

Children's Ear Nose & Throat Center

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MYRINGOPLASTY - TYMPANOPLASTY - MASTOIDECTOMY

We appreciate the opportunity to care for your child. Please review this sheet as it will help you know what to expect for your child's surgery. Please do not hesitate to call us if you have any questions or concerns.

WHAT IS A MYRINGOPLASTY OR TYMPANOPLASTY?

Both procedures are done to repair the tympanic membrane (eardrum). In children, the most common reason for performing the procedure is removal of a retained ear tube or a hole in the eardrum (eardrum perforation) that won't heal and close on its own. Several types of graft material can be used to plug or patch the hole, such as a paper patch, fat plug, or other tissue (cartilage or fascia).



MYRINGOPLASTY - a more minimal procedure used to plug a small hole in the ear drum

TYMPANOPLASTY - a procedure used to treat most medium to large holes, lifting up the eardrum to place a larger patch under or over the eardrum to repair the hole; also used to open the middle ear to look at the ear bones or remove tumors, or treat other middle ear diseases.

WHAT IS A MASTOIDECTOMY?

For some ear disease, the bone behind the ear (mastoid bone) may need to be opened. This is usually done with a special drill that removes the bone carefully, and can be done to clear disease out of the mastoid itself, or to get through the mastoid bone to reach the middle ear. A mastoidectomy always involves an incision behind the ear (postauricular incision - see image on next page).

HOW DO WE GET INTO THE EAR?

There are several ways to approach the eardrum and middle ear during surgery:

TRANSCANAL: all myringoplasty surgeries are done transcanal, and some tympanoplasty surgeries as well, depending on the anatomy of the ear. This means that the surgical procedure can be done through the ear canal without an outside skin incision. However, if your child has a perforation (hole in the eardrum) repaired, there may also be a small incision behind the ear just large enough to get some fat or other tissue out from under the skin that is used as a patch/graft over the perforation. Children go home following a short recovery time in the post anesthesia care unit.



POSTAURICULAR INCISION: With larger perforations or certain ear anatomy, the surgical procedure may be performed by making an incision behind the ear, along the crease hidden behind the ear, and generally from the top to the bottom of the ear (see image). This provides better access to the eardrum in postoperative nausea and vomiting. A small drainage tube may be placed under the skin at the end of the surgery and left overnight.

FOR A TYMPANOPLASTY:

During the surgery, the eardrum (Fig. A) is lifted up like a trap door, and the material used to repair the hole (called a tympanic membrane graft) is slipped behind the eardrum (Fig. B). Then the eardrum is put back in place over the patch (Fig. C). The graft is supported from behind with some packing material in the middle ear space which slowly dissolves over the next 2-3 months. Packing material placed in the ear canal on top of the eardrum and graft will dissolve over the next several weeks as you use the prescribed ear drops. During this time, the eardrum heals over the graft and closes the hole. When the packing is all dissolved, the hearing will be tested to see how much the patch has improved the hearing levels.



PRE-OPERATIVE CARE

- Avoid aspirin products (including Pepto-Bismol) or products containing Ginkgo Biloba or St. John's Wort for two weeks prior to surgery.
- Acetaminophen (Tylenol) may be given as well as over the counter cold medications and antibiotics.
- Please notify your doctor if there is a family history of bleeding tendencies or if the child tends to bruise easily.
- Until surgery, if your child swims in untreated water (ocean, creek, lake, or river), your child will need to wear an earplug or ear putty in the affected ear(s). If you do not have either of these, please call our office.
- **If before surgery your child has any kind of drainage from the affected ear(s), please contact our office.** This may indicate an infection that needs to be treated promptly before surgery. You may be asked to bring your child in again right before surgery to see the status of the infection. If drainage is present on the day of surgery, your child's surgery date may be rescheduled so the drainage can be addressed. An infected or draining ear has a much higher risk of graft failure, leaving a hole after the surgery.

WHAT CAN I EXPECT THE DAY OF SURGERY?

A patch **myringoplasty** usually takes about 10-15 minutes.

A **tympanoplasty** can take several hours.

Your surgeon will talk to you as soon as the surgery is over. When your child finishes the surgery, he or she will be taken to the post anesthesia care unit (PACU) to completely wake up. You can be with your child once he or she has been transferred to this area.

Children can often go home the same day of surgery. In rare cases, an overnight stay may be necessary (e.g., your child has excessive nausea or vomiting). If your child does stay overnight, one parent is required to stay overnight too.

POST-OPERATIVE INSTRUCTIONS

1. Taking Care of the ear and incision:

If there is a postauricular incision, a plastic ear shield with a velcro head strap will secure gauze against the ear. Please leave this in place for two nights following surgery. You may remove the cup to change the gauze dressing and replace the cup during that time. It is normal for the gauze to be stained with blood from surgery. If there is any active bleeding, apply gentle direct pressure and

contact the office. If the plastic ear shield and head strap slides off of the head/ear, readjust it so it covers the ear. When you do this, make sure that the outer ear is flat against the head and not folded over (folding over can be very uncomfortable). The plastic ear shield can be removed the second morning after surgery and then reserved for use during sleep, if desired.

