

Acute Otitis Media – Clinician Guide

Diagnosis¹⁻⁴

- Moderate to severe bulging of the tympanic membrane or new-onset ear drainage (otorrhea) with symptoms of middle-ear inflammation (e.g., ear pain, fever).
- Severe symptoms include ill appearance, moderate to severe otalgia, otalgia lasting at least 2 days, or temperature of 102 degrees Fahrenheit or greater.
- Common bacterial pathogens: *Streptococcus pneumoniae* (~25%), nontypeable *Haemophilus influenzae* (~50%), and *Moraxella catarrhalis* (~15%).

Treatment^{2,4-7}

Age	Otorrhea With Acute Otitis Media (AOM)	Unilateral or Bilateral AOM With Severe Symptoms	Bilateral AOM Without Otorrhea and Without Severe symptoms	Unilateral AOM Without Otorrhea and Without Severe Symptoms
<6 months	Antibiotics	Antibiotics	Antibiotics	Antibiotics
6 months to <2 years	Antibiotics	Antibiotics	Antibiotics	Antibiotics or observation
2 years and older	Antibiotics	Antibiotics	Consider observation	Antibiotics or observation

- For children <6 months old, a virtual examination should rule out other causes of infection. If unilateral or bilateral AOM is confirmed, antibiotics are indicated due to risk for severe or systemic infection in infants with waning maternal antibodies and immature immune systems.⁶
- Decision to observe a child with AOM should be made with the caregiver and with a plan for close followup.
- High-dose amoxicillin (45 mg/kg per dose of amoxicillin every 12 hours) is the preferred therapy for AOM, if antibiotics are prescribed.
 - Amoxicillin covers almost all *S. pneumoniae* and a large portion of *H. influenzae*.
 - *S. pneumoniae* is associated with greater clinical severity than other pathogens (e.g. high fever, more intense otalgia, and a higher potential for bacteremia, meningitis, and mastoiditis).
- Amoxicillin-clavulanate is recommended in children with AOM who—
 - Do not improve after 48–72 hours of amoxicillin.
 - Have received amoxicillin within the previous 30 days.
 - Have concurrent purulent conjunctivitis (most likely *H. influenzae*).
 - Have a history of recurrent AOM unresponsive to amoxicillin.
- Alternative agents for children with nonsevere penicillin allergies or intolerance to amoxicillin-clavulanate: cefdinir, cefuroxime, cefpodoxime, or ceftriaxone (intramuscular or intravenous daily for up to three doses).
- Levofloxacin can be considered for children with severe penicillin allergies.

Duration⁵⁻⁶

- <2 years old or severe symptoms at any age: 10 days.
- 2–5 years: 7 days.
- ≥6 years: 5–7 days.

Followup¹⁻²

- If a decision is made to observe without antibiotics, a clear plan should be made with the parent for when and where the child should present to medical attention including a telemedicine versus in-person visit.
- Patients should seek medical attention if the child worsens or fails to improve within 48–72 hours of initiating antibiotics; if the child is becoming confused, lethargic, or increasingly tired; or if the child is ill appearing.
- Consider referral to pediatric otolaryngology if child is nontoxic but has persistent symptoms despite multiple courses of antibiotics, chronic otitis media (>3 months of middle ear effusion without infection), or recurrent ear infections (at least three episodes of AOM in 6 months or four episodes of AOM within 12 months).⁸

References

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