



FEBRUARY 2009 Newsletter

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Are your child's ears burning? Is someone talking about them, or do they have an ear infection?

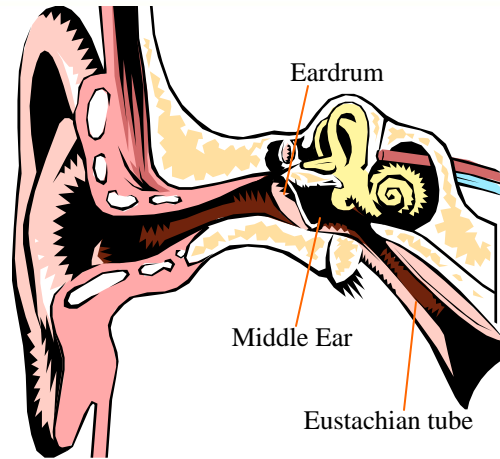
One of the most common reasons children under the age of 5 years old make visits to the doctor's office is because of an ear infection. Otitis media, or infection of the middle ear, occurs most frequently among children ages 6 months to 5 years; most children have at least one episode of otitis media by the age of 2 or 3 (Mayo). Usually the trip to the medical clinic for an ear infection



will have 1 of 2 results: watch and wait or prescription antibiotics. Is there anything more frustrating to a parent who has been up all night with a screaming child, with a painful ear, than to be told to monitor the situation and wait it out? Most of us want the antibiotics so our child can get some sleep! But what if antibiotics don't help?

What is otitis media?

There are 2 main types of otitis media: serous and acute. Serous otitis media is when there is a build-up of fluid inside the middle ear, but there is no infection present. Acute otitis media is when the fluid that has built up in the middle ear becomes infected due to exposure to bacteria or a virus. Both conditions can be quite painful, and both are what we commonly refer to as "ear infections." Now the big question is, what causes the fluid to build up in the middle ear? Usually, it is due to a simple drainage problem. The drainage system of the middle ear is quite simple: the Eustachian tube runs from the middle ear to the back of the throat.



The Eustachian tube opens briefly when you swallow or yawn, allowing fluids to drain from the middle ear to the throat. A child's Eustachian tube is shorter and more horizontally oriented than an adult's. As children grow, their Eustachian tubes lengthen, becoming wider and more vertical, making it easier for the middle ear to drain. This is why the occurrence of middle ear infections decreases dramatically as one ages.

So, let's recap. The most common underlying cause of otitis media is a problem with the drainage system of the ear: the Eustachian tube. By not allowing the fluids from the middle ear to drain, it causes the fluid to build up and put pressure on the eardrum (called **serous otitis media**), which can be very painful. If the child comes in contact with bacteria or a virus, the fluid in the middle ear can become infected (called **acute otitis media**). If there is bacteria in the middle ear and antibiotics are prescribed, the antibiotics will only attempt to rid the body of the bacteria; it will not do anything to drain the fluid from the middle ear, and will not directly decrease the pain your child is experiencing. Another thing to be aware of is if the antibiotic being used is the correct one for the bacteria present. Antibiotics are usually prescribed to treat the most common strains of bacteria, which may or may not be the strain causing the infection.

Why not give them antibiotics, just in case?

If your child has serous otitis media, or fluid build-up, in the middle ear without the presence of bacteria, the use of antibiotics would be fruitless. The use of antibiotics when they are not necessary may increase the spread of drug-resistant bacteria. This can make future infections very challenging to treat. Oftentimes, a child's immune system is strong enough to fight the infection without the use of antibiotics. But sometimes antibiotics are required so that the infection does not spread to surrounding tissues. Up to 80% of ear infections resolve without the use of antibiotics. In fact, a review of studies by the American Academy of Pediatrics showed no significant difference in symptom relief after a 24-hour period between children treated with antibiotics and those who were not (Mayo). Visit the Mayo Clinic website for further information regarding the pros and cons of using antibiotics for middle ear infections.



What about ear tubes?

Ear tubes are often suggested if a child has chronic fluid build-up in the middle ear, or has repeated middle ear infections. Ear tube placement is a surgical procedure that requires general anesthesia, which can have its own complications including allergic reaction, fever, breathing difficulties, and heart irregularities.

During the surgery, the surgeon makes a small incision in the eardrum and then inserts a tiny metal or plastic tube into the hole in the eardrum. This tube then does the job of the Eustachian tube, draining excess fluid from the middle ear and balancing pressure inside the ear.

The risks of insertion of ear tubes include bleeding and infection, tearing or scarring of the eardrum, hearing loss, or infection of the tubes themselves. The tubes are left in the ears for 6-12 months, and will eventually fall out themselves. If the tubes do not stay in or fall out too soon, additional surgery may be prescribed to insert another set of tubes.

My child has an earache, not a backache. Why would I go to the Chiropractor?

Chiropractic is gaining popularity in the general population as a method of draining the middle ear. Chiropractors assist the body to work as it is supposed to. The Eustachian tube should be draining the middle ear, so Chiropractors focus on the reason why the tube isn't doing its job. Babies and children often have joints in their upper necks that are restricted in their movement, for various reasons from the trauma of birth to daily bumps and falls. When these joints are not able to move correctly, it causes the muscles in that region to become tight and sometimes inflamed. This can put pressure on surrounding tissues, including nerves and other structures that can cause blockage of the Eustachian tubes, making them unable to open up enough to drain the fluid from the middle ear. Through very specific Chiropractic adjustments, these joints regain their motion, the muscles are able to relax, and the pressure is taken off the Eustachian tubes, allowing the ears to drain. The Chiropractic adjustments that are administered to babies and children are usually painless and very gentle, usually consisting of a light finger-tip adjustment, placing pressure in very specific points. A study about the effectiveness of Chiropractic with acute otitis media showed that over 90% of children show improvement, 75% in 10 days or less, with over 40% in only 1 or 2 treatments. Serious side effects of spinal adjustments are very rare. The estimated risk of serious complications from neck adjustments is 6.39 per 10 million adjustments, and for low back adjustments it is 1 per 100 million adjustments, according to an article in *Integrative Medicine*. If you have further questions regarding alternative treatments for otitis media, please contact your Chiropractor.

The big picture:

1. **Many ear infections are a result of improper drainage of the ear.**
2. **Antibiotics are often ineffective and can increase drug-resistant bacteria.**
3. **Antibiotics do not help alleviate pain or cause drainage of the middle ear.**
4. **Surgical tubes can result in various side effects.**
5. **Chiropractic is safe, gentle, and effective.**

References:

Mayo Clinic, American Chiropractic Association, Coulter ID. Efficacy and Risks of Chiropractic Manipulation: What Does the Evidence Suggest? *Integrative Medicine* 1998;1:61-66
Froehle. Ear infection: a retrospective study examining improvement from chiropractic care and analyzing for influencing factors. *Journal of Manipulative and Physiological Therapeutics* 1996 Mar-Apr;19(3):169-77.