call your healthcare provider if the medication prescribed for you doesn't ease your pain.
- Don't drive or drink alcohol while you're taking prescription pain medication. Some prescription pain medications can make you drowsy. Alcohol can make the drowsiness worse.
- As your incision heals, you'll have less pain and need less pain medication. An over-the-counter pain reliever such as acetaminophen (Tylenol®) or ibuprofen (Advil® or Motrin®) will ease aches and discomfort.
 - Follow your healthcare provider's instructions for stopping your prescription pain medication.
 - Don't take more of any medication than the amount directed on the label or as instructed by your healthcare provider.
 - Read the labels on all the medications you're taking, especially if you're taking acetaminophen. Acetaminophen is an ingredient in many over-the-counter and prescription medications. Taking too much can harm your liver. Don't take more than 1 medication that contains acetaminophen without talking with a member of your healthcare team.
- Pain medication should help you resume your normal activities. Take enough medication to do your activities and exercises comfortably. 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 you first have pain is better than waiting for the pain to get worse.

Some prescription pain medications (such as opioids) may cause constipation (having fewer bowel movements than usual).

Preventing and managing constipation

Talk with your healthcare provider about how to prevent and manage constipation. You can also follow the guidelines below.

- Go to the bathroom at the same time every day. Your body will get used to going at that time. If you feel like you need to go, though, don't put it off.
- Try to use the bathroom 5 to 15 minutes after meals. After breakfast is a good time to go. That's when the reflexes in your colon are strongest.
- 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.
 - Choose liquids such as water, juices (such as prune juice), soups, and ice cream shakes.
 - Avoid liquids with caffeine (such as coffee and soda). Caffeine can pull fluid out of your body.
- Slowly increase the fiber in your diet to 25 to 35 grams per day. Unpeeled fruits and vegetables, whole grains, and cereals contain fiber. If you have an ostomy or have had recent bowel surgery, check with your healthcare provider before making any changes in your diet.
- Both over-the-counter and prescription medications are available to treat constipation. Check with your healthcare provider before taking any medications for constipation, especially if you have an ostomy or have had bowel surgery. Follow the instructions on the label or from your healthcare provider. Examples of over-the-counter medications for constipation include:
 - Docusate sodium (Colace®). This is a stool softener (medication that makes your bowel movements softer) that causes few side effects. You can use it to help prevent constipation. Don't take it with mineral oil.
 - Polyethylene glycol (MiraLAX®). This is a laxative (medication that causes bowel movements) that causes few side effects. Take it with 8 ounces (1 cup) of a liquid. Only take it if you're already constipated.
 - Senna (Senokot®). This is a stimulant laxative, which can cause cramping. It's best to take it at bedtime. Only take it if you're already constipated.

If any of these medications cause diarrhea (loose, watery bowel movements), stop taking them. You can start again if needed.

For more information, read the resource *Constipation*. You can find it online at www.mskcc.org/pe/constipation or ask your healthcare provider for a copy.

Caring for your incision

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

Call your healthcare provider's office if:

- The skin around your incision is very red.
- The skin around your incision is getting more red.
- You see drainage that looks like pus (thick and milky).
- Your incision smells bad.
- The skin around your incision is warmer than usual.
- The area around your incision is starting to swell.

If you go home with staples or sutures in your incision, your healthcare provider will take them out during your first appointment after surgery.

Cleaning your incision

It's very important that you keep your incision clean and remove any crust that develops on it. Crust can collect bacteria and lead to infection. Your healthcare provider will teach you how to care for your incision before you're discharged. You do not have to clean your incision if you go home with Steri-Strips.

Your healthcare provider may recommend you clean your incision with an antibacterial ointment such as Bacitracin®. To clean your incision with an antibacterial ointment, follow these steps.

