

About Your Ommaya Reservoir Placement Surgery for Pediatric Patients

This guide will help you get ready for your Ommaya reservoir placement surgery at Memorial Sloan Kettering (MSK). It will also help you know what to expect as you recover.

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

In this resource, the words “you” and “your” refer to you or your child.

Your care team

Doctor: _____

Nurse: _____

Phone number: _____

Fax number: _____



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



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About your Ommaya reservoir surgery

About your Ommaya reservoir

An Ommaya reservoir is a quarter-sized, soft, plastic, dome-shaped device that is placed under the scalp. It's connected to a catheter (thin, flexible tube) that's placed in one of the ventricles in your brain (see Figures 1 and 2).

Your ventricles are hollow spaces that make cerebrospinal fluid (CSF), which surrounds your brain and spinal cord.

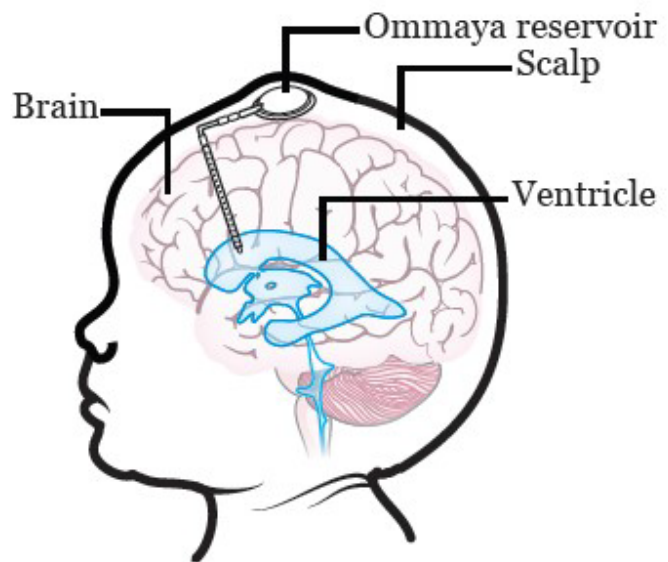
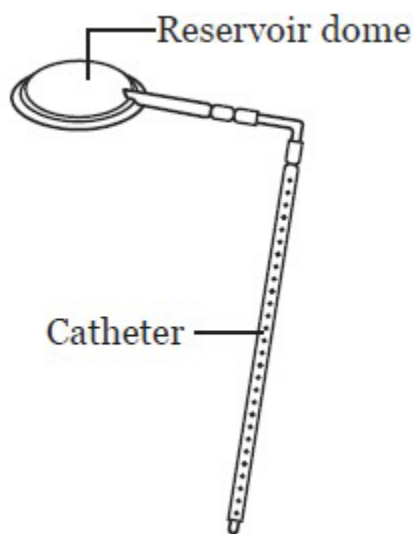


Figure 1: Ommaya reservoir

Figure 2: Placement of the Ommaya reservoir

An Ommaya reservoir will help your healthcare provider:

- Get samples of your CSF. Your healthcare provider can check your CSF for cancer cells or infections.
- Give you medicine, such as chemotherapy, monoclonal antibodies, or antibiotics directly into your CSF.

These procedures are referred to as an “Ommaya reservoir tap.” You may need fewer spinal taps if you have an Ommaya reservoir.

About your Ommaya reservoir surgery

The surgery to place your Ommaya reservoir is done in the operating room. Before your surgery, you will get anesthesia (medicine to make you sleep during your surgery). Once you’re asleep, a nurse will shave the hair in the area where your incisions (surgical cuts) will be. Your entire head won’t be shaved.

During your surgery, your neurosurgeon will make a C-shaped incision behind your hairline. They will insert the reservoir dome under your scalp. Your neurosurgeon will pass the catheter through your brain into the space where CSF forms. They will close your incision with staples or sutures (stitches).

The surgery will take about 1 hour.

Possible complications from surgery

The surgery to place your Ommaya reservoir can cause some complications. These complications are listed below:

- There is a small risk that you could bleed into your brain.
- There is a small risk that you could have some loss of function. Your neurosurgeon will talk with you about this risk.

