

TYMPANOPLASTY/PAPER PATCH MYRINGOPLASTY

AT CHILDREN'S HOSPITAL OF PITTSBURGH OF UPMC, we believe parents and guardians can contribute to the success of this surgery, and we invite you to participate. Please read the following information to learn about the surgery and how you can help.

Fast Facts About Tympanoplasty and Myringoplasty

- Tympanoplasty (tim-PAN-oh-plas-tee) and myringoplasty (mer-RING-go-plas-tee) are surgical procedures to repair a hole in a child's eardrum (tympanic membrane).
- Tympanoplasty and myringoplasty are outpatient surgeries that will be done at the Same Day Surgery Center at Children's Hospital in Oakland, at Children's North or Children's South surgery centers.
- Tympanoplasty and myringoplasty both require general anesthesia (an-es-THEEZ-ya) to make your child sleep during the surgery.
- When general anesthesia is needed, there are important rules for eating and drinking that must be followed in the hours before the surgery.
- Myringoplasty usually takes between 10 and 30 minutes.
- Tympanoplasty usually takes from 2 to 3 hours.
- Recovery from general anesthetic can take several hours.
- Your child might be prescribed medications after the surgery.

What Are Tympanoplasty and Myringoplasty?

A hole in the eardrum or "perforated eardrum" can come from a bad ear infection; a surgical procedure, such as placement of an ear tube; or from injury, such as sticking something inside the ear canal. Although some holes heal on their own, if they last for more than 3 months without infection or drainage, they are unlikely to close by themselves. The decision on how to surgically close a perforation depends on a variety of factors, including the patient's age, and the size and location of the eardrum hole.

The simplest repair is called a myringoplasty. It works best with relatively small holes. In this surgery, the hole is covered with a small piece of special paper or gel foam that temporarily seals the hole, encouraging the body's normal healing processes. Sometimes fat from the child's ear lobe is used as the patch.

Another common surgery for repairing a hole in the eardrum is called a tympanoplasty. The hole is patched with a graft of the patient's own tissue, either a connective tissue called fascia (FASH-ah) or perichondrium (per-uh-KON-dree-um) that come from underneath the skin.



Ear, Nose and Throat



In tympanoplasty, the surgeon slips the new tissue behind or on top of the hole in the eardrum. To hold the tissue in place, the surgeon packs a tiny wad of special material behind it. This material slowly dissolves over the next 2 to 3 months while the eardrum heals.

Sometimes a tympanoplasty can be performed completely through the ear canal. But when the ear canal is too small or the hole is too large to be completely seen through the ear canal, the surgeon must reach the eardrum through an incision behind the ear. Because the incision is behind the ear, no scar is visible after it heals. Packing sometimes also is placed in the ear canal to hold the patch in place during healing.

Home Preparation

When general anesthesia is needed, there are important rules for eating and drinking that must be followed in the hours before the surgery. One business day before your child's surgery, you will receive a phone call from a surgery nurse between 1 and 9 p.m. (Surgery nurses do not make these phone calls on weekends or holidays.) Please have paper and a pen ready to write down these instructions.

The nurse will ask you about your child's medical history, current medications and readiness for the surgery. If you have any questions, you may ask the nurse at this time.

- The nurse will tell you what time you should arrive at the Same Day Surgery Center. Allow enough time for travel and parking. Arriving late may delay your child's surgery or cause it to be postponed.
- The nurse will give you specific eating and drinking instructions for your child based on your child's age. Following are the usual instructions given for eating and drinking. No matter what age your child is, you should follow the specific instructions given to you on the phone by the nurse.

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For children older than 12 months:

After midnight the night before the surgery, do not give any solid food or non-clear liquids. That includes milk, formula, juices with pulp, coffee and chewing gum or candy.

For infants under 12 months:

- Up to 6 hours before your scheduled arrival time, formulafed babies may be given formula.
- Up to 4 hours before your scheduled arrival time, breastfed babies may nurse.

For all children:

- Up to 2 hours before your scheduled arrival time, give only clear liquids. Clear liquids include water, Pedialyte®, Kool-Aid® and juices you can see through, such as apple or white grape juice.
- In the 2 hours before your scheduled arrival time, give nothing to eat or drink.
- For the safety of your child, it is important to follow these specific times for eating and drinking. Remember: If your child does eat or drink after the scheduled times, it will delay the surgery or cause it to be rescheduled for another day.
- Do not give your child any medication containing aspirin or ibuprofen for 10 days before the surgery.
- Do not give your child any natural supplements or homeopathic therapy for 10 days before the surgery.
- Make sure you have non-aspirin children's pain reliever (Tylenol® or acetaminophen), a thermometer, and sterile cotton balls available at home for after the surgery.
- Buy juices, clear soups, and bland foods like bread, rice and oatmeal to have at home for after the surgery.

A Parent's/Guardian's Role During the Surgery

The most important role of a parent or guardian is to help your child stay calm and relaxed before the surgery. The best way to help your child stay calm is for you to stay calm.

- Once your child is registered for the surgery, your child's nurse and doctor will meet with you to take your child's vital signs, weight and medical history.
- The anesthesia doctor will meet with you and your child to review your child's medical information and decide which kind of sleep medication your child should get. As the parent or legal guardian, you will be asked to sign a consent form before the anesthesia is given.
- If you wish, you may stay with your child until just prior to the sleep medication being given, and then you will be taken to the waiting room.
- You may bring along a comfort item—such as a favorite stuffed animal or "blankie"—for your child to hold during the surgery.