1. Gather the following supplies:
 - Cotton swabs (such as Q-Tips®)
 - Normal saline
 - Antibacterial ointment
2. Wash your hands with soap and water for at least 20 seconds or use an alcohol-based hand sanitizer such as Purell®.
3. Take a cotton swab and dip it in the normal saline.
4. Use the cotton swab to gently clean along the incision line around the staples or sutures. This will help loosen any crust that may have developed along the wound.
5. Throw the swab away.
6. Repeat the steps above with a fresh swab as many times as it takes to clean the incision line. Remember that you can only dip the swab once. **Use a clean swab each time you dip it into the saline.**
7. Apply a small amount of antibacterial ointment to the incision line with a clean cotton swab

Showering

- If you go home with drainage tubes, don't shower until your healthcare provider removes your drain. You can take a sponge bath instead of a shower.
- If you don't have drainage tubes, take a shower every day to clean your incision. If you have staples in your incision, it's OK to get them wet. Use soap during your shower, but don't put it directly on your incision. Don't rub the area around your incision. After you shower, pat the area dry with a clean towel.

Don't take a bath for the first 4 weeks after your surgery.

Eating and drinking

You can eat all the foods you did before your surgery, unless your healthcare provider gives you other instructions. Eating a balanced diet with lots of calories and protein will help you heal after surgery. Try to eat a good protein source (such as meat, fish, or eggs) at each meal. You should also try to eat fruits, vegetables, and whole grains.

It's also important to drink plenty of liquids. Choose liquids without alcohol or caffeine. Try to drink 8 to 10 (8-ounce) glasses of liquids every day.

If you have questions about your diet, ask to see a clinical dietitian nutritionist.

Physical activity and exercise

After your sutures or staples are removed, your healthcare provider may instruct you to do certain exercises every day. This will depend on how well you can turn your neck and move your arm(s) after surgery. The exercises will help you regain full range of motion and strength to the affected area(s). It's important that you do them every day. Your healthcare provider will show you how to do the exercises and will give you written instructions at first appointment after surgery. For more information, read *Exercises After Your Neck Surgery*. You can find it in the "Educational Resources" section of this guide.

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.

Your healthcare provider will tell you when you can resume your normal activities during your post-operative visit. Until then, avoid all activity that could put strain on your incision, including:

- Driving
- Lifting anything heavier than 10 pounds (4.5 kilograms)
- Strenuous activities (such as jogging and tennis)
- Sexual activity

Going back to work

Talk with your healthcare provider 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.

Follow-up care

Your first appointment after your surgery will be about 1 week after you're discharged from the hospital. Until then, be sure to follow all instructions given to you when you were discharged.

The lymph nodes that were removed during your surgery will be checked by a pathologist after your surgery. The test results are usually ready in 1 week. Based on the results, you may need further treatment. Your healthcare provider will discuss the results with you during your first follow-up appointment after your surgery.

Managing your feelings

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

The first step in coping is to talk about how you feel. Family and friends can help. Your healthcare providers can reassure, support, and guide you. It's always a good idea to let us know how you, your family, and your friends are feeling emotionally. Many resources are available to you and your family. Whether you're in the hospital or at home, we're here to help you and your family and friends handle the emotional aspects of your illness.

When to call your healthcare provider



Call your healthcare provider if:

- You have a fever of 100.5 °F (38 °C) or higher.
- You have chills.
- You're having trouble breathing.
- The skin around your incision is warmer than usual.
- The skin around your incision is getting redder.
- The area around your incision is starting to swell.
- You have drainage or fluid coming from your incision.
- The area around your incision is getting more swollen.
- You have any questions or concerns.

Contact information

Monday through Friday from 9:00 AM to 5:00 PM, call your healthcare provider's office.

After 5:00 PM, during the weekend, and on holidays, call 212-639-2000 and ask to speak to the person on call for your healthcare provider.

Support Services

This section has a list of support services that may help you get ready for your surgery and recover safely.

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

Notes _____

MSK support services

Admitting Office

212-639-7606

Call if you have questions about your hospital admission, including requesting a private room.

