

What causes ear infections?

The underlying cause of ear infections is poor Eustachian tube function. The Eustachian tube keeps air pressure balanced and also helps drain fluid from the middle ear. Because the Eustachian tube is smaller and at a horizontal angle in younger children, they are often prone to more ear infections. By the time a child reaches age 5, the Eustachian tube has widened, become longer and developed more of a downward angle, allowing for drainage of the middle ear, thus leading to fewer ear infections. Teething, swollen gums, "swimmer's ear" and a sore throat may all have similar symptoms as an ear infection, but do not truly cause an infection of the middle ear.

What should be done for a child's ear pain?

Treat children under age 6 months with antibiotics. For children ages 6 to 23 months, use antibiotics if severe pain or fever exists, otherwise observe the child and allow the body to fight the infection naturally. Observe children age 2 and older for 48 to 72 hours prior to starting antibiotics. Relieve pain, especially in the first 24 hours, with Tylenol or ibuprofen. A cold or warm compress over the painful ear for 20 minutes can provide comfort. Keeping the head elevated at a 45-degree angle can also decrease ear pain. Prevent ear infections by reducing risk factors such as bottle propping, exposure to second hand smoke or to large numbers of other children.

When are tubes needed?

Tubes are warranted when a child has recurrent ear infections or when fluid is present in the middle ear longer than 12 to 16 weeks. There are no universally-accepted, absolute indications for tube placement. The necessity for tubes becomes a judgment call for the parents, their pediatrician and otolaryngologist (ear, nose and throat specialist). About 1 million children receive tubes each year. It is the most common minor surgery performed on children.

What are tubes?

Ear tubes, known technically as tympanostomy tubes, are about 3 millimeters in diameter and made of silicone, plastic or metal.

The tube holds open a tiny hole in the ear drum, allowing air to reach the middle ear space, bypassing the underlying Eustachian tube dysfunction. The tubes are designed to last varying periods of time.

The most common tubes are short-acting which stay in the ear 12 to 18 months before falling out on their own. It is a simple short operation that successfully and dramatically improves hearing.

Tubes are inserted by means of a short operation, taking 5 to 10 minutes that is performed as an outpatient procedure. There is minimal discomfort afterward.

While tubes are in place, the child should wear molded or wax ear plugs while bathing and swimming to keep water out of the ear.

About 85 percent of children suffer far fewer middle ear infections and have much less need for antibiotics in the ear after tube placement. Any hearing loss caused by fluid build-up or negative pressure is corrected with the tubes.

By the time the tubes work out of the ears, about 80 percent of children will have attained appropriate Eustachian tube function.

The other 20 percent will need more than one set of tubes and/or their adenoids removed.

We're Ready for Your Call

For questions about childhood health and development, including those on ear infections, or for assistance in choosing a pediatrician, our pediatric nurses can help.

Call the St. Louis Children's Hospital Answer Line at **314.454.KIDS** (5437) or **800.678.KIDS** (5437).

This information was provided by the Department of Otolaryngology and the Answer Line at St. Louis Children's Hospital.