- There is a small risk that you could get an infection in your brain. To reduce the risk of infection, you will be given antibiotics after your surgery.
- Your Ommaya reservoir may need to be adjusted. To make sure it's in the right place, you will get a computed tomography (CT) scan the day after your surgery. If your reservoir isn't in the right place, you may need to have another surgery to fix it.
- Your Ommaya reservoir may not work. To make sure your Ommaya reservoir is working, a CSF flow study may be done after your surgery. If you need a CSF flow study, your doctor or nurse will give you more information about this.

Your neurosurgeon will explain all the possible risks and complications before your surgery.

Notes _____

Getting ready for your Ommaya reservoir surgery

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



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

Notes _____

Getting ready for your surgery

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

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

These are examples of medicines. There are others.

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

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

About drinking alcohol

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

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

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

Here are things you can do before 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. Tell your healthcare provider right away if you:
 - Get a headache.
 - Feel nauseous (like you're going to throw up).
 - Feel more anxious (nervous or worried) than usual.
 - Cannot sleep.

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

- Tell your healthcare provider if you cannot stop drinking.
- Ask your healthcare provider questions about drinking and surgery. All your medical information will be kept private, as always.

About smoking

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

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

About sleep apnea

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

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

Using MyMSK

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

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

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

Within 30 days of your Ommaya reservoir surgery

Presurgical testing (PST)

You'll have a PST appointment before your surgery. Depending on your age, your testing can take place in a variety of places. You'll get a reminder from your surgeon's office with the appointment date, time, and location.



Use this area to write down your PST appointment information:

Date: _____ Time: _____

Your appointment will be at one of these locations:

- ❑ Presurgical Testing (PST) at Rockefeller Outpatient Pavilion
160 E. 53rd St. (at 3rd Avenue)
New York, NY 10022
Take the elevator to the 7th floor.
- ❑ The Pediatric Ambulatory Care Center (PACC) at Memorial Hospital
1275 York Ave. (between East 67th and East 68th streets)
New York, NY 10065
Take the B elevator to the 9th floor.

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

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

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

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

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

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

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

Parking at the Pediatric Ambulatory Care Center (PACC)

The PACC is in Memorial Hospital (MSK's main hospital).

Memorial Hospital
1275 York Ave. (between East 67th and East 68th streets)
New York, NY 10065

MSK's parking garage is on East 66th Street between York and 1st avenues. If you have questions about prices, call 212-639-2338.

To reach the garage, turn onto East 66th Street between York and 1st avenues. The garage is about a quarter of a block in from York Avenue. It's on the right (north) side of the street. There's a tunnel you can walk through that connects the garage to the hospital.

There are other parking garages on:

- East 69th Street between 1st and 2nd avenues.
- East 67th Street between York and 1st avenues.
- East 65th Street between 1st and 2nd avenues.



Parking at PST

PST is in the Rockefeller Outpatient Pavilion, also known as MSK 53rd Street.

Rockefeller Outpatient Pavilion
160 E. 53rd St. (at 3rd Avenue)
New York, NY 10022

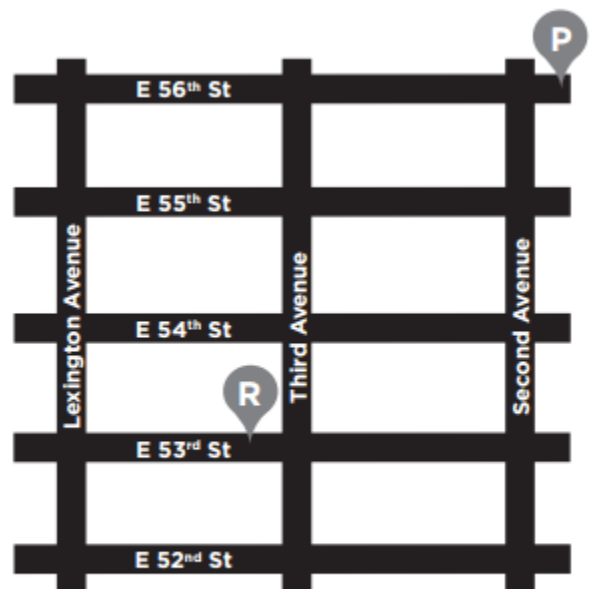
There are several options for parking during your PST appointment. The Bristol Garage offers discounts to patients. To get a discount, have your parking ticket validated at the concierge desk in the Rockefeller Outpatient Pavilion. There is a shuttle that goes from the Bristol Garage to the Rockefeller Outpatient Pavilion every 20 minutes.