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

332-699-7968

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 the main lobby of Memorial Hospital 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 many services to complement (go along with) traditional medical care, including music therapy, mind/body therapies, dance and movement therapy, yoga, and touch therapy.

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 Peer Support Program

212-639-5007

You may find it comforting to speak with someone who has been through a treatment similar to yours. You can talk with a former MSK patient or caregiver through our Patient and Caregiver Peer Support Program. These conversations are confidential. They may take place in person or over the phone.

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** can help if you're dealing with cancer-related sexual health challenges such as premature menopause or fertility issues. For more information or to make an appointment, call 646-888-5076.
- Our **Male Sexual and Reproductive Medicine Program** can help if you're dealing with cancer-related sexual health challenges such as erectile dysfunction (ED). 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 cancer patients. 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

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

Visit www.mskcc.org/pe/external_support_services for a list of these support services. You can also talk with an MSK social worker by calling 212-639-7020.

Educational Resources

This section has the educational resources mentioned in this guide. These resources will help you get ready for your surgery and recover safely after surgery.

As you read through these resources, you can use space below to write down any questions you want to ask your healthcare provider.

Notes _____



PATIENT & CAREGIVER EDUCATION

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

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

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

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

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

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

What is an active ingredient?

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

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

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

How to find a medicine or supplement's active ingredients

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

Over-the-counter medicines

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

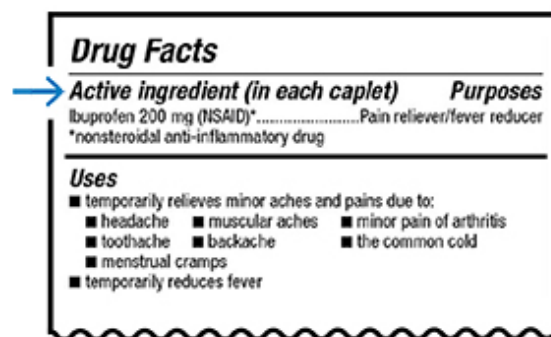


Figure 1. Active ingredients on an over-the-counter medicine label

Prescription medicines

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

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

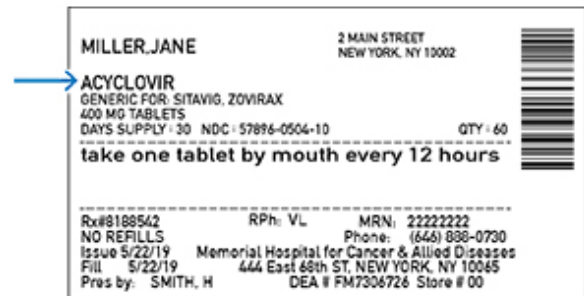


Figure 2. Active ingredients on a prescription medicine label

Dietary supplements

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

Supplement Facts		
Serving Size 1 Tablet		
	Amount Per Serving	% Daily Value
Vitamin A (as retinyl acetate and 50% as beta-carotene)	5000 IU	100%
Vitamin C (as ascorbic acid)	60 mg	100%
Vitamin D (as cholecalciferol)	400 IU	100%
Vitamin E (as di-alpha tocopheryl acetate)	30 IU	100%
Thiamin (as thiamin mononitrate)	1.5 mg	100%
Riboflavin	1.7 mg	100%
Niacin (as niacinamide)	20 mg	100%
Vitamin B ₆ (as pyridoxine hydrochloride)	2.0 mg	100%
Folate (as folic acid)	400 mcg	100%
Vitamin B ₁₂ (as cyanocobalamin)	6 mcg	100%
Biotin	30 mcg	10%
Pantothenic Acid (as calcium pantothenate)	10 mg	100%
Other ingredients: Gelatin, lactose, magnesium stearate, microcrystalline cellulose, FD&C Yellow No. 6, propylene glycol, propylparaben, and sodium benzoate.		

