

Let's Talk About...

Middle ear surgeries

The middle ear is an air-filled space that contains the eardrum and small bones important for hearing. The eardrum or small bones may not develop properly or be damaged by infection or an accident. If this happens, your child may need a tympanoplasty, tympanoplasty with mastoidectomy, or ossiculoplasty.

What is a tympanoplasty?

A tympanoplasty [TIM-pan-oh-PLASS-tee] is a surgery to repair the eardrum (tympanic membrane) using a tissue graft. The surgeon will also check the hearing bones (ossicles) that carry sound from the eardrum to the inner ear. During a tympanoplasty, the surgeon:

- Makes a small opening behind the ear or in the ear canal
- Uses a tissue graft (often from behind the ear) to repair the eardrum
- Puts a piece of dissolvable sponge material in the middle ear and ear canal to keep the graft in place

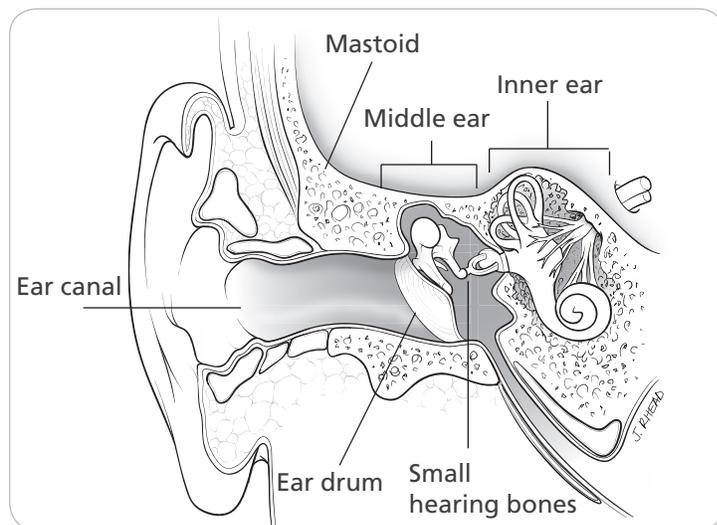
Your child's doctor may ask you to put ear drops in your child's ear before their follow-up appointment. These drops make the sponge dissolve quicker.

What is a tympanoplasty with mastoidectomy?

A tympanoplasty with mastoidectomy [mass-toyd-ECK-toh-me] is a surgery to remove infection or skin growth from the mastoid bone, a honeycomb-shaped space behind the ear canal. The mastoid bone can trap infection or collect a skin growth called a cholesteatoma [co-LESS-tee-ah-TOH-mah]. When this happens, skin and bacteria can damage the hearing bones or other ear structures.

During a mastoidectomy, the surgeon:

- Removes the cholesteatoma
- May remove part of the mastoid bone



- May need to remove some or all of the hearing bones or enlarge the ear canal

Once the skin is removed, there may be a chance to improve your child's hearing by placing an artificial bone implant called a prosthesis [proh-THEE-sis].

What is an ossiculoplasty?

An ossiculoplasty [oh-SICK-you-low-PLASS-tee] is a surgery to reconstruct or repair the hearing bones that don't work. During an ossiculoplasty, the surgeon:

- Makes a small opening behind the ear or in the ear canal
- Usually puts a prosthesis in the ear
- May use a small piece of cartilage (firm tissue) from the ear to provide structural support

What can I expect after my child's surgery?

The doctor will fill your child's ear canal with ointment and may put dissolvable sponge material in the middle ear to keep the graft in place. This material, along with some blood or scabs, may drain from your child's ear canal over several days.

A small amount of blood and drainage is normal, but the drainage should not soak through the dressing completely. Call your child's doctor if there is drainage after a few days, the drainage smells bad, or the bleeding does not stop.

Your child's hearing may be worse for a short time because of the packing material. As this dissolves, your child's hearing should improve. Your child's hearing may also be worse for a while if the doctor had to remove some of the hearing bones.

When should I schedule a follow-up appointment for my child?

Call your child's doctor's office as soon as possible and make an appointment for 4 to 6 weeks after surgery.

When can my child eat?

