

Myringotomy Surgery with PE Tube Placement Perioperative Instructions

Introduction

This form is intended to inform you about myringotomy (meer-ing-GOT-o-mee) surgery. During myringotomy surgery, a tube is placed in the eardrum. Topics covered include basic function of the ear, what occurs during surgery and postop care.

How does the ear work?

The outer ear collects sound. The paper-thin eardrum separates the outer ear from the middle ear, a tiny air-filled cavity. The middle ear contains the bones of hearing, which are attached to the eardrum. When sound waves strike the eardrum, it vibrates and sets the bones in motion, enabling sound to be transmitted to the inner ear. The inner ear converts vibrations to electrical signals and sends these signals to the brain.

A healthy middle ear contains air, which enters through the narrow Eustachian tube that connects the back of the nose to the ear. A normally functioning Eustachian tube opens to equalize pressure in the middle ear, allowing fluid to exist. Fluid build-up in the middle ear can block transmission of sound, causing hearing loss and/or setting the stage for recurrent ear infections (otitis media).

What is an ear tube?

Ear tubes are small hollow tubes, most often made of soft plastic. They are known by several names, but are most often called PE (pressure equalizing) tubes. After the tube is placed, the pressure in the middle ear normalizes. This allows ear fluid to drain as needed.

What happens during surgery?

Myringotomy for children is usually done under anesthesia in the operating room using a mask and anesthetic gases. For adults and older children, the procedure is usually done in the office using numbing medicine. The ENT surgeon uses a microscope to look into the ear. A small incision is made in the eardrum. Any fluid or infection in the middle ear is evacuated. A PE tube is then placed into the incision where it remains without the use of stitches. If performed in the hospital under anesthesia, most children will go home a few hours following surgery.

In most cases, the eardrum will naturally push the tube out of the eardrum over time. Most often, this will occur 2 to 36 months after the tubes have been placed. Usually, when the tube has fallen out, the child has outgrown the need for tubes. In most cases, when a tube falls out it goes unrecognized by the patient.

What is the purpose of myringotomy surgery?

- Treats ear infections that have not responded well to other treatments
- Improves hearing loss caused by fluid build up
- Improves speech development delayed by hearing loss
- Treats recurrent Eustachian tube dysfunction
- Treats ear problems associated with cleft palate

Benefits of myringotomy surgery may include:

- Fewer and less severe ear infections
- Hearing improvement
- Improvement of speech

What are the risks of surgery?

- Difficulties related to anesthesia
- Failure for the incision to heal after the tube falls out (tympanic membrane perforation)
- Scarring of the eardrum
- Hearing loss
- Persistent ear drainage
- Pain
- Tubes falling out early, requiring that another set be inserted
- Failure of the tube to fall out, requiring a simple procedure for removal

What can be expected after surgery?

Most patients recover from myringotomy surgery quickly. Most children resume normal activities within 24 hours of surgery. It is important to know the following information when caring for your child after ear tube surgery:

Pain and fever – Most patients do not experience significant pain following surgery. If a child is fussy or runs a fever, give acetaminophen (Tylenol) or ibuprofen according to package instructions.

Nausea and vomiting – A few patients experience nausea and fatigue from anesthesia. Usually these symptoms pass after a few hours. Call your surgeon if these symptoms persist for more than 12 hours after surgery.

Eating and drinking – On the day of surgery, gradually resume a normal diet. Liquids or light meals are usually well tolerated. If nausea is present, wait an hour, then promote intake of clear liquids.

Protection from water – It is acceptable to swim in a chlorinated pool with PE tubes in place, but diving or swimming with the head deep (below three to four feet) is not recommended. Showering or splashing in the bathtub is acceptable. However, the head should not be submersed into bath water. **Do not swim in an ocean, lake or river without waterproof ear plugs.** If any of the above prohibited water activities are desired, speak with your surgeon about acquisition and use of ear plugs.

Hearing – Most patients experience an immediate improvement in their hearing following surgery. This may cause children to be frightened by normal sounds because they will seem loud. Children usually adjust quickly to these sounds.

Drainage – You may see drainage from the ear(s) for up to one week after surgery. This is normal. The drainage may appear as crusted material or as a dripping liquid. The color of the drainage may be clear, blood-tinged or colored.

Ear drops – After surgery, your ENT surgeon may prescribe drops to deal with any encountered infection at the time of surgery and/or to prevent the build-up of blood and other fluids that have the potential to block the tubes.

Ear infections after surgery – As a rule, ear tubes reduce the frequency of ear infections. However, about 10 percent of patients will develop frequent ear infections even after the placement of tubes. When watching for ear infections after surgery, it is important to know the following:

- For the first seven days after surgery, drainage from the tubes is normal. However, should this drainage persist for greater than a week, contact your surgeon.
- After seven days, drainage that appears may indicate an infection. Drainage may or may not be accompanied by ear pain, fullness or fever. When this occurs, consult your primary care physician. As a rule, ear infections that drain from PE tubes are best treated with antibiotic drops. If drainage persists despite these efforts, consult your ENT surgeon.

Extrusion of tubes – As mentioned, tubes will generally fall out after 2 to 36 months. Your primary care physician and your ENT surgeon can help determine when the tube(s) are out and when the eardrum(s) are healed. Rarely, tubes will not fall out on their own within the usual time. This may result in the need for tube removal by your ENT surgeon. Most children do not need a second set of tubes. However, for a small percentage of patients, your surgeon may recommend a second set of tubes and/or removal of the adenoid tonsil that has the potential to play a role in development of recurrent ear infections or middle ear fluid.

Follow Up Care

Your surgeon and his staff will arrange follow up appointment. If you have any questions or concerns before that time, contact your surgeon.

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