

# Antibiotic Decision Making for Acute Otitis Media (AOM)

## Terms:

**AOM** = Acute Otitis Media

**AOE** = Acute Otitis Externa

**OME** = Otitis Media With Effusion

**Severe signs** = Fever  $\geq 39^{\circ}\text{C}$  or moderate-severe otalgia<sup>1</sup> or otalgia<sup>1</sup>  $\geq 48$  hours

**Watchful waiting** = Initial observation

**po** = by mouth

## Note:

Know seasonal epidemiology and when rapid diagnostic testing is warranted (RSV, influenza).

Optimize management of a child with asthma.

**Age 6 months to 12 years with signs/symptoms of an ear infection:**  
fever, otalgia<sup>1</sup>, fussiness, sleep disturbance

YES

**Additional symptoms suggestive of AOM:**  
Moderate-severe TM bulging  
or mild bulging *and* recent otalgia<sup>1</sup> onset  
or mild bulging *and* intense erythema  
or new onset otorrhea not due to AOE

NO

**Not AOM: Do not treat with antibiotics**

**If middle ear effusion only:**  
**Do not treat OME with antibiotics**

**YES (AOM confirmed)**

**Severe**

**Nonsevere**

**Age: 6–23 months**

**Age:  $\geq 24$  months**

### Severe signs

Fever  $\geq 39^{\circ}\text{C}$  or moderate-severe otalgia<sup>1</sup> or otalgia<sup>1</sup>  $\geq 48$  hours

### Bilateral AOM without severe signs

Fever  $< 39^{\circ}\text{C}$  and mild otalgia or otalgia  $< 48$  hours

### Unilateral AOM without severe signs

Fever  $< 39^{\circ}\text{C}$  and mild otalgia or otalgia  $< 48$  hours  
*Watchful waiting preferred*

### Unilateral or bilateral AOM Without severe signs

Fever  $< 39^{\circ}\text{C}$  and mild otalgia or otalgia  $< 48$  hours  
*Watchful waiting preferred*

**High-Dose Amoxicillin<sup>2</sup>**  
80–90 mg/kg/day po divided BID (max dose 2 g) for 10 days

**High-Dose Amoxicillin<sup>2</sup>**  
80–90 mg/kg/day po divided BID (max dose 2 g) for 10 days

**Assess for initial observation (watchful waiting)**  
*Discuss with parents / caregivers. Mechanism for follow-up required.*

Watchful waiting **not** chosen

**High-Dose Amoxicillin<sup>2</sup>**  
80–90 mg/kg/day po divided BID (max dose 2 g)  
Duration:  
10 days if severe signs  
10 days if  $< 2$  years  
5–7 days if nonsevere and  $\geq 6$  years  
7 days if nonsevere and 2–5 years

**Watchful waiting chosen**

Symptoms improve over next 48–72 hours:  
**Do not treat with antibiotics**

Symptoms persist or worsen over next 48–72 hours:  
**Treat with High-Dose Amoxicillin<sup>2</sup>**  
80–90 mg/kg/day po divided BID (max dose 2 g)  
Duration:  
10 days if severe signs  
10 days if  $< 2$  years  
5–7 days if nonsevere and  $\geq 6$  years  
7 days if nonsevere and 2–5 years

## Footnotes

1. **Otalgia:** May present as holding, tugging, rubbing of the ear in a nonverbal child. Pain relief is indicated for otalgia.

2. Alternate therapy is indicated if patient has history of:

- **Amoxicillin treatment in last 30 days, concurrent purulent conjunctivitis, or history of recurrent AOM unresponsive to amoxicillin:** Amoxicillin-clavulanate 90 mg/kg/day of amoxicillin with 6.4 mg/kg/day clavulanate po divided in 2 doses (max 2 g/dose) for 10 days.

- **Severe or nonsevere penicillin allergy:** Cefdinir 14 mg/kg/day po divided 1 or 2 doses (max dose 600 mg/day), or cefpodoxime 10 mg/kg/day po divided BID (max 400 mg/dose) or cefuroxime 30 mg/kg/day po in 2 divided doses (max 500 mg/dose) for the duration recommended for amoxicillin per algorithm above, or ceftriaxone 50 mg/kg IM/IV per day (max 2 g/dose) for 1–3 days.

**Macrolides: Not recommended** unless severe allergy to penicillin and cephalosporins exist. Resistance is well known and treatment failures related to macrolide resistance have occurred.

## Reference

Lieberthal AS, Carroll AE, Chonmaitree T, et al. [AAP Clinical Practice Guideline: the diagnosis and management of acute otitis media](#). *Pediatrics*. 2012;121(3):e961–e999.

