Middle Ear Infection (Acute Otitis Media)

Ear infections are very common in infants and young children. Some children have many episodes. Ear infections usually occur along with an upper respiratory infection. Although usually treated with antibiotics, the option of using pain medications for a couple of days in mild cases is reasonable for some children.

What is middle ear infection?

Acute otitis media is inflammation (soreness, redness) of the middle ear (the space behind the eardrum). The inflammation is usually caused by infection with bacteria or sometimes with viruses; it often occurs with a cold. Symptoms may include ear pain, fever, fussiness, and fluid draining from the ear.

Acute otitis media is very common in infants and toddlers, particularly those between the ages of 6 and 20 months. Otitis media can become a frequent or continuing problem for some children.

What does it look like and how is it diagnosed?

- Ear pain is the main symptom. Babies may cry or act fussy. Toddlers and older children can tell you that they have an earache.
- Usually an upper respiratory infection (runny nose, cough, congestion) is present or occurred recently.
- Fever is sometimes present.
- Pus or other fluid may drain from the ear (otorrhea).
- Babies may pull or tug on the ear. However, this isn't always a sign of ear infection—instead it may be a sign of fluid or congestion in the middle ear (otitis media with effusion).
- To make the diagnosis, the doctor will look at the eardrum with an instrument called an otoscope. If infection is present, the drum is usually red and there is fluid or pus behind the drum.

What causes middle ear infection?

- *Acute otitis media* is caused by infection with bacteria. Viruses sometimes play a role.
- *Otitis media with effusion* (serous otitis) occurs when fluid builds up inside the ear, even though no infection is present. Antibiotic treatment is not needed.

What are some possible complications of middle ear infection?

- Frequent doctor's office visits and antibiotic treatment. For some children, acute otitis media becomes a repeated problem. Frequent treatment with antibiotics can encourage the growth of bacteria that are resistant to common antibiotics and therefore are harder to treat.
- Reduced hearing. This is usually temporary. Hearing returns after the fluid is gone from inside the ear. However, hearing loss may be a more lasting problem if your child has repeated infections or if fluid stays in the middle ear for a long time.
- Rupture of the eardrum, with pus draining from the ear. In most cases, the eardrum heals without a problem.
- Persistent ear infection—one that doesn't get better with the usual antibiotic treatment. This may require special antibiotic treatment or drainage.
- Other complications are possible but rare, such as:
  - Infection of the mastoid bone (mastoiditis), which is right behind the ear.
  - Permanent hearing loss, resulting from severe, repeated ear infections or fluid remaining in the ear for a long time.
  - Growth of a cyst within the ear (cholesteatoma).

What puts your child at risk of middle ear infection?

- Colds: Most middle ear infections occur with or soon after a cold.
- Genetic factors: Middle ear disease may "run in families."
- Risk may be higher for boys.
- Risk is high for Native-American children.
- Exposure to tobacco smoke ("passive smoking").
- Using a pacifier may increase the risk.
- Certain medical conditions (for example, cleft palate, Down syndrome) increase the risk.
- The risk is highest for infants and toddlers between 6 and 20 months old.

Can middle ear infection be prevented?

The following steps may reduce your child's risk:

- Breast-feeding.
- Don't smoke or let others smoke around your child.
- If your child has had a lot of trouble with middle ear infections, options may include placing a small tube through the eardrum (see Treatment).

How are middle ear infections treated?

- Antibiotics are often recommended. Treatment usually continues for 10 days but may be less depending on the age of the child and which antibiotic is used.
- To be certain the bacteria causing the infection are eliminated, make sure your child takes all of the prescribed antibiotics. Don't stop treatment just because he or she seems to be feeling better. If your child isn't getting better within 2 to 3 days, call our office.
- If the infection is mild, the doctor may discuss the option of just using pain medication. Many of these milder infections get better just as quickly without antibiotics. Unnecessary use of antibiotics makes it more difficult to treat future infections. If the symptoms get worse or don't get better in a few days, antibiotics will probably be prescribed.
- The doctor may want to re-examine your child after 4 to 6 weeks to see if there is any fluid or congestion behind the eardrum. Even if fluid is present, it usually goes away.
- If infections occur very often or don't get better after a long time, we may recommend a visit to a doctor specializing in ear, nose, and throat diseases (otorhinolaryngologist, or ENT physician). The ENT doctor may perform a procedure to drain fluid from the ear.
- In some situations, the ENT doctor will recommend placing a tube through the eardrum. The tube helps to drain fluid and pus from the ear and to prevent future infections.
- Tubes are usually placed with the patient under anesthesia. The procedure causes little or no pain and the tube often comes out on its own after a few months.
- There are generally few problems with ear tubes. However, sometimes drainage continues despite tube placement, or the tube comes out too early to be helpful. At other times, the tube leaves a hole in the eardrum, which may need to be repaired at a later time.

When should I call your office?

Call our office if:

- Your child's symptoms (ear pain, fever) continue for more than 2 to 3 days after starting treatment.
- Your child's symptoms get better but then return after treatment.

Please type your custom instructions and/or office contact information here.