

Middle Ear Infection (Otitis Media)

Overview:

- Middle ear infection is one of the most common illnesses among children.
- It is often caused by a bacterial or viral infection.
- Discharge from the ear is a symptom that requires immediate doctor visit.
- A child with frequent ear infections may need a hearing test, testing speech skills or others
- Breastfeeding a child in a recumbent position is one of the most common risk factors.
- Treatment varies depending on the type and severity of the inflammation.

Introduction:

Middle ear infection is most often caused by a bacterial or viral infection affecting the middle ear, which leads to the accumulation of fluid behind the eardrum. This disease is one of the most common diseases in children, where it is more common than adults due to several factors, including:

- Shortness of the Eustachian canal (a thin tube extending from the middle ear to the back of the nose) and thus the ease of transmission of viruses and bacteria from the nose or pharynx to the middle ear and the occurrence of inflammation.
- Immunodeficiency in children compared to adults makes them more susceptible to infectious diseases in general.

Types of Middle ear infection (Otitis media)

- **First type: Severe Middle ear infection:**
Caused by a bacterial or viral infection in most cases and may be due to complications of an infection of the upper respiratory tract or sinuses. These symptoms usually disappear by treating the pathogen.
- **Second type: Middle ear infection with cold:**
The main cause of infection of this type is the accumulation of fluid and mucous secretions of the ear inside it due to several reasons, including:
 - Blockage of the Eustachian tube after infection in the upper respiratory tract and the occurrence of leaching and the accumulation of mucous secretions inside the ear.
 - poor functioning of the Eustachian canal; usually due to cleft palate, frequent colds or air pressure shock.
- **Third type: Chronic Middle ear infection:**
This type occurs as a result of delayed treatment of cases of acute inflammation in the ear, which leads to the accumulation of fluid and secretions for two weeks or more, thus forming wax that may reach the eardrum, with large amounts leading to discharge from the ear.

Causes:

- Respiratory infection, such as a cold or flu.
- Allergy.
- Exposure to cigarette smoke.
- Inflammation of the adenoids or tonsils.
- For infants, it is due to the leakage of milk into the baby's ear during feeding.



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Symptoms:

In children:

- Pain in the ear, especially when lying down.
- Difficulty sleeping.
- Crying more than usual and pulling the ear.
- Not responding to sounds.
- Loss of balance
- Fever reaching 38°C or more
- Ear discharge
- Loss of appetite

In adults:

- Ear pain
- Difficulty sleeping.
- Ear discharge
- Weak hearing.

When to see a doctor:

- If symptoms persist for more than one day.
- Severe ear pain.
- Discharge or blood from the ear.
- The presence of symptoms in a child aged less than 6 months.
- Difficulty sleeping when the child has a cold or other upper respiratory tract infections.

Diagnosis:

Ear infections are diagnosed based on the symptoms described, and your doctor is likely to use an otoscope in addition to:

- Middle ear efficiency test
- Acoustic reflection measurement (sound response).



- Puncture the drum with a small needle to extract a sample of inflammatory fluid into the inner ear.

If your child has persistent ear infections or a persistent buildup of fluid in the middle ear, your doctor may refer you to a hearing specialist, speech therapist, or developmental therapist to test your hearing, speech skills, or language comprehension.

Risk factors:

- Children aged six months to two years.
- Breastfeeding a child in a recumbent position
- Seasonal diseases such as colds and flu.
- People suffering from seasonal allergies.
- Exposure to tobacco smoke and polluted air.

Complications:

Repeated infection and constant fluid accumulation can lead to some serious complications:

- weak hearing
- Delay in speech skills or development in children.
- Spread of untreated inflammation to nearby tissues.

Treatment:

- If the infection is mild or viral, it is advisable to monitor the child and see a doctor regularly until the inflammation has passed.
- If the inflammation is recurrent and worsens over time, and the symptoms are severe, the patient needs treatment and the doctor will dispense antibiotics if the cause of the infection is bacterial. It will be taken orally or as an injection. Make sure to give the child daily antibiotic and do not stop until the end of the treatment course, even if the condition improves.



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- If it is due to allergies, anti-congestive or anti-histamine ear drops may help relieve symptoms.
- If the condition is difficult and does not respond to treatment with antibiotics, the doctor may have to make a hole in the eardrum to allow the accumulated pleural fluid out of the ear.

Prevention:

- During colds, it is preferable that patients, especially children, get treated. Neglecting treatment may lead to middle ear infections.
- If a child suffers from recurrent middle ear infections (four or more times a year), he may need to take an antibiotic.
- It is important to closely observe the child's health status especially if he suffers from recurrent middle ear infections.
- It is essential that children get their routine vaccinations.
- Children must not be exposed to cigarette smoke, shisha and others (passive smoking).
- Keep the child away from ill people.
- Always make sure the baby's head is a bit raised during nursing.
- Breastfeeding for at least 6 months boosts immunity and makes the baby less susceptible to ear infections.

Clinical Health Education Department

For more information, please contact us by email on:

Hpromotion@moh.gov.sa