Figure 3. Active ingredients on a supplement label

Active ingredients to look for

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

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

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

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

About acetaminophen (Tylenol)

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

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

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

Instructions before your cancer treatment

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

Before your surgery

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

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

Before your radiology procedure

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

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

Before and during your chemotherapy

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

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

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

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

All rights owned and reserved by Memorial Sloan Kettering Cancer Center

PATIENT & CAREGIVER EDUCATION

Herbal Remedies and Cancer Treatment

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

About Herbal Remedies

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

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

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

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

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

Talk with your healthcare provider about any herbal remedies or other

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

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

Stop taking herbal remedies before your treatment

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

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

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

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

Common Herbal Remedies and Their Effects

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

Echinacea (EH-kih-NAY-shuh)

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

Garlic

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

Ginkgo (also known as Ginkgo biloba)

- Can increase your risk of bleeding.

Ginseng (JIN-seng)

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

Turmeric (TER-mayr-ik)

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

St. John's Wort

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

Valerian (vuh-LEER-ee-un)

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

Herbal formulas

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

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

Contact Information

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

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

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

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

All rights owned and reserved by Memorial Sloan Kettering Cancer Center



PATIENT & CAREGIVER EDUCATION

How To Use Your Incentive Spirometer

This information will help you learn how to use your incentive spirometer (in-SEN-tiv spy-rah-MEE-ter). It also answers some common questions about it.

About your incentive spirometer

After your surgery you may feel weak and sore, and it may be uncomfortable to take deep breaths. Your healthcare provider may recommend using a device called an incentive spirometer (see Figure 1). It helps you practice taking deep breaths.

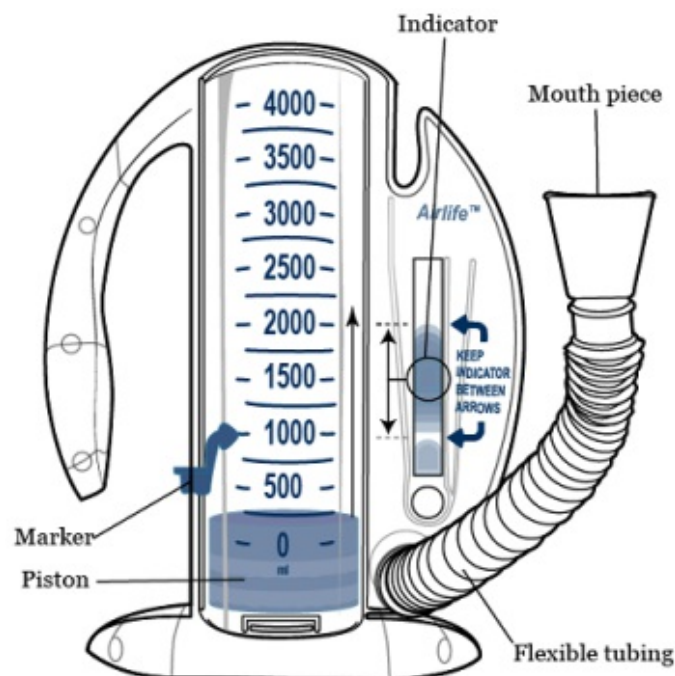


Figure 1. Parts of an incentive spirometer

It's important to use your incentive spirometer after your surgery. Using an incentive spirometer:

- Helps your lungs expand so you can take deep, full breaths.
- Exercises your lungs and makes them stronger as you heal from surgery.

If you have a respiratory infection, do not use your incentive spirometer around other people. A respiratory infection is an infection in your nose, throat, or lungs, such as pneumonia (noo-MOH-nyuh) or COVID-19. This kind of infection can spread from person to person through the air.

How to use your incentive spirometer

Here is a video that shows how to use your incentive spirometer:



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

Setting up your incentive spirometer

Before you use your incentive spirometer for the first time, you will need to set it up. First, take the flexible (bendable) tubing out of the bag and stretch it out. Then, connect the tubing to the outlet on the right side of the base (see Figure 1). The mouthpiece is attached to the other end of the tubing.

