

Patient information: Ear infections (otitis media) (The Basics)

Written by the doctors and editors at UpToDate

What is an ear infection? — An ear infection is a condition that can cause pain in the ear, fever, and trouble hearing. Ear infections are common in children.

Ear infections often occur in children after they get a cold. Fluid can build up in the middle part of the ear behind the eardrum. This fluid can become infected and press on the eardrum, causing it to bulge ([figure 1](#)). This causes symptoms.

In some children, some fluid can stay in the ear for weeks to months after the pain and infection have gone away. This fluid can cause hearing loss that is usually mild and temporary. If the hearing loss lasts a long time, it can sometimes lead to problems with language and speech, especially in children who are at risk for problems with language or learning.

What are the symptoms of an ear infection? — In infants and young children, the symptoms include:

- Fever
- Pulling on the ear
- Being more fussy or less active than usual
- Having no appetite and not eating as much
- Vomiting or diarrhea

In older children, symptoms often include ear pain or temporary hearing loss.

How do I know if my child has an ear infection? — If you think your child has an ear infection, see a doctor or nurse. The doctor or nurse should be able to tell if your child has an ear infection. He or she will ask about symptoms, do an exam, and look in your child's ears.

Is there anything I can do on my own to help my child feel better? — Yes. You can give your child medicine, such as [acetaminophen](#) (sample brand name: Tylenol) or [ibuprofen](#) (sample brand names: Advil, Motrin) to reduce the pain. But never give [aspirin](#) to a child younger than 18 years old. Aspirin can cause a dangerous condition called Reye syndrome.

Most doctors do not recommend treating ear infections with cold and cough medicines. These medicines can have dangerous side effects in young children.

How are ear infections treated? — Doctors can treat ear infections with antibiotics. These medicines kill the bacteria that cause some ear infections. But doctors do not always prescribe these medicines right away. That's because many ear infections are caused by viruses — not bacteria — and antibiotics do not kill viruses. Plus, many children get over ear infections without antibiotics.

Doctors usually prescribe antibiotics to treat ear infections in infants younger than 2 years old. For children older than 2, doctors sometimes hold off on antibiotics.

Your child's doctor might suggest watching your child's symptoms for a day or two before trying antibiotics if:

- Your child is healthy in general
- The pain and fever are not severe

You and your doctor should discuss whether or not to give your child antibiotics. This will depend on your child's age, health problems, and how many ear infections he or she has had in the past.

When should I follow up with the doctor or nurse? — You should call the doctor or nurse:

- After 1 to 2 days, if you are watching your child's symptoms. If the pain and fever have not gotten better, your doctor might prescribe antibiotics.
- After 2 days, if your child is taking antibiotics and his or her symptoms have not improved or are worse.

You should also see the doctor or nurse a few months after an ear infection if your child is younger than 2 or has language or learning problems. Your doctor or nurse will do an ear exam to make sure the fluid is gone. Your child might also need follow-up testing to check his or her hearing.

If the fluid in the ear is causing hearing loss and does not go away after several months, your doctor might suggest treatment to help drain the fluid. This involves a surgery in which a doctor places a small tube in the eardrum ([figure 2](#)).

Can I reduce the number of ear infections my child gets? — Yes. If your child gets a lot of ear infections, ask the doctor what you can do to prevent repeat infections. The doctor might suggest that your child get routine vaccines (that he or she might be missing). The doctor might also talk with you about the risks and benefits of:

- Giving your child an antibiotic every day during certain months of the year
- Doing surgery to place a small tube in your child's eardrum