After your child wakes up from surgery, they can have clear liquids, including water, apple juice, Pedialyte, Gatorade, ice pops, and plain gelatin. These are easily digested. Most babies can take a bottle or resume breastfeeding. Your child may resume a normal diet after leaving the hospital. Start with soft, easily digested foods, and avoid high-fat or greasy foods like hamburgers and pizza for 24 hours after the surgery.

What should I do about nausea and vomiting?

Sedation (medicine that makes your child sleep during surgery), car movement, and pain medicine can all cause nausea and vomiting. This is normal. However, if your child had an ossiculoplasty, vomiting can move the prosthesis out of place. To prevent nausea and vomiting:

- Have your child lie down and try not to move.
- Wait to give your child food or drinks until they feel better.
- Give your child medicine to reduce nausea (if the doctor tells you to).

If your child vomits, wait 30 minutes to let their stomach settle. Then give them small sips of clear liquids or ice chips until they can begin eating and drinking normally.

How can I help my child manage pain?

Your doctor may prescribe pain medicine to give your child until the pain goes away. The pharmacy can flavor the medicine to make it easier to take. Sometimes all your child needs is acetaminophen (Tylenol) and ibuprofen (ask the doctor about this). Your child's doctor may also prescribe an antibiotic and ear drops.

To relieve ear and throat discomfort after surgery, try repositioning or raising your child's head so they can sleep better. Comfort your child and listen to their concerns. An older child can tell you when they are in pain. A younger or developmentally delayed child in pain may moan, cry, make a face of pain, be irritable, or not want to move, eat, or sleep.

How should I care for my child's ears?

- Remove the plastic cover over the cotton ball in your child's ear canal the day after surgery.
- Put some antibiotic ointment or petroleum jelly in the cotton ball and change it once a day (or as needed).
- Remind your child not to blow their nose or sneeze with their mouth closed until the doctor says it's OK. Forceful blowing can dislodge a new eardrum or prosthesis, so dab a runny nose instead.
- Put ear drops into your child's ear canal before their follow-up appointment so the ear packing dissolves quicker (if the doctor prescribes these). This helps prevent cotton fibers from getting stuck in your child's ear canal.

When can my child take a bath or shower?

Your child may bathe or shower right after surgery if they keep the ear canal dry. For the first 2 days after surgery:

- Don't wash your child's hair.
- Put a cotton ball coated with petroleum jelly loosely into the ear canal and cover it with a washcloth to keep water out of the ear canal.
- Keep the incision behind the ear dry (if your child has one).

You can also give your child a sponge bath. Try to avoid water getting into the ear canal for 4 weeks after surgery.

How active can my child be after surgery?

Your child should avoid playing sports and riding bikes for the first 24 hours after surgery. Teens should not drive a car for 24 hours or while taking narcotic pain medicine. It usually takes 1 to 7 days for your child to return to normal activity.

Your child can often return to school 3 days after surgery, but ask their doctor whether they can participate in gym or sports activities.

Have your child avoid water activities, including swimming, diving, and water-skiing, until their doctor says it's OK. Water exposure in the inner ear can cause an infection.

What is normal behavior after surgery?

It's normal for your child to wet the bed or become angry, change their sleep and eating patterns, or have nightmares after surgery. Being patient with your child will help reduce these changes. If your child's behavior changes last more than 3 to 4 weeks, call their doctor.

When should I call my child's doctor?

Call your child's doctor's office at 801.662.1740. If the office is closed, call the Primary Children's Hospital operator at 801.662.1000 and ask for the pediatric ENT (ear, nose, and throat) resident on call.

You should call your child's doctor if your child has:

- Excessive bleeding
- Dizziness (this could be a sign of an inner ear problem)
- Persistent nausea and vomiting
- A fever higher than 102°F (38°C)
- Increased drainage from the wound
- Uncontrolled pain
- Numb fingers and toes
- Signs of dehydration (Dry mouth, less than 6 to 8 wet diapers, or a lack of tears)
- Excessive diarrhea or constipation

If your child has chest pain or trouble breathing, take them to the emergency room or call 911.

Questions for my child's doctor

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