Myringotomy & Tympanostomy Tubes

What is a Myringotomy?
A surgery to make a small opening in the eardrum is called a myringotomy. (This word sounds like my-rin-GOT-oh-me.) The tubes that are put into the opening are called tympanostomy tubes. (This word sounds like tim-pan-OST-oh-me.)

Why does my child need tubes?
Your child’s Otolaryngologist (ENT - Ear, Nose & Throat Doctor) may suggest tubes because your child:

- has had a number of ear infections.
- has a build-up of fluid in the space behind the ear drum. This space is called the middle ear.
- has an eardrum that is not moving back and forth or vibrating freely.
- has inward movement or retraction of the eardrum.

Tympanostomy tubes help the middle ear be filled with air instead of fluid. These tubes let fluid drain out of the middle ear, which improves hearing.

Normally, the middle ear is filled with air. There is a tube which connects the middle ear to the back of the nose. This is called the eustachian tube. (This word sounds like you-stay-shun.) The eustachian tube allows air in and out of the ear so that the pressure on both sides of the eardrum is the same. The equal pressure allows the eardrum and the three tiny middle ear bones, also called ossicles, to vibrate when sound waves bounce onto the ear drum.

Children can get fluid build up in their middle ear because their eustachian tube is shorter than an adult’s. When fluid builds up an infection is more likely to occur in the middle ear. Fluid in the ear may cause hearing loss because the eardrum cannot vibrate freely. Your child may have an uncomfortable feeling of a plugged or popping ear.

What happens during the surgery?
Your child is given medication so she or he is asleep for the surgery. This is called general anesthetic. The surgery takes about 5 to 10 minutes.

The ENT Doctor looks through a microscope and makes a small opening in the ear drum. Any fluid which has collected behind the eardrum drains through the opening.

A small plastic tube, like a tiny straw, may be placed in the opening. The tube is 2 to 3 millimeters long. It usually can only be seen in the ear with special equipment.

The tube allows air into the middle ear. This keeps the air pressure inside the middle ear equal to the air pressure outside of the eardrum.

The tube usually improves hearing and prevents further inward movement or retraction of the eardrum.

What should I expect for my child after the surgery?

- Your child may complain of an ear ache or discomfort in the ear.
  - If this occurs, give pain medication called acetaminophen (e.g. Tylenol® or Tempra®). Read the package to know how much to give and how often to give it. If there is discomfort, it is usually mild and should only last less than 8 hours.

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Your child may be sick to his or her stomach after the surgery.

- Feed your child very small amounts of liquids you can see through such as ginger ale, water, or apple juice, not milk. Increase the amount slowly. Your child can eat what he or she usually does as soon as he or she feels well enough.

A small amount of bloodstained fluid draining from the ears for 1 to 2 days after the surgery.

- This is normal. If there is yellow, smelly or bloody ear discharge after the 2nd day, please contact the ENT Clinic Nurse or your child’s ENT Doctor. This type of drainage is called otorrhea. (This word sounds like “oh-tor-re-a.”)

Give ear drops for the first few days if your ear doctor ordered them. This may help to prevent the tube from becoming blocked. Keep the extra drops in case your child needs them later to treat otorrhea.

You will not be able to see the tubes in place. Your child will not be able to feel them. Most tubes slip out of the ear drums themselves and the ear drums heal on their own. This usually happens about 6 to 9 months after surgery. For some children it happens sooner and for other children it takes longer.

When can my child start normal activities?

- Your child can start to do their normal activities the day after the surgery. This includes going to school.
- If it is cold, windy weather your child may be more comfortable if the ears are covered.
- Plane flights and changes in height will not bother your child’s ears as long as the tubes are in place and open.

What are the most important things for me to do?

Talk with your child’s ENT Doctor to find out when your child can start swimming and whether he or she recommends waterproof ear plugs for swimming and bathing.

1. Keep your child’s ear free of fluid.

   Bath Care:
   - Keep bath water out of the ears. Keep your child sitting up in the bath. Do not let your child put her or his head or ear under the bath water. Keep the water level low.
   - Use small amounts of shampoo to wash your child’s hair. Rinse the hair with clean tap water.

