

Middle Ear Fluid and Your Child



The *middle* ear is the space, usually filled with air, behind the eardrum. When a child has middle ear fluid (otitis media with effusion), it means that a watery or mucous-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.

Read more to learn 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 pediatrician 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 small tube 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 often 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, changes in behavior, loss of balance, clumsiness, and repeated ear infections. 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.

Talk with your pediatrician if you are concerned about your child's hearing.

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. Children at risk may include those 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)

Keep a record of your child's ear problems

Write down your child's name, pediatrician's name and number, date and type of ear problem or infection, treatment, and results. This may help your pediatrician find the cause of the middle ear fluid.

- 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 out right away.

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 a *pneumatic otoscope* and *tympanometry*. A pneumatic otoscope is the best test for middle ear fluid. With this tool, the pediatrician looks at the eardrum. Tympanometry is another test for middle ear fluid. Tympanometry shows 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 listen.

How can middle ear fluid be treated?

Middle ear fluid can be treated in many 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 pediatrician can help you decide what treatment is best for your child. If one treatment doesn't work, another treatment can be tried. Ask your pediatrician about the costs, advantages, and disadvantages of each treatment.

When should middle ear fluid be treated?

Your pediatrician will decide if treatment is needed based on several factors including the following:

- If your child is at risk (see “Can middle ear fluid affect my child’s learning?”)
- How long your child has had middle ear fluid
- The amount of hearing loss or other problems caused by the fluid

What treatments are not recommended?

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

- **Medicines** not recommended include decongestants and antihistamines; prolonged, frequent, or low-dose courses of antibiotics; and steroid nasal sprays.
- **Surgical treatments** not recommended include myringotomy (draining of fluid without placing a tube) and tonsillectomy (removal of the tonsils). If your pediatrician suggests one of these surgeries, it may be for another medical reason. Ask your pediatrician why your child needs the surgery. If you are still unsure, you may want to talk to another doctor.

What about other treatment options?

No recommendation can be made regarding complementary and alternative medicine treatments, including herbal medicines, for middle ear fluid. There isn’t enough evidence showing that these treatments work. Some of these treatments have major risks.

No recommendation can be made regarding allergy management treatments for middle ear fluid. There isn’t enough evidence showing a cause-and-effect relationship between allergy and middle ear fluid. Also, the benefits of treatment are uncertain, there are major potentially harmful effects, and treatments can be 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