The Bristol Garage
300 E. 56th St.
(between 1st and 2nd avenues)
New York, NY 10022

There are other parking garages on:

- East 53rd Street between 2nd and 3rd avenues.
- East 54th Street between 2nd and 3rd avenues.

For more information about MSK's locations, including directions and parking options, visit www.msk.org/locations



P = Parking

R = Rockefeller Outpatient Pavilion

Arrange for housing, if needed

The Ronald McDonald House has temporary housing for out-of-town pediatric cancer patients and their families. MSK also has arrangements with several local hotels and housing facilities that may give you a special lower rate.

Your social worker can talk with you about your options and help you make reservations. You can also call 212-639-8315 to talk with the Pediatric Patient Services Coordinator.

Tell us if you're sick

If you get sick before your surgery, call the healthcare provider who scheduled your surgery. This includes a fever, cold, sore throat, or the flu.

10 days before your Ommaya reservoir surgery

Stop taking vitamin E

Vitamin E can cause bleeding. Stop taking it 10 days before your surgery.

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

7 days before your Ommaya reservoir surgery

Follow your healthcare provider's instructions for taking aspirin

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

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

Stop taking multivitamins, herbal remedies, and other dietary supplements

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

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

2 days before your Ommaya reservoir surgery

Stop taking nonsteroidal anti-inflammatory drugs (NSAIDs)

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

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

1 day before your Ommaya reservoir surgery

Note the time of your surgery

A pediatric surgical coordinator will call you after 2 p.m. the day before your surgery. If your surgery is scheduled for a Monday, they'll call you the Friday before. If you do not get a call by 4 p.m., call 212-639-7056.

The surgical coordinator will tell you what time to get to the hospital for your surgery. They'll also remind you where to go.

This will be one of these locations:

- ☐ The Presurgical Center (PSC) at Memorial Hospital
1275 York Ave. (between East 67th and East 68th streets)
New York, NY 10065
Take the B elevator to the 6th floor.
- ☐ The Pediatric Ambulatory Care Center (PACC) at Memorial Hospital
1275 York Ave. (between East 67th and East 68th streets)
New York, NY 10065
Take the B elevator to the 9th floor.



Use this area to write down your surgery information:

Date: _____ Time: _____

The night before your Ommaya reservoir surgery

Shower

Unless you're given other instructions, you can shower and wash your hair the night before your surgery. **Do not use any hair products, such as hair spray or gel.**

Sleep

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

Instructions for eating and drinking before your surgery



Do not eat or drink anything after a certain time on the night before your surgery. This exact time is based on your age and any other medical problems you may have.

Your nurse practitioner (NP) will talk with you about what you can and cannot eat before surgery.

If you do not follow the instructions they give you, your surgery may be cancelled.

Write your instructions here:

The morning of your Ommaya reservoir surgery

Take your medicines as instructed

If your doctor or NP instructed you to take certain medicines the morning of your surgery, take only those medicines with a sip of water. Depending on what you usually take and the surgery you're having, this may be all, some, or none of your usual morning medicines. **Starting 2 hours before your surgery, do not take any medicines.**



Do not eat or drink anything the morning of your surgery.

This includes water, hard candy, and gum. Take any medicine as instructed with a sip of water.

Things to remember

- Wear something comfortable and loose-fitting.
- If you wear contact lenses, wear your glasses instead. Wearing contact lenses during surgery can damage your eyes.
- Do not wear any metal objects. Take off all jewelry, including body piercings. The tools used during your surgery can cause burns if they touch metal.
- Do not 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. We'll give you disposable underwear and a pad if you need them.
- Before you're taken into the operating room, you will need to remove your hearing aids, dentures, prosthetic device(s), wig, and religious articles.

