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EAR INFECTIONS (OTITIS MEDIA/OTITIS EXTERNA) AND EAR TUBES

What is Otitis?

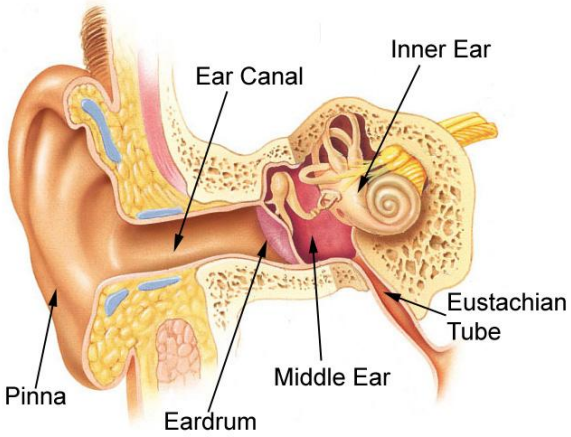
Otitis refers to an infection of the ear. There are two types: otitis externa (outer ear infection) and otitis media (middle ear infection).

What is Otitis Externa?

Otitis externa is an infection in the outer ear canal. Another name for this infection is "swimmer's ear" as this infection can be associated with exposure to water. This can make the skin more susceptible to infection by bacteria, yeast, and fungi. The symptoms include redness and swelling of the skin in the ear canal, significant pain of the ear canal and drainage. Treatment for this infection includes antibiotic or antifungal eardrops and possibly oral (by mouth) antibiotics. Prevention is advised in recurrent cases. Preventive treatments can include rinsing the ears with water and white vinegar mixed 50/50 after swimming. Ready-made eardrops for this purpose are also sold at various pharmacies.

What is Otitis Media?

Otitis media is also known as a middle ear infection (an infection in the space behind the ear drum). For children, otitis media is one of the most common infections. More than 90% of all children will have at least one infection by two years of age. There are two common forms: 1) recurrent "acute" infections, or 2) long lasting "chronic" infections. Persistent fluid behind the eardrum is known as otitis media with effusion.

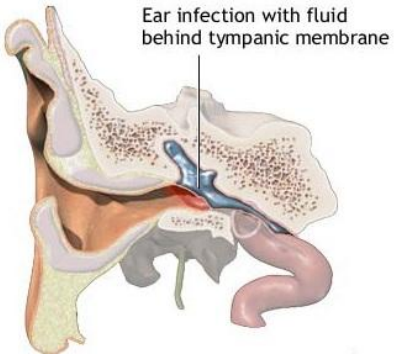


What Causes Otitis Media?

Ear infections can be caused by bacteria or viruses. Risk factors include day care (usually with more than ten children) and smoking in the home. Allergies may contribute to ear disease but are not usually the direct cause of infections. Congenital syndromes such as Down syndrome, Treacher-Collins, and patients with cleft palate (Pierre-Robin) also have more infections due to difficulty in equalizing the pressure behind the ear drum.

How common is otitis media?

Middle ear infections are the most common reasons children present to the doctor's office. By three years of age, most children have had at least one ear infection, and 30% of children have had three or more episodes. If ear infections start before 6 months of age, your child may be "otitis prone" and may have more than the usual number of infections. Also, infections in newborn infants can lead to more severe complications of otitis media when compared to older children.



How do I know if my child has ear infections?

Ear infections, for some children, are very painful. Commonly associated symptoms include pulling on the ears, increased irritability or behavioral changes, awakening at night, fever, decreased appetite, not wanting to lie flat, or a loss of balance. Some children have little or no discomfort, and ear infections in these children may be picked up only upon routine doctor visits or as part of an examination for another complaint.

When should I go see the doctor?

If your child has the signs and symptoms of an ear infection, see your pediatric doctor without delay. Although doctors may differ in their opinion on how to treat ear infections, it is important for your child to be followed closely until the ear infection resolves completely. This means that the infection as well as any remaining fluid in the middle ear is gone. The fluid in the middle ear may remain up to 3 months after a typical ear infection has resolved.

What are some of the complications of untreated otitis media?

Otitis media will often resolve without any treatment. However, possible complications of untreated otitis media include a hole (perforation) of the eardrum, hearing loss, and mastoiditis (see below). Even more life threatening complications, such as meningitis (infection in the fluid surrounding the brain), brain abscess (pocket of pus in the brain), and/or blood clots in the veins in the head brain, are uncommon, but can occur.
Because of the severity of these possible complications, many physicians recommend treatment for most ear infections with antibiotics.

What is mastoiditis?

