

## **Bilateral Tympanostomy with Tube Placement (BTT)**

**What is it?** BTT is the most common surgical procedure an ENT surgeon will perform on a child. BTT is usually performed to treat recurrent otitis media (infections that take place behind the eardrum) and chronic otitis media (keeping fluid behind the eardrum). The procedure is done in the operating room with the child asleep (general anesthetic). The procedure usually lasts around 10 minutes. Afterward, the child is monitored for a brief time in the recovery room and is then allowed to go home.

**About the anesthetic:** The child is taken to the operating room and allowed to breath anesthetic gas out of a mask until they fall asleep... this generally takes about 30 seconds. Some sedation may be given prior to going to the operating room if the child has excessive anxiety and will not separate easily from the parents. Under normal circumstances, no IV catheter and no breathing tube is used during the procedure. A member of the anesthesia department will administer the anesthetic, and all of the routine intraoperative monitoring devices are used. In an otherwise healthy child, the anesthetic should be safer than your car ride to the hospital. Parents should remain in the waiting room while the child is in the operating room. Your doctor will talk to you after the procedure is finished.

**About the surgery:** A microscope is used to examine the ear and clean any wax out of the ear canal. A small knife is used to make a small opening in the eardrum. If there is any fluid behind the eardrum, it is suctioned out. Cultures are sometimes taken of the middle ear fluid. A tiny tube is then placed in the eardrum which functions to keep the hole open in the eardrum. Antibiotic drops are then placed in the ear canal.

**What to expect in your child after surgery:** In general, this is a very easy operation for the child to tolerate. Within an hour after surgery, the child should be able to resume normal activity and diet. For reasons related to the anesthetic, the child should stay with a family member after being discharged from the hospital. However, the child should be able to return to daycare/school on the day after surgery.

**What to expect following ear tube placement:** Although it is impossible to predict how well the child will respond to BTT, the vast majority of children will have a dramatic reduction in the number of ear infections. Many have no infections while the ear tubes are in place and patent. If the child had BTT to treat chronic middle ear fluid, you may see some drainage of fluid (sometimes bloody) from the ears for a couple days following surgery...this is normal. However, if the drainage persists after the child finishes the prescribed ear drops, please call us in the clinic to ask for further treatment. If the child has hearing loss related to the presence of fluid behind the eardrum, this is improved immediately after the surgery.

**About ear drops:** Ear drops are usually used for a short period of time after surgery. Your doctor will specify how to use them on the day of surgery. After finishing the ear drops, keep the bottle in the refrigerator as they may be used in the future should your child have another ear infection.

**What about water in the ears?** The current recommendation regarding getting water in the ears after BTT depends on the child's age and his/her extent of exposure to water. In general, casual exposure to non-soapy water in the bathtub and surface swimming in a pool should not require ear plugs. However, if the child does a lot of diving below the surface of the water or if the ears could be exposed to dirty water (lake or ocean water) then ear plugs should be used.

**What about ear infections after BTT?** If your child experiences an ear infection while the ear tubes are in place and patent, you will see drainage from the ear(s). The drainage will look like mucus or pus and can

sometimes have some blood with it. If this happens, we can usually treat it easily with ear drops, and sometimes an oral antibiotic is also used.

**Natural history of BTT:** The function of the ear tube is to keep a hole open in the eardrum. BTT tends to work very well for treating fluid and reducing the number of ear infections only while they are in place in the eardrum and remain open. Once the ear tubes fall out, some children will resume having ear problems. Some of these children may benefit from having the ear tubes replaced. Ear tubes will usually fall out of the eardrum one to two years after surgery. It is unusual for the tubes to fall out prior to this. We prefer to do periodic examinations of the child in the clinic to monitor this progress. If the tubes remain in place in the eardrum for up to three years, it may be recommended that the tubes be removed.

**Complications of ear tubes:** The likelihood of having a complication related to the ear tube placement is extremely low. The most common complication we see is keeping a hole in the eardrum after the ear tube extrudes. This happens in one or two kids out of a hundred and can be fixed easily. Much less common complications include hearing loss and abnormal healing of the eardrum.