What to bring

- ☐ Your breathing device for sleep apnea (such as your CPAP machine), if you have one.
- ☐ Your cell phone and charger.

- ❑ A case for your personal items, if you have any. Eyeglasses, hearing aids, dentures, prosthetic devices, wigs, and religious articles are examples of personal items.
- ❑ This guide. You'll use it to learn how to care for yourself after surgery.

Where to park

For information about parking at Memorial Hospital, read the "Parking at the Pediatric Ambulatory Care Center (PACC)" section above.

Once you're in the hospital

When you get to the hospital, take the B elevator to the 6th floor (the PSC) or the 9th floor (the PACC). Check in at the desk in the waiting room.

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

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



For caregivers, family, and friends

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

Meet with a nurse

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

If you have an implanted port or central venous catheter (CVC), your nurse will access it. If you don't, your nurse may place an intravenous (IV) line in one of your veins, usually in your arm or hand. If your nurse does not place the IV, your anesthesiologist will do it in the operating room.

Meet with an anesthesiologist

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

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

Get ready for surgery

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

You'll either walk into the operating room or a staff member will bring you there on a stretcher. A member of the operating room team will help you onto the operating bed.

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

Once you're asleep, your surgery will begin. You won't feel any pain during your surgery.

Notes _____

Recovering after your Ommaya reservoir surgery

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



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

Notes _____

What to expect

When you wake up after your surgery, you will be in the Post-Anesthesia Recovery Unit (PACU). As soon as you're settled in the PACU, a nurse will bring your family members in to be with you.

You may have a mask over your face that will give you air and help you wake up after surgery. You will be attached to machines that will monitor your body temperature, heart rate, blood pressure, and oxygen level. You may also have dressings (bandages) over your incisions.

While you're in the hospital, you will frequently be asked to move your arms, fingers, toes and legs. Your nurse will check your pupils with a flashlight and ask questions such as "What is your name?"

It's normal to feel very tired after surgery. Your PACU nurse will make sure you're comfortable and answer any of your questions.

Once you're awake and your pain is under control, you will be taken to your hospital room. Depending on your age and condition, you may be taken to the Pediatric Intensive Care Unit (PICU), the Adult Intensive Care Unit (ICU), or the Neurology Advanced Care Unit (NACU) for close observation and monitoring.

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

After 24 hours, you will be taken to the pediatric or neurology floor for continued care. If you have a bandage over your incision, your doctor will take it off around this time. After the bandage is removed, your incision(s) will be left uncovered.

Commonly asked questions

Will I have any pain?

You may have a mild headache or feel discomfort from your incision for the first few days after your surgery. Your nurse will give you pain medicine. Please tell your nurse if the medicine isn't helping your pain.

You may have a sore throat after your surgery. This is caused by the breathing tube that was used during your surgery. You will be given cool liquids to drink and lozenges to suck on to help with the discomfort.

How long will I be in the hospital?

Most people stay in the hospital 1 night, but this will depend on your recovery.

Parents can call the inpatient unit at any time. Ask your nurse for the phone number. Because of privacy concerns, staff will only give information to parents or spouses. **Please tell friends and other relatives not to call the inpatient unit for information.**

Can family and friends visit me in the hospital?

Your parents, other family members, and friends are welcome to visit you during your hospital stay as long as they're in good health. No one with any signs of sickness, such as fever, cough, congestion, sore throat, or rash, is allowed to visit.

Visiting hours may be different depending on where you will be staying. Ask your nurse about the visitation policy in the area you're staying. Visitors on the Pediatric Unit are limited to parents and 2 other visitors per day.

Will I be able to eat and drink?

You will be given ice chips to eat after your surgery. You will start with a liquid diet and then progress to solid food.

When will my sutures or staples be removed?