Mastoiditis is infection or inflammation of the mastoid bone (the big hard bump of bone in the skull behind the ear). Inside of the mastoid bone there is a "honeycomb" (like inside a bee hive) area filled with air. Mastoiditis occurs when otitis media spreads to this air filled area inside the mastoid bone. This complication of otitis media is uncommon today; because of the success antibiotics have in clearing up ear infections. Suspicion of mastoiditis occurs when the patient develops redness, tenderness, and swelling behind the ear. Antibiotics are used (usually in a vein) to treat this infection. If antibiotics are not effective in treating the infection then a surgery called a mastoidectomy is considered.

What options are available to treat ear infections?

Because most ear infections are painful or may lead to complications, the most common treatment is with antibiotics and pain medication (Tylenol, ibuprofen, or numbing ear drops). If the infection is severe, a shot may be required to help reduce symptoms more quickly.

Decongestants and antihistamines have not been found helpful in clearing ear infections unless the child has significant allergies contributing to the ear infection.

If the ear infections keep recurring, but completely clear in-between, your pediatrician or family doctor may suggest prophylactic (preventive) therapy. This involves daily low dose antibiotics (amoxicillin or bactrim) for 4-6 weeks. This is not recommended for children in day care.

If your child has fluid that will not clear, long-term antibiotic therapy is not needed. Ninety percent of children will resolve persistent fluid from the middle ear within 3 months after the infection.

When Should I See an Ear, Nose and Throat Specialist for ear infections/fluid in the ear?

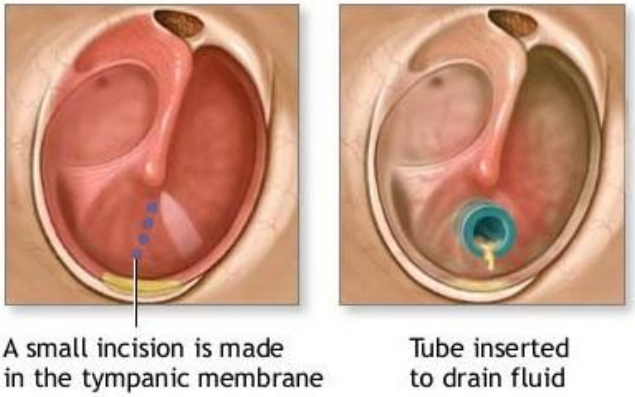
If you are wondering when your child should be seen by a specialist, the following are guidelines which have been jointly adopted by the American Academy of Pediatrics and the American Academy of Otolaryngology (ear, nose and throat physicians):

1. If your child has three or more infections prior to six months of age.
2. If your child has four infections in six months or
3. If your child has six or more infections in a year.
4. If your child has fluid that lasts more than three months with associated hearing loss.
5. If your child has signs of significant hearing loss.

When are Ear Tubes a Consideration?

Tympanostomy tubes (ear tubes) may be suggested when your child has failed to improve with antibiotics or has fluid which will not clear after an appropriate length of time. Tubes are especially helpful in reversing the hearing loss due to fluid trapped behind the ear drum.

Tympanostomy tubes are small plastic or silastic tubes that allow more normal movement of air behind the ear drum. Tubes usually fall out of the ear (as the ear drum grows) within one to two years unless specified as "permanent" by your doctor.



Placement of tubes occurs through the ear canal under a brief (ten minutes) general anesthetic. The procedure is painless and allows your child to resume normal activity upon leaving the hospital.

FREQUENTLY ASKED QUESTIONS ABOUT TYMPANOSTOMY TUBES (EAR TUBES)

1. **Do tubes cause scarring of the ear drum?**
   The tubes used in our practice are unlikely to cause changes in the ear drum. However, if ear drum scarring occurs due to tubes or repeated infection, this rarely causes hearing loss.

2. **Do the tubes ever fall in the ear instead of out?**
   Very rarely, tubes migrate into the middle ear instead of out and into the ear canal. They can be easily retrieved under a brief anesthetic and the ear drum patched. In some instances, your physician may recommend leaving the tube alone.

3. **Can my child reach the ear tubes?**
   No, the ear drum (and tube) cannot be reached without a long narrow instrument.

4. **When the tube falls out, is there a hole left in the ear drum?**
   The ear drum heals as the tube is pushed out. Very rarely, the ear drum does not heal completely, leaving a hole. This can be repaired by "patching" the ear drum, a common and highly successful procedure.

5. **Do tubes cause drainage?**
   No. Once tubes are placed, the ear should not drain except in the first three days after surgery. If drainage occurs, this is usually the result of a cold, sinus infection, adenoid infection, or rarely, a mastoid infection.

6. **Will my child need a second set of tubes?**
   Generally, no. About 20% of all children who get tympanostomy tubes in the first place need a second set. Risk factors include: infection starting before six months of age, adenoid disease, immune system problems, cleft palate and sinusitis.

7. **Are there any restrictions involved after the tubes are placed in my child?**
   Diving should be avoided while the tubes remain in the ears. In addition, ear plugs or ear putty will be recommended if the child lies with ears submerged in bath water, swims deeper than 18 inches, or swims in the lake water.