Knowing what number to aim for on your incentive spirometer

Your healthcare provider will teach you how to use your incentive spirometer before you leave the hospital. They will help you set a goal and tell you what number to aim for when using your spirometer. If a goal was not set for you, talk with your healthcare provider. Ask them what number you should aim for.

You can also check the package your incentive spirometer came in. It may have a chart to help you figure out what number to aim for. To learn more, read “What number I should aim for?” in the “Common questions about your

incentive spirometer” section.

Using your incentive spirometer

When using your incentive spirometer, make sure to breathe through your mouth. If you breathe through your nose, your spirometer will not work right.

Follow these steps to use your incentive spirometer. Repeat these steps every hour you’re awake. Follow the instructions from your healthcare provider if they’re different from the ones here.

1. Sit upright in a chair or in bed. Hold your incentive spirometer at eye level.
2. Put the mouthpiece in your mouth and close your lips tightly around it. Make sure you do not block the mouthpiece with your tongue.
3. With the mouthpiece in your mouth, breathe out (exhale) slowly and fully.
 - Some people may have trouble exhaling with the mouthpiece in their mouth. If you do, take the mouthpiece out of your mouth, and then exhale slowly and fully. After you exhale, put the mouthpiece back in your mouth and go on to step 4.
4. Breathe in (inhale) slowly through your mouth, as deeply as you can. You will see the piston slowly rise inside the spirometer. The deeper you breathe in, the higher the piston will rise.
5. As the piston rises, the coaching indicator on the right side of the spirometer should also rise. It should float between the 2 arrows (see Figure 1).
 - The coaching indicator measures the speed of your breath. If it does not stay between the 2 arrows, you’re breathing in either too fast or too slow.
 - If the indicator rises above the higher arrow, you’re breathing in too fast. Try to breathe in slower.
 - If the indicator stays below the lower arrow, you’re breathing in too slow. Try to breathe in faster.

6. When you cannot breathe in any further, hold your breath for at least 3 to 5 seconds. Hold it for longer if you can. You will see the piston slowly fall to the bottom of the spirometer.
7. Once the piston reaches the bottom of the spirometer, breathe out slowly and fully through your mouth. If you want, you can take the mouthpiece out of your mouth first and then breathe out.
8. Rest for a few seconds. If you took the mouthpiece out of your mouth, put it back in when you're ready to start again.
9. Repeat steps 1 to 8 at least 10 times. Try to get the piston to the same level with each breath. After you have done the exercise 10 times, go on to step 10.
10. Use the marker on the left side of the spirometer to mark how high the piston rises (see Figure 1). **Look at the very top of the piston, not the bottom. The number you see at the top is the highest number the piston reached. Put the marker there.** This is how high you should try to get the piston the next time you use your spirometer.
 - Write down the highest number the piston reached. This can help you change your goals and track your progress over time.

Take 10 breaths with your incentive spirometer every hour you're awake.

Cover the mouthpiece of your incentive spirometer when you're not using it.

Tips for using your incentive spirometer

Follow these tips when using your incentive spirometer:

- If you had surgery on your chest or abdomen (belly), it may help to splint your incision (surgical cut). To do this, hold a pillow firmly against your incision. This will keep your muscles from moving as much while you're using your incentive spirometer. It will also help ease pain at your incision.
- If you need to clear your lungs, you can try to cough a few times. As

you're coughing, hold a pillow against your incision, as needed.

- If you feel dizzy or lightheaded, take the mouthpiece out of your mouth. Then, take a few normal breaths. Stop and rest for a while, if needed. When you feel better, you can go back to using your incentive spirometer.
- You may find it hard to use your incentive spirometer at first. If you cannot make the piston rise to the number your healthcare provider set for you, it's OK. Reaching your goal takes time and practice. It's important to keep using your spirometer as you heal from surgery. The more you practice, the stronger your lungs will get.

Common questions about your incentive spirometer

How often should I use my incentive spirometer?