The sutures or staples in your incision will be removed 7 to 14 days after your surgery. They may need to stay in longer if you have had this surgery before. Your doctor or NP will remove them during your follow-up visit at the clinic.

How do I care for my incision?

Mild swelling around the incision is normal. As your incision heals, it may burn, itch, or feel numb. Check your incision daily for any signs of redness, swelling, or drainage.

Don't apply any creams, ointments, hair products, or use a hair dryer on your incisions until they are completely healed. This may take about 6 weeks.

Once your incision is healed, it doesn't need to be covered. However, you should protect it from the sun by wearing a hat or scarf and using sunblock.

When can I shower?

You can shower right after your surgery. However, for the first 5 days after your surgery, you must wear a shower cap to protect your incision from getting wet.

Five days after your surgery, you should begin to wash your hair daily. This helps to loosen up the crusting on your incision and will make it easier for your surgeon or nurse to remove your staples or sutures.

When you wash your hair, use a gentle shampoo, such as baby shampoo. You can gently massage the area near your incision to wash off any dried blood or drainage. Clean your incision with soap and water and pat it dry with a clean towel. You can let the shower water run over your incision.

Don't let your incision soak in water. Avoid baths, hot tubs, and swimming pools for at least 2 weeks after your surgery.

When can I go back to work?

Your doctor will tell you when you can go back to work. This depends on your age, type of work, medical condition, and other factors.

When can I go back to school?

You can go back to school as soon as you feel ready. Tell your school nurse that you have an Ommaya reservoir.

When can I go back to my normal activities?

You can participate in all non-contact sports (such as swimming and running), exercise, and go to the gym 2 weeks after your surgery. You can't participate in any contact (collision) sports (such as football, boxing and wrestling) until your neurosurgeon says it's OK. Remember to wear a helmet to decrease the risk of head injury, if needed. Ask your neurosurgeon for specific guidelines on wearing a helmet.

When can I swim?

Don't swim for at least 2 weeks after your surgery. If your incision needs more time to heal, you may need to wait longer. Your doctor or NP will tell you when it's OK to swim at your first follow-up appointment after your surgery.

When can I travel?

Don't travel on an airplane until your neurosurgeon says it's OK.

When is my first appointment after my surgery?

Your first appointment after surgery will be in 7 to 14 days after you leave the hospital. Contact your neurosurgeon's office to schedule your appointment before you leave the hospital. Depending on how you're

healing, some or all of your sutures or staples will be removed during this appointment.

Will I need any more tests?

You will have a computed tomography (CT) scan within 24 hours after your surgery to make sure your Ommaya reservoir is in the right place.

How do I care for my Ommaya reservoir?

Your Ommaya reservoir doesn't need special care.

Can the Ommaya reservoir be removed?

The reservoir is usually not removed unless you have problems with it.

When should I call my doctor or NP?

Call your doctor or NP if you have:

- A fever of 100.4° F (38° C) or higher
- Tenderness, redness, or swelling around your reservoir
- Clear, bloody, or pus-like discharge from your reservoir
- Headaches
- Vomiting
- Neck stiffness
- Blurry vision
- Confusion

These warning signs can appear quickly. **If any of these signs or symptoms develop, call your doctor or NP immediately.**



If you cannot wake your child, call 911 or go to the nearest emergency room immediately.

Contact information

If you have any questions or concerns, please talk with your doctor or nurse. You can reach them Monday through Friday from 9 a.m. to 5 p.m. at 212-639-7056.

After 5 p.m., during the weekend, and on holidays, call 212-639-2000. Ask to speak to the pediatric neurosurgery fellow on call.

Notes _____

Support services

This section has a list of support services. They may help you as you get ready for your surgery and recover after your surgery.



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

Notes _____

MSK support services

Admitting Office

212-639-7606

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

Anesthesia

212-639-6840

Call if you have questions about anesthesia.

Blood Donor Room

212-639-7643

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

Bobst International Center

332-699-7968

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

Caregivers Clinic

www.msk.org/caregivers

Our Caregivers Clinic provides support for caregivers who are having a hard time coping with the demands of being a caregiver. Call Dr. Allison Applebaum's office at 646-888-0200 to learn more.

