



Surgery for Vestibular Schwannoma: What to Expect Before, During, and After Surgery

Vestibular schwannoma is a benign (not cancerous) tumor in your ear that affects your hearing and balance nerve. There are different options to address it, including surgery. Your care team will talk with you and give you recommendations for your specific case.

What can I expect when planning for my surgery?

You will meet with several medical teams, including but not limited to:

- Otolaryngology-Neurotology (ear and skull base surgeons)
- Audiology (hearing health care providers)
- Neurosurgery (brain surgeons)
- Vestibular (balance) therapists

When you meet with one of the teams who will do your surgery (otology-neurotology or neurosurgery), they may schedule the following tests to better understand the size and location of your tumor and how to best approach it surgically:

- CT scan of the bone around your ear (called the temporal bone)
- MRI of the brain including the internal auditory canal (even if you have had an MRI before, you will need to get a specific type of MRI for this tumor)
- Audiogram (a hearing test)
- Vestibular testing (balance testing used to measure your balance functions in each ear)

- Auditory brainstem response (this is another type of hearing test you will need to get if you are having a certain type of surgery, like a middle cranial fossa approach or retrosigmoid approach)

During the surgery scheduling process:

- Once you tell your surgeon that you have decided to have surgery, staff from the surgery office will work with you and the surgeon to schedule a date for your surgery.
- During your vestibular therapy appointment before your surgery, the vestibular therapists will give you a blue folder. This folder will include exercises for you to do at home before your surgery, immediately after your surgery in the hospital, and at home after you leave the hospital.
 - You will usually see the vestibular therapists again a few weeks after your surgery, and then 1 or 2 more times after that over 3 months. The goal is to make sure your brain has adjusted for the loss of the balance function on the side that was operated on.
- Once you schedule your surgery date, you will also schedule a preoperative (before surgery) clinic visit. At this visit, a physician assistant (PA) will ask you about your medical history and do a physical exam. You may have this visit in person or virtually.
 - This preoperative team may refer you to the Anesthesia department, Cardiology, or other departments for more screening (tests) to make sure you're okay to have surgery.
 - They will also talk with you about your current medications. They will let you know if there are any medications you need to stop taking in the days before surgery, as well as exactly when you should stop taking them and when you can start taking them again after your surgery.
 - **If you use a CPAP machine at home, do not bring it with you to the hospital and do not use your CPAP machine for 3 weeks after**

Department of Otolaryngology – Head and Neck Surgery

Surgery for Vestibular Schwannoma: What to Expect Before, During, and After Surgery

your surgery. Sometimes the preoperative team may mistakenly tell you to bring it with you to the hospital, but you should not. Using your CPAP machine in the hospital or within 3 weeks after your surgery can put you at risk for a cerebrospinal fluid (CSF) leak (leaking fluid from your brain and spinal cord). When sleeping at home after surgery, patients who typically use CPAP usually have to sleep upright in a chair or recliner.

What can I expect on the day before surgery?

- On the day before your surgery, the operating room's staff will call you to confirm your surgery start time and when you should arrive to the preoperative ("pre-op") area.
 - They will also tell you what time to stop eating or drinking before surgery and what medications you are allowed to take the day of surgery.
 - They will explain the check-in plans for both you and your visitors, and how the surgical team will communicate with your friends and family during and after your surgery.
- As you prepare your items to bring to the hospital, please pack the blue folder that the vestibular therapy team gave you, since you will need to do your exercises while you are recovering in the hospital.

What can I expect on the day of my surgery?

You will check into the waiting room at the hospital, and when staff is ready, they will call you to the preoperative area ("pre-op").

- In pre-op, you will change out of your clothes (including your underwear) and change into a hospital gown, and you will have a chance to use the restroom. The nursing team will check on you and start an intravenous (IV) line by inserting a needle into your vein. The IV line helps the surgery

team to give you medication before, during, and after your surgery. The team may start more lines as needed in your hand or foot.

- Different medical teams will visit you, including the surgeon, the anesthesiologist or anesthesiologist (a provider who gives you medication to keep you asleep and control pain during surgery), the operating room nurse, and possibly learners or assistants to any of these providers.
- You will need to sign a consent form for your surgery if you haven't yet. The consent form will be for your surgery, as well as for a **left abdominal fat graft**. This procedure is used for **reconstruction** (filling in the space where your tumor will be removed from). The surgeon will make a 6-10 cm cut (called an incision) in the left lower side of your body between your hip and belly button. Depending on what surgery you have, they will remove some fat from this area to place in the space where your surgery was done.
- You may be given a sedative (a medication that makes you sleepy) after you have signed the consent form for surgery.
- The Anesthesia team will take you to the operating room on a stretcher (a movable bed).

In the operating room:

- You will be moved onto a new operating room bed. Many team members will be preparing you for surgery, and there will be lots of activity around you.
 - They will make several adjustments to the devices and bed around you and offer you a warm blanket.
 - You will complete a formal final check-in with the team (called a pre-induction verification, where you will repeat your name and review your consent to the surgeries and plan). Then, the

Department of Otolaryngology – Head and Neck Surgery
Surgery for Vestibular Schwannoma: What to Expect Before, During, and After
Surgery

Anesthesia team will give you medicine through your IV to put you to sleep and place an oxygen mask on your face.

- Once you are asleep, the team will place a breathing tube and a bladder catheter (thin tube) to drain urine from your bladder. You will also be moved into a good position for surgery.
- The operating room nurse will give short updates to your visitors in the waiting room throughout the day. These surgeries may last anywhere between 6-16 hours, based on the size of your tumor and how the team does the surgery. A longer surgery time is not a cause for concern.