2. Do proper ear care.

   - Some doctors suggest children wear ear plugs when bathing. Check what your child’s ENT Doctor recommends.

Swimming:

- Swimming in pools with chlorine or in most areas of the ocean is less likely to cause otorrhea than swimming in lakes, ponds, lagoons, rivers, or hot tubs. Water in lakes, ponds, lagoons, rivers, bath tubs and hot tubs usually has more bacteria and germs in it and is more likely to cause a clearish discharge, pus or blood to drain from your child’s ears. This is called otorrhea.

Your child can take swimming lessons with tubes in her or his ears. Keep the ears under water only a second or two. Make sure your child’s head does not go below the water surface more than three hands lengths or 40 centimetres. No diving.

If your child needs ear protection…

- Make a simple waterproof ear plug by covering a marble sized cotton ball with petroleum jelly.
- Silicone Ear Putty or non customized ear plugs might also serve as waterproof ear plugs. Silicone Ear Putty is one size fits all.
- The non-customized ear plugs need to be fitted by the ENT Clinic Nurse before buying them at the BC Children’s Gift Shop. Foam or ribbed ear plugs are not waterproof.
- Buy specially made waterproof ear plugs for your child. These are called swim molds. The ENT Clinic can give you a list of places that make them. It is important for you to know that they can be expensive, can be easily lost in the pool and your child may out grow them in 6 to 12 months.
- Buy an “Aqua Earband”. It is made of material that gives an extra layer of waterproof protection. You can buy it at the BC Children’s Gift Shop. Your child’s ENT Doctor will let you know, during one of your follow-up visits, when your child no longer needs to take the above precautions.

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   - Use a moist cloth to clean the outer part of the ear. Wax usually comes out on its own. **DO NOT clean any part of the ear canal with cotton tipped swabs.** It is not safe. They can harm the ear drum or skin in the ear canal.

   - **DO NOT** use store-bought treatments (e.g. Debrox® or Ceruminex®) or home remedies (e.g. oil or peroxide) or flush your child’s ear with water.
If your child has a clearish discharge, pus or blood draining from her or his ears, it is best treated with the ear drops the doctor prescribed to prevent the tube from being blocked.

- First soak up the discharge with a twisted piece of Kleenex.
- Have your child lay down with the affected ear facing the ceiling.
- Place the drops in the affected ear(s).
- Pump the skin and cartilage in front of the ear which is called the tragus.
- Do these steps two times a day for 7 days until the otorrhea stops.
- DO NOT put alcohol in the ear canal. Also check to make sure it is not an ingredient in over-the-counter medications you have for your child’s ear.

### 3. Watch for signs of infection.

**Call the ENT Clinic Nurse if:**

- your child’s earache does not go away within 5 days of the surgery.
- drainage from your child’s ear is yellow or smelly or both yellow and smelly.
- your child’s temperature goes above 38 degrees Celsius or 100 degrees Fahrenheit for more than 3 days.

Children with tubes in their ears can still develop middle ear infections. Your child may have an ear infection that needs treatment with antibiotic eardrops. Your child’s ENT Doctor will order these. Follow the directions carefully when giving the drops.

- If after using them awhile, your child says the drops sting or that he or she can taste the drops, this usually means the ears are clear of infection. Stop using the drops.
- If discharge is still there for 3 to 4 days after using the drops, call the ENT clinic so your child can be checked out. Your child needs to be seen at the ENT clinic in the next 3 to 4 days.

### 4. Follow up with your child’s ENT Doctor.

Call the office at 604-875-2113 to make appointments:

- 6 to 12 weeks after the surgery.
- Every 6 months after the first visit for the next few years until the tubes fall out, the ear drums have healed, and your child’s middle ear has not had fluid in it or an infection for at least one winter.
- A hearing test is usually done at the same time. Hearing tests are currently available at BC Children’s Hospital in the morning clinics.

### 5. Call if you need help or have a question.

The ENT Clinic Nurse is happy to help you. Please feel free to call: 604-875-2345 ext. 7053 or call toll free in BC: 1-888-300-3088 ext. 7053

It’s good to ask!