Counseling Center

www.msk.org/counseling

646-888-0200

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

Food Pantry Program

646-888-8055

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

Integrative Medicine Service

www.msk.org/integrativemedicine

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

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

MSK Library

library.mskcc.org

212-639-7439

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

Nutrition Services

www.msk.org/nutrition

212-639-7312

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

Patient and Community Education

www.msk.org/pe

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

Patient Billing

646-227-3378

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

Patient Representative Office

212-639-7202

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

Perioperative Nurse Liaison

212-639-5935

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

Private Duty Nurses and Companions

917-862-6373

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

Rehabilitation Services

www.msk.org/rehabilitation

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

- **Rehabilitation medicine doctors** diagnose and treat problems that affect how you move and do activities. They can design and help coordinate your rehabilitation therapy program, either at MSK or

somewhere closer to home. Call Rehabilitation Medicine (Physiatry) at 646-888-1929 to learn more.

- An OT can help if you're having trouble doing usual daily activities. For example, they can recommend tools to help make daily tasks easier. A PT can teach you exercises to help build strength and flexibility. Call Rehabilitation Therapy at 646-888-1900 to learn more.

Resources for Life After Cancer (RLAC) Program

646-888-8106

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

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

Social Work

www.msk.org/socialwork

212-639-7020

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

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

Spiritual Care

212-639-5982

Our chaplains (spiritual counselors) are available to listen, help support family members, and pray. They can contact community clergy or faith groups, or simply be a comforting companion and a spiritual presence.

Anyone can ask for spiritual support. You do not have to have a religious affiliation (connection to a religion).

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

Virtual Programs

www.msk.org/vp

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

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

External support services

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

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

Notes _____

Educational resources

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



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

Notes _____

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

- ***Call! Don't Fall! for Pediatric Patients***
(www.msk.org/pe/call_dont_fall_peds)
- ***Herbal Remedies and Cancer Treatment***
(www.msk.org/pe/herbal_remedies)
- ***How To Check if a Medicine or Supplement Has Aspirin, Other NSAIDs, Vitamin E, or Fish Oil***
(www.msk.org/pe/check-med-supplement)
- ***How to Enroll in MyMSK: Memorial Sloan Kettering's Patient Portal***
(www.msk.org/pe/enroll_mymask)
- ***Information for Family and Friends for the Day of Surgery***
(www.msk.org/pe/info_family_friends)

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.abouterbs.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

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PATIENT & CAREGIVER EDUCATION

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

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

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

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

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

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

What is an active ingredient?

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

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

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

How to find a medicine or supplement's active ingredients

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

Over-the-counter medicines

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

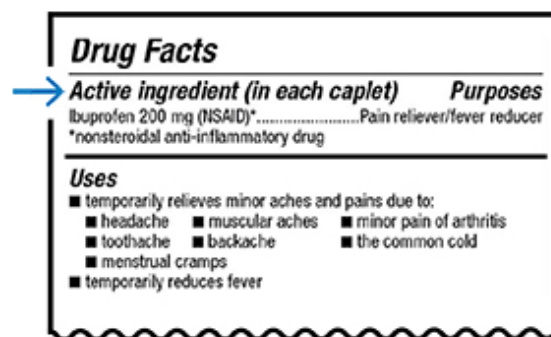


Figure 1. Active ingredients on an over-the-counter medicine label

Prescription medicines

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

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

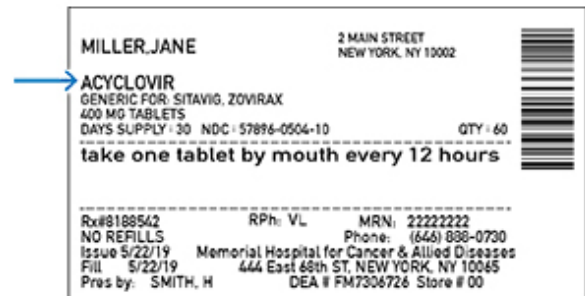


Figure 2. Active ingredients on a prescription medicine label

Dietary supplements

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

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

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