When your surgery is complete:

- The surgeon will ask for your visitors to be put in a consultation room so they can talk with them about how the surgery went.
- The team will move you to the **PACU (post-anesthesia care unit)** where you will recover from surgery for about 4 hours (possibly longer, as your medications wear off and you wake up). After you recover, they will take you to the **ICU (intensive care unit)** to rest overnight.
 - The nurses will decide when it is safe for your visitors to see you in the PACU.
 - You will have a sore throat from the breathing tube that was placed during surgery.
 - Sometimes your visitors may have to wait until you have arrived in the ICU before they can see you. **The team will do what is safest for you and others.**

What can I expect while I'm recovering in the ICU?

- We will continue to check on you and your recovery from the surgery. You will see both the Neurosurgery team and the Otolaryngology-Neurotology team while you are in the ICU.

- The surgical team will decide when it is time to remove the bladder catheter.
- You will have a white head wrap dressing which will stay on for 2-4 days. It will cover your incision, which has staples. We will remove these staples at your postoperative (after surgery) appointment. The team will remove the white head wrap when appropriate. If you notice it slipping off during the first 2 days, please let your nurses know so that the Otolaryngology-Neurotology team can fix it. It is very important that it stays on to keep a constant pressure on your incision after surgery.
- You may have a small drain at the fat graft site that your surgeon placed during the surgery. The surgical team will decide when it is time to remove this during your hospital stay.
- You may feel extremely dizzy for the first 2 days. This is because the vestibular nerves will have been cut during the surgery so they can remove your tumor. The dizziness may be mild to severe, but usually it starts to get better after 2 days. The team may give you medication to help with any nausea you have from this. However, you will not be given medication to treat the dizziness, as those medications can delay your full recovery from the dizziness.
- You may have a sore throat from the breathing tube that was placed during surgery.
- You will have an order to be transferred from the ICU to the surgical floor of the hospital on the day after your surgery. However, the hospital has been full lately, so it is possible that there will not be any rooms available on the surgical floor. In this case, you will stay in your ICU room until a surgical floor room is available (this is called being on “floor status”). This does not mean that you are doing poorly - it is just because there aren’t enough beds available on the surgical floors.

What can I expect while I'm recovering on the surgical floor (or if I'm still in the ICU but on "floor status"):

- You will see the Physical Therapy team on the first or second day after your surgery. They will work with you on walking and moving around. If you have stairs in your home, then they will come back after your surgery to work on stairs with you. They do this to make sure you are safe to move around at home.
- You should complete your vestibular exercises given to you by the Vestibular Physical Therapy team before your surgery (in the blue folder).
- You may shower 2 days after your surgery, but you are not allowed to get your head wet, wash your hair, or scrub your incisions.
- If you wear glasses and you want to wear them after your surgery, you must remove the arm of the glasses that is on the same side that you had surgery on. This is because we do not want to irritate your incision.
- You should expect to be in the hospital for about 3-4 days. During that time, the team will work on making sure your pain is well-controlled, you are able to move around, and that you have had a bowel movement or are passing gas.
- When the team decides it is safe, you will be sent home. You will need someone to drive you.
 - We will send any prescriptions for medications you need to your preferred pharmacy for you to pick up. This may include stool softeners, steroids, and possibly pain medication.
 - We will give you instructions on your care after surgery, including when to contact your care team if there is a concern and how to reach them.
 - Your postoperative appointment with your surgeon will be about 14 days after your surgery. You will also meet with the vestibular therapist on this date.

What can I expect once I'm home from the hospital?

- Depending on the specific surgery you had:
 - You may be deaf on the side where your tumor was removed.
 - You need to continue doing the vestibular therapy exercises from the Vestibular Physical Therapy team.
 - There may be titanium plates and screws over the area where you had surgery, or there may be a soft area where your fat was moved to fill the space where you had surgery. Do not push on the area of your incision.
- It's important for a family member or helper to be with you for the first few days you are home. They can help make sure you don't strain or harm yourself while you're recovering, and they can call for help if you develop any problems.
- You may get tired more easily for the first few weeks.
- Stay hydrated (drink 8 glasses of water a day) to help yourself heal.
- You may go back to your normal diet, but **you must not strain during bowel movements**. Take a stool softener or laxative if necessary.
- You will be off work for about 6 weeks, depending on what your job is.
- You should be able to shower unless your doctor tells you not to. You can start washing your hair with dry shampoo as early as the second day after your surgery. You can start washing your hair with a gentle shampoo (like baby shampoo) a week after your surgery.
- You need to go to your postoperative appointment, so the surgeon can check on how well you're healing and talk with you about any other follow-up appointments and future MRI scans. You can also talk with your surgeon about hearing rehabilitation options.

Disclaimer: This document contains information and/or instructional materials developed by University of Michigan (U-M) Health for the typical patient with your condition. It may include links to online content that was not created by U-M Health and for which U-M Health does not assume responsibility. It does not replace medical advice from your health care provider because your experience may differ from that of the typical patient. Talk to your health care provider if you have any questions about this document, your condition or your treatment plan.

Authors: Carla Valenzuela MD, MSCI, Bianca Waller RN, BSN
Reviewers: Renee Banakis Hartl, MD, AuD, Gregory Basura, MD, PhD, Hussam El-Kashlan, MD,
Emily Stucken, MD, Christopher Welch, MD, PhD
Edited by: Brittany Batell, MPH MSW

Patient Education by [U-M Health](#) is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International Public License](#). Last Revised 10/2023