

Middle Ear Fluid and Your Child

The *middle* ear is the space behind the eardrum that is usually filled with air. When a child has middle ear fluid (otitis media with effusion), it means that a watery or mucus-like fluid has collected in the middle ear. *Otitis media* means *middle ear inflammation*, and *effusion* means *fluid*.

Middle ear fluid is **not** the same as an ear infection. An ear infection occurs when middle ear fluid is infected with viruses, bacteria, or both, often during a cold. Children with middle ear fluid have no signs or symptoms of infection. Most children don't have fever or severe pain, but may have mild discomfort or trouble hearing. About 90% of children get middle ear fluid at some time before age 5.

The following is information from the American Academy of Pediatrics about the causes, symptoms, risk reduction, testing, and treatments for middle ear fluid, as well as how middle ear fluid may affect your child's learning.

What causes middle ear fluid?

There is no one cause for middle ear fluid. Often your child's doctor may not know the cause. Middle ear fluid could be caused by

- A past ear infection
- A cold or flu
- Blockage of the eustachian tube (a narrow channel that connects the middle ear to the back of the nose)

What are the symptoms of middle ear fluid?

Many healthy children with middle ear fluid have little or no problems. They usually get better on their own. Often middle ear fluid is found at a regular checkup. Ear discomfort, if present, is usually mild. Your child may be irritable, rub his ears, or have trouble sleeping. Other symptoms include hearing loss, irritability, sleep problems, clumsiness, speech or language problems, and poor school performance. You may notice your child sitting closer to the TV or turning the sound up louder than usual. Sometimes it may seem like your child isn't paying attention to you, especially when at the playground or in a noisy environment.

Talk with your child's doctor if you are concerned about your child's hearing. Keep a record of your child's ear problems. Write down your child's name, child's doctor's name and number, date and type of ear problem or infection, treatment, and results. This may help your child's doctor find the cause of the middle ear fluid.

Can middle ear fluid affect my child's learning?

Some children with middle ear fluid are at risk for delays in speaking or may have problems with learning or schoolwork, especially children with

- Permanent hearing loss not caused by middle ear fluid
- Speech and language delays or disorders
- Developmental delay of social and communication skills disorders (for example, autism spectrum disorders)
- Syndromes that affect cognitive, speech, and language delays (for example, Down syndrome)
- Craniofacial disorders that affect cognitive, speech, and language delays (for example, cleft palate)
- Blindness or visual loss that can't be corrected

If your child is at risk and has ongoing middle ear fluid, her hearing, speech, and language should be checked.

How can I reduce the risk of middle ear fluid?

Children who live with smokers, attend group child care, or use pacifiers have more ear infections. Because some children who have middle ear infections later get middle ear fluid, you may want to

- Keep your child away from tobacco smoke.
- Keep your child away from children who are sick.
- Throw away pacifiers or limit to daytime use, *if your child is older than 1 year*.

Are there special tests to check for middle ear fluid?

Two tests that can check for middle ear fluid are *pneumatic otoscopy* and *tympanometry*. A pneumatic otoscope is the recommended test for middle ear fluid. With this tool, the doctor looks at the eardrum and uses air to see how well the eardrum moves. Tympanometry is another test for middle ear fluid that uses sound to see how well the eardrum moves. An eardrum with fluid behind it doesn't move as well as a normal eardrum. Your child must sit still for both tests; the tests are painless.

Because these tests don't check hearing level, a hearing test may be given, if needed. Hearing tests measure how well your child hears. Although hearing tests don't test for middle ear fluid, they can measure if the fluid is affecting your child's hearing level. The type of hearing test given depends on your child's age and ability to participate.

How can middle ear fluid be treated?

Middle ear fluid can be treated in several ways. Treatment options include observation and tube surgery or adenoid surgery. Because a treatment that works for one child may not work for another, your child's doctor can help you decide which treatment is best for your child and when you should see an ear, nose, and throat (ENT) specialist. If one treatment doesn't work, another treatment can be tried. Ask your child's doctor or ENT specialist about the costs, advantages, and disadvantages of each treatment.

When should middle ear fluid be treated?

Your child is more likely to need treatment for middle ear fluid if she has any of the following:

- Conditions placing her at risk for developmental delays (see "Can middle ear fluid affect my child's learning?")
- Fluid in both ears, especially if present more than 3 months
- Hearing loss or other significant symptoms (see "What are the symptoms of middle ear fluid?")

What treatments are not recommended?

A number of treatments are **not** recommended for young children with middle ear fluid.

- **Medicines** not recommended include antibiotics, decongestants, antihistamines, and steroids (by mouth or in nasal sprays). All of these have side effects and do not cure middle ear fluid.
- **Surgical treatments** not recommended include myringotomy (draining of fluid without placing a tube) and tonsillectomy (removal of the tonsils). If your child's doctor or ENT specialist suggests one of these surgeries, it may be for another medical reason. Ask your doctor why your child needs the surgery.

What about other treatment options?

There is no evidence that complementary and alternative medicine treatments or that treatment for allergies works to decrease middle ear fluid. Some of these treatments may be harmful and many are expensive.

The information contained in this publication should not be used as a substitute for the medical care and advice of your pediatrician. There may be variations in treatment that your pediatrician may recommend based on individual facts and circumstances.

From your doctor

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