When you remove the head dressing, you will see that a cotton ball has been placed in the opening to the ear canal on the outer ear. Just below the cotton ball, the ear canal is filled with a combination of a material called Gelfoam (looks like foam pieces and/or crusted blood) and Bacitracin antibiotic ointment that keeps the graft in place while the eardrum heals. Because of this packing, your child may report decreased hearing in that ear for a few weeks to months. You may also see blood-tinged drainage at any time from the ear as the packing dissolves. Most children will report hearing a “crackling” or “popping” noise inside their ear 1-3 weeks after surgery. This sensation is normal and is no cause for alarm. This is a result of the packing dissolving inside the ear. Do not attempt to remove any of the material or clean the ear canal. The only thing you should remove is the cotton ball.

There may be an incision behind the ear closed with absorbable suture (underneath the skin) and possibly skin glue or paper tapes. Try to keep this area as dry as possible. If it gets wet, pat it dry, but do not rub over the incision. If there are little pieces of tape on the skin (Steri-Strips), let them fall off on their own. They may even stay in place until you see your doctor for follow-up after surgery. If skin glue was used, it will begin to dry and flake off over the next 1-2 weeks. Avoid picking at it - it keeps the incision clean and dry. If no skin glue is present, gently clean any crusting on the incision by rolling over it with a Q-tip dipped in ½ strength hydrogen peroxide (equal parts hydrogen peroxide and water) and coat with an antibiotic ointment 2-3 times a day until the incision is no longer draining/crusted. Keeping the incision clean will allow it to heal faster and better, and result in a thinner, nicer looking scar.

2. Bathing: Your child may bathe and wash their hair after surgery, but you must keep the ear canal clean and dry until you see your doctor at your follow-up appointment. During baths or showers, coat a cotton ball with Vaseline (petroleum jelly) and place it in the ear canal. The vaseline will prevent water from seeping into the ear canal. After bathing, replace the cotton with a fresh, clean, and dry cotton ball. During normal activities, keep a clean, dry cotton ball in the ear canal. You can change the cotton ball as often as needed. You will probably need to change it quite often during the day.

3. Activity:

- **After a Myringoplasty:** your child may return to his/her regular activities within 1-2 days after surgery. There is no need to restrict regular activity after your child feels back to normal. Strenuous exercise (such as swimming and running) should be avoided until you see your doctor after the surgery (usually 2 weeks)

- **After a Tympanoplasty:** your child should not participate in PE or sports for 4-6 weeks. Your child **should also not go swimming, fly in an airplane, play wind/horn instruments during this time. Your child should not blow their nose or drink from a straw for 7 days after surgery, and must open their mouth while sneezing to let the pressure out.** The goal of these restrictions is to avoid any sudden pressure changes or high pressure in the middle ear that can push the graft out of place and reopen the eardrum hole.

4. Medications:

- **Pain:** Ear pain and soreness are common after surgery. These symptoms should begin to improve during the first 3-5 days after surgery. Your doctor may prescribe pain medicine to take home for the first few days after surgery. If your child complains of pain in the ear you can safely give Tylenol (acetaminophen), Motrin (ibuprofen) or other pain medication prescribed by your doctor.

- **Antibiotic Ear Drops:** Your child will be given a prescription for an antibiotic ear drop. Start using these 7 days after surgery and continue to use them until your follow-up appointment. These drops help speed up the process of dissolving the packing material in the ear and keep the

ear canal clean. Remove the cotton ball to place the drops in the ear, and then replace the cotton ball. Your child may also be given a prescription for an oral antibiotic.

WHAT ELSE DO I NEED TO KNOW?

1. Dizziness or persistent vomiting are uncommon after eardrum surgery but occasionally occur. Please call our office if your child continues to vomit more than 24 hours after surgery or is having difficulty standing or walking.
2. If a **tympanoplasty** was done, your child will not be able to hear normally in the operated ear until the packing behind the eardrum dissolves. This can take 2-3 months. In fact, the hearing will probably be worse than it was before surgery until the packing dissolves
3. At the first postoperative visit, your doctor may gently clean the ear canal with suction in order to inspect the reconstructed eardrum. You may be asked to use some antibiotic ear drops for a week or two to treat any postoperative inflammation.
4. A hearing test will usually be done again 8-12 weeks after surgery.

WHEN TO CALL OUR OFFICE

Please call the office or after hours number if your child:

- Has a temperature of over 102 F that does not come down with Motrin or Tylenol
- Pus draining from the ear
- Complains of sudden increased pain in the ear
- Persistent vomiting or inability to drink fluids

FOLLOW-UP

We will need to see your child 3 weeks after surgery in the office in most cases. If you do not have an appointment, please call our office to schedule.