

Ear Infections

Why does my child get ear infections? Ear infections, or otitis media, are very common in children as well as infants. Otitis media is an infection of the middle ear, behind the eardrum. Fluid may accumulate in the middle ear, and become infected from bacteria or viruses which reside in the back of the nose or the throat. The middle ear is connected to the nose and throat by the eustachian tube, one on each side. This muscular tube is immature in both its size and orientation in young children. As they grow, the tube changes direction from a horizontal angle to more of an acute angle, allowing for better drainage and pressure equalization in the middle ear. Children may also have enlarged adenoids contributing to recurrent ear infections. Adenoids are a mass of lymphoid tissue that sit behind the nose. If they are enlarged, they may block the ability of the eustachian tube, which extends from the middle ear to the adenoid region, to allow fluid drainage from the middle ear. Bacteria may also remain in the adenoid region, and may further lead to risk of recurrent ear infections.

There are certain '**risk factors**' which have been shown to put a child at increased likelihood of having recurrent ear infections. For infants, taking the bottle to bed at night may result in **bottle feeding** 'refluxing' into the back of the nose, and even eustachian tubes. This may cause swelling; or even fluid accumulation, in the middle ear. Breast feeding is associated with a lower incidence of recurrent ear infections in infants. The combination of feeding in an upright position and exposure to protective maternal antibodies contribute to this.

Tobacco exposure is known to increase the incidence of otitis media in infants and young children. You should not smoke. It is bad for you and for those around you. That goes without saying, but still needs to be said. Higher incidence of recurrent ear infections in children of smokers is yet another reason to stop.

Daycare is a catch 22. It is an integral important part of society in families with two working parents. However, there has been an increased overall incidence of recurrent otitis media in children in daycare. Exposure to many children with a multitude of infections has been associated with higher incidence of recurrent ear, nose, and throat infections in young children.

Antibiotics yet another catch 22. Many ear infections are treated with antibiotics. This is the standard treatment. However, the more antibiotics that are used, the more likelihood that 'resistant' bacteria can grow. These 'resistant' bacteria are organisms that have 'seen' certain antibiotics before, and select out 'stronger' strains that can survive despite antibiotics.

What are ear tubes? Ear tubes are small plastic or metal tubes that are inserted in the eardrum. A tiny opening, the size of a dash on this page, is made in the eardrum to drain the fluid. The tube, which looks like a tiny spool, is placed in the eardrum opening and rests in the eardrum by itself. The central opening of the tube is approximately one millimeter. The tube will in most cases fall out on its own within 9-18 months. (average

of one year). Tubes act as 'mature' eustachian tubes that allow fluid drainage from the middle ear to the outside in the event of ear infections. They do not prevent ear infections, but allow drainage when infections occur. They may also significantly improve hearing.

Complications of otitis media: Like any illness, there are 'major' and 'minor' complications from ear infections.

Hearing loss: Recurrent ear infections, either from persistent fluid in the ear, or from recurrent acute infections, may cause hearing loss. An infant under 12 months who does not seem to respond to sound may have hearing loss. An infant at 18-24 months who does not speak single words yet may have hearing loss. Toddlers and young children who seem to 'ignore' you may have hearing loss. This may be hard to evaluate, as a certain degree of 'selective' hearing may be normal in this age group. If the television or radio is at rock concert levels in order for your child to hear it comfortably, he or she may have hearing loss. If there is an attention problem at school, your child may have hearing loss.

Major complications: High fever, stiff neck, swelling behind the ear, foul drainage from the ear, or weakness of the muscles of the face are some of the major complications from Otitis media that should be attended to on an emergency basis.