Going To Sleep

- If your child is very scared or upset, the doctor might give a special medication to help him or her relax. This medication is flavored and takes effect in about 10 to 15 minutes.
- Young children get their sleep medication through a mask that carries air mixed with medication. Your child may choose a favorite scent to flavor the air flowing through the mask. There are no shots or needles used while your child is still awake.
- Older children may choose between getting their medication through the mask or directly into a vein through an intravenous (IV) line.

While Asleep

- While your child is asleep, his or her heart rate, blood pressure, temperature and blood oxygen level will be checked continuously.
- An intravenous (IV) line for the sleeping medication may be placed in your child's hand.
- A small breathing tube may be inserted in your child's mouth/windpipe. Your child might have a sore throat after the surgery.
- To keep your child asleep during the surgery, he or she may be given anesthetic medication by mask, through the IV, or both.

The Surgery

- In a myringoplasty or tympanoplasty, the surgeon will use a microscope to look at the eardrum perforation through the child's ear canal.
- In myringoplasty, after gently cleaning the ear, the surgeon will insert the paper "patch" or gel foam through the ear canal.
- In tympanoplasty, the surgeon will take a small piece of tissue from under the skin behind or above your child's ear. This tissue is very much like eardrum tissue, and the surgeon will graft it across the eardrum hole. The graft encourages the normal eardrum tissue to grow across the hole.
- The surgeon may apply a bandage across the outside of the ear to protect the patch.

Waking Up

When the surgery is over, the medications will be stopped, and your child will be moved to the recovery room. You will be called to the bedside so that you can be there as your child wakes up.

- It is OK to hold your child in your arms or on your lap.
- Your child will need to stay in the recovery room to be watched until he or she is alert and his or her vital signs are
 stable. Some children take longer than others to wake up after anesthesia.
- Children coming out of anesthesia react in different ways. Your child might cry, be

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fussy or confused, feel sick to his or her stomach, or vomit. Very young children and infants may cry and "arch" their backs. These reactions are normal and will go away as the anesthesia wears off.

- You might notice a band-aid and a little red mark on your child's hand from the IV placed during the surgery.
- Your child will have no memory of the surgery.
- In the recovery room, he or she will be encouraged to drink or to eat an ice pop.

Going Home

- After your child goes home, he or she still might be groggy and should take it easy for the day.
- Your child may resume normal activities at the rate he or she is comfortable with, usually within 2 or 3 days. Sports and vigorous activities must be avoided for 4 to 6 weeks.
- Your child may begin to eat and drink a little at a time and resume normal eating and drinking as long as he or she is feeling well. Clear liquids and bland foods like bread, rice and oatmeal may be given if he or she has an upset stomach.
- A nurse will call you 24 hours after the surgery to check on how your child is doing.

Ear Care At Home

- If your child's ear is draining, you can gently set a sterile cotton ball in his or her ear to absorb drainage, especially for the first 3 to 5 days. Some bloody drainage is expected.
- NOTHING, except eardrops, should be put directly into the ear canal, and only when directed by your surgeon.
- Ear drainage may be gently cleaned from the OUTSIDE of the ear with cotton swabs dipped in hydrogen peroxide, or by using a washcloth with soap and water.
- If your child had an incision behind his or her ear, keep the incision dry for at least 7 days after the surgery.
- Before your child showers or takes a bath, dip cotton balls in antibiotic ointment (such as Neosporin® or bacitracin) and gently place them in his or her ear to keep water out.
- After a bath, gently pat or dab the area behind the child's ear-do not rub it. If there are Steri-Strips—little

tape-like strips—on your child's skin, leave them there. They will dry up and fall off by themselves.

- Your child should not go swimming or fly in an airplane until the surgeon approves it.
- Some types of packing must be removed, and others will dissolve.
- It is very important to keep the follow-up appointments for packing removal and checkups for healing of the eardrum.

Common Symptoms After Tympanoplasty and Myringoplasty

After a tympanoplasty and myringoplasty surgery, you might notice some of the following signs. These symptoms are normal:

- Your child might have bloody discharge or drainage from the ear canal for a few days after surgery.
- Your child might have mild ear pain and soreness after surgery. These symptoms should go away during the first 3 to 5 days after surgery. You may give your child non-aspirin pain reliever, such as Tylenol® or acetaminophen with or without codeine, as directed for your child's age.

Warning Signs After Tympanoplasty and Myringoplasty

Although most children recover quickly from tympanoplasty and myringoplasty surgery with no problems, you should **immediately call** your child's ENT doctor, pediatrician or Children's surgery nurse if your child has any of these symptoms:

- Large amounts of bright red blood
- Severe pain
- Fever higher than 101° F
- Severe nausea or vomiting, or can't keep clear liquids down
- Breathing trouble
- Rashes anywhere on his or her body
- Weakness of the face
- Dizziness/vertigo

Special Needs

If your child has any special needs or health issues you feel the doctor needs to know about, please call the Division of Otolaryngology at Children's Hospital before the surgery and ask to speak with a nurse. It is important to notify us in advance about any special needs your child might have.

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Children's North 2599 Wexford-Bayne Road Sewickley, PA 15143

To see the list of all available patient procedures descriptions, please visit www.chp.edu/procedures.