How often you will need to use your incentive spirometer is not the same for everyone. It depends on the type of surgery you had and your recovery process.

Most people can take 10 breaths with their spirometer every hour they're awake.

Your healthcare provider will tell you how often to use your spirometer. Follow their instructions.

How long after my surgery will I need to use my incentive spirometer?

The length of time you will need to use your incentive spirometer is not the same for everyone. It depends on the type of surgery you had and your recovery process.

Your healthcare provider will tell you how long you need to use your spirometer. Follow their instructions.

How do I clean my incentive spirometer?

An incentive spirometer is a disposable device and only meant to be used for a short time. Because of this, you may not find cleaning instructions in the package your spirometer came in. If you have questions about cleaning your spirometer, talk with your healthcare provider.

What do the numbers on my incentive spirometer measure?

The large column of your incentive spirometer has numbers on it (see Figure 1). These numbers measure the volume of your breath in milliliters (mL) or cubic centimeters (cc). The volume of your breath is how much air you can breathe into your lungs (inhale).

For example, if the piston rises to 1500, it means you can inhale 1500 mL or cc of air. The higher the number, the more air you're able to inhale, and the better your lungs are working.

What number I should aim for?

The number you should aim for depends on your age, height, and sex. It also depends on the type of surgery you had and your recovery process. Your healthcare provider will look at these things when setting a goal for you. They will tell you what number to aim for.

Most people start with a goal of 500 mL or cc. Your healthcare provider may change your goal and have you aim for higher numbers as you heal from surgery.

The package your incentive spirometer came in may have a chart. You can use the chart to set your goal based on your age, height, and sex. If you cannot find this information, ask your healthcare provider what your goal should be.

What does the coaching indicator on my incentive spirometer measure?

The coaching indicator on your incentive spirometer measures the speed of your breath. As the speed of your breath changes, the indicator moves up and down.

Use the indicator to guide your breathing. If the indicator rises above the higher arrow, it means you're breathing in too fast. If the indicator stays below the lower arrow, it means you're breathing in too slow.

Aim to keep the indicator between the 2 arrows (see Figure 1). This means your breath is steady and controlled.

When to call your healthcare provider

Call your healthcare provider if you have any of these when using your incentive spirometer:

- Feel dizzy or lightheaded.
- Pain in your lungs or chest.
- Severe (very bad) pain when you take deep breaths.
- Trouble breathing.
- Coughing up blood.
- Fluid or blood coming from your incision site when you cough.
- Trouble using your spirometer for any reason.

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

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

How To Use Your Incentive Spirometer - Last updated on November 24, 2023

All rights owned and reserved by Memorial Sloan Kettering Cancer Center



PATIENT & CAREGIVER EDUCATION

Exercises After Your Neck Surgery

This information will teach you how to do neck and shoulder exercises after your neck surgery.

About Exercising After Your Neck Surgery

After surgery, your neck and shoulder on the surgical side (involved side) may feel tight and weak. The exercises in this resource will help make your neck and shoulder muscles stronger and more flexible. This will help your shoulder and neck move and work like they did before your surgery.

Tips for Your Daily Life

While you're recovering, doing your daily activities may be harder for you. Follow these tips for help.

- Always keep your shoulders back and relaxed, and your head retracted (pulled back). This will help you keep good posture. It also prevents you from having tightness in your chest muscles and from straining your neck and shoulder muscles.
- Lie on your back as much as possible when sleeping. If you must lie on your uninvolved side, rest the arm of your involved side on a pillow in front of you. This prevents you from pulling at your shoulder. Do not lie on your involved side unless your healthcare provider says it's OK.
- Do not lift or carry anything heavier than 3 pounds (1.4 kilograms) on your involved side. For your reference, a steam iron weighs around 3 pounds while a half gallon of milk is 4 pounds. Talk with your healthcare provider before lifting or carrying things over 3 pounds.
- Do not carry a heavy shoulder bag or purse on your involved side. Check with

your healthcare provider before you try to carry a backpack or knapsack.