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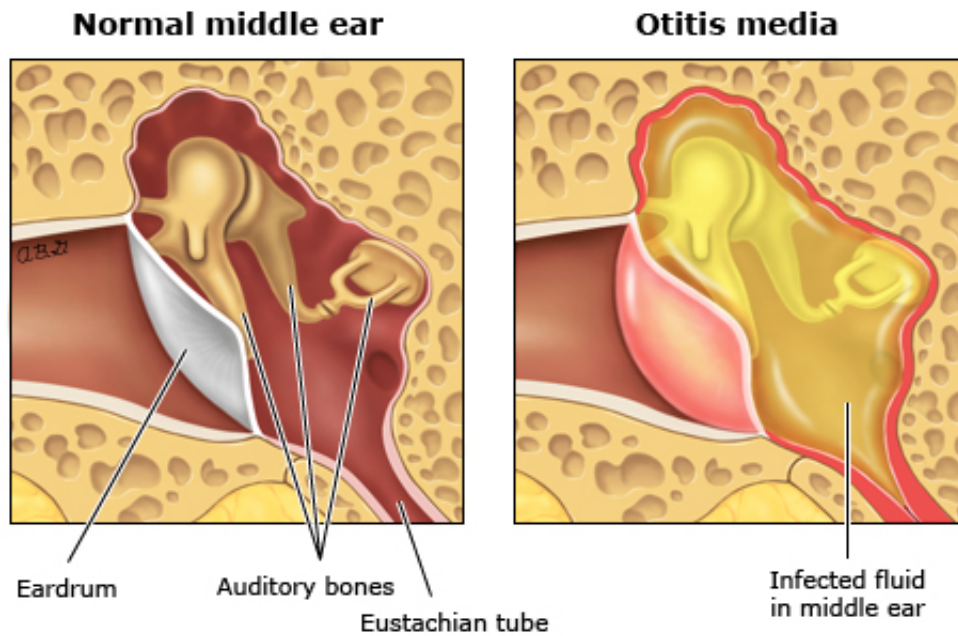
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GRAPHICS

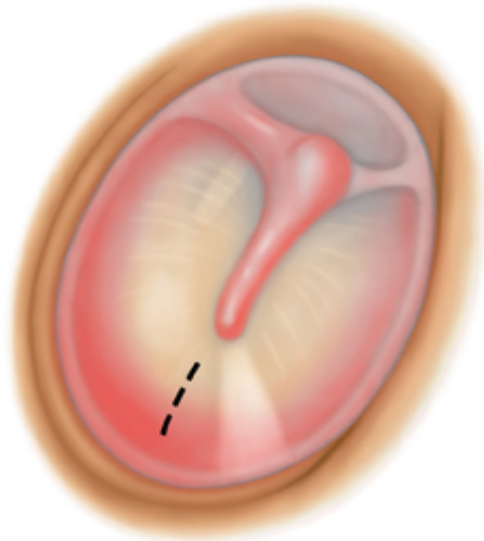
Ear infection (otitis media)



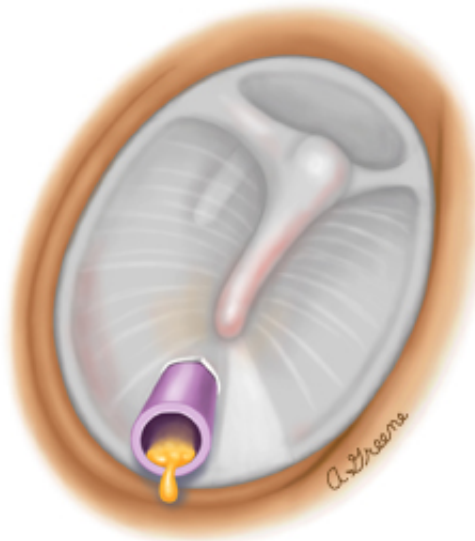
The ear on the left is normal and does not have an infection. The ear on the right shows what an infection can look like. The infected fluid in the middle ear causes the eardrum to bulge. Normally, fluid in the middle ear drains into the throat through a tube called the "eustachian tube." But during an infection, swelling blocks off the tube, so fluid builds up.

Graphic 54739 Version 7.0

Surgery to treat fluid in the ear (tympanostomy tube)



Small cut made in eardrum
for tympanostomy tube



Fluid from middle ear
drains from tube

This surgery might be done when fluid in the middle ear does not go away. This treatment can also be used to prevent more ear infections in children who get them a lot. The figure on the left shows an eardrum before the tube is inserted. The figure on the right shows fluid draining from the middle ear after the tube has been placed in the eardrum.