Exercises

This section shows the exercises you should do after your neck surgery to help you heal. **Start these exercises only when your healthcare provider tells you that it's safe to do them. They will also tell you when your incision (surgical cut) has healed well enough to start these exercises.** Starting too soon or too late can affect how well your shoulder and neck will work in the future.

Follow these tips when doing your exercises.

- It may be helpful to use a timer or clock to make sure you hold the stretches long enough.
- Breathe normally. Do not hold your breath during the exercises.
- Do the exercises slowly and smoothly. Do not make any fast or jerky movements.
- Watch your movements in a mirror to make sure you have good posture.
- Stop any exercise that causes pain, nausea, dizziness, swelling, or discomfort. Call your healthcare provider to tell them if this happens.

Do these exercises 2 times a day for 3 months. You may be able to move your shoulder and get full motion of your neck back before 3 months. If this happens, ask your healthcare provider if you can stop doing the exercises. If you cannot move your neck or shoulder after 3 months of doing these exercises, tell your healthcare provider.

Diagonal neck stretch: Up

Do this exercise 2 times every day.

1. Gently turn your head so you're looking up and to the right.
2. Place your right hand on your left cheek and jaw. Apply mild pressure to give yourself a deeper stretch (see Figure 1).



Figure 1. Diagonal neck stretch: up

3. Repeat this in the other direction.
4. **Hold each stretch for 30 seconds, then relax. Take 1 full breath between each repetition. Repeat this 5 times on each side.**

Diagonal neck stretch: Down

Do this exercise 2 times every day.

1. Gently turn your head so you're looking down and to the left.
2. Place your left hand on top of your head. Apply mild pressure to give yourself a deeper stretch (see Figure 2).



Figure 2. Diagonal neck stretch: down

3. Repeat this in the other direction.
4. **Hold each stretch for 30 seconds, then relax. Take 1 full breath between each repetition. Repeat this 5 times on each side.**

Side neck stretch

Do this exercise 2 times every day.

1. Sit or stand and point your right arm downward.
2. Place your left hand on top of your head.
3. Gently pull down your head toward your left shoulder, to stretch the muscles on the right side of your neck (see Figure 3).



Figure 3. Side neck stretch

4. Repeat this in the other direction.
5. **Hold each stretch for 30 seconds, then relax. Take 1 full breath between each repetition. Repeat this 5 times on each side.**

Pectoral stretch using doorway

Do this exercise 2 times every day.

1. Stand in a doorway.
2. Place your hands and forearms at shoulder level on the sides of the doorway (see Figure 4).



Figure 4. Pectoral stretch using doorway

3. Gently step forward until you feel a gentle stretch across your chest and in front of your shoulders. Keep your back straight, and your neck and shoulders relaxed.
4. **Hold for 30 seconds, then relax.**
5. Return to the starting position with your arms at your sides.
6. **Take 1 full breath between each repetition. Repeat this 5 times.**

Chin tuck

Do this exercise 2 times every day.

1. Sit or stand with your back and head leaning against the wall.
2. Tuck your chin in and try to flatten the back of your neck against the wall (see Figure 5). **Hold this position for 5 seconds, then relax.**

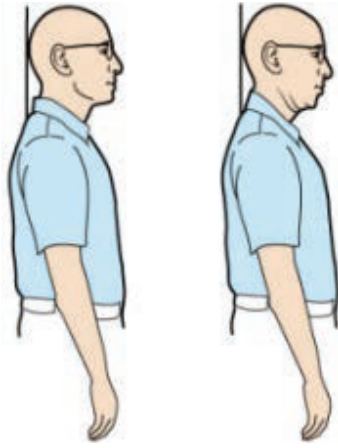


Figure 5. Chin tuck

3. Return to the starting position.
4. **Take 1 full breath between each repetition. Repeat this 10 times.**

Jaw lowering

Do this exercise 2 times every day.

1. Sit or stand in front of a mirror, so you can see your face.
2. Place the tip of your tongue behind your top teeth.
3. Slowly lower your bottom jaw to open your mouth, while keeping your tongue in contact with the roof of your mouth (see Figure 6). Use the mirror to make sure you're opening your mouth evenly, and not moving your jaw from side to side. **Hold this position for 10 seconds, then relax.**



Figure 6. Jaw lowering

4. Close your mouth.

5. **Take 1 full breath between each repetition. Repeat this 10 times.**

Backward shoulder rolls

Do this exercise 2 times every day.

1. Sit up tall in proper posture.
2. Shrug your shoulders up toward your ears, then push your shoulders backward (see Figure 7).

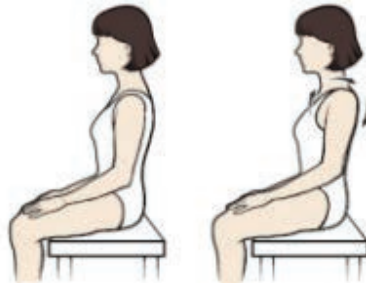


Figure 7. Backward shoulder rolls

3. Drop them down slowly.
4. **Take 1 full breath between each repetition. Repeat this 10 times.**

Arm circles

Do this exercise 2 times every day.

1. Sit or stand with your arms at your sides. Have your palms facing forward and your thumbs pointing to the ceiling.
2. Lift your arms up and circle them backward (see Figure 8).

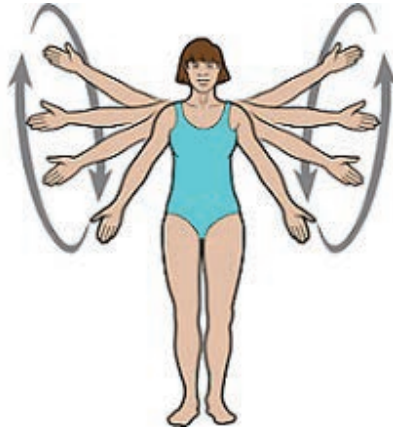


Figure 8. Arm circles

3. Return to the starting position.
4. **Take 1 full breath between each repetition. Repeat this 10 times.**

Arm and shoulder retraction

Do this exercise 2 times every day.

1. Sit or stand with your arms in front of you and your palms facing forward.
2. Push your shoulders down and away from your ears. This stops you from shrugging.
3. Move your arms out to the sides, while squeezing your shoulder blades together (see Figure 9). **Hold this position for 5 seconds, then relax.**



Figure 9. Arm and shoulder retraction

4. Return to the starting position.
5. **Take 1 full breath between each repetition. Repeat this 10 times.**

Diaphragmatic (DY-uh-fra-MA-tik) breathing

Do this exercise 2 times every day.

1. Lie on your back or sit in a supportive chair.
2. Place one or both of your hands over your abdomen (belly) (see Figure 10).

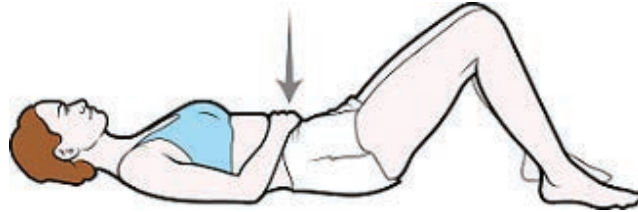


Figure 10. Diaphragmatic breathing

3. Breathe in slowly and deeply through your nose. Your abdomen should rise but your upper chest should stay still and relaxed.
4. Breathe out slowly through your mouth. As you breathe out, slowly and gently pull your abdomen toward your spine.
5. **Take 1 full breath between each repetition. Repeat this 10 times.**

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

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

Exercises After Your Neck Surgery - Last updated on February 6, 2022

All rights owned and reserved by Memorial Sloan Kettering Cancer Center