

# Ear Pain

## Otitis Media

- Sx: pain, sometimes fever
- Assoc with young age, often follows a viral URI
- Exam: not just red, should include bulging, opacity, lack of light reflex
  - Treat bullous OM same as any other acute OM but emphasize analgesia
- Slide 2 for treatment options
  - Observation option: oral analgesics for 24-48 hours, start antibiotics if symptoms persist
- Click here for [Images](#)
- Click here for [Exam Tips](#)

## Otitis Externa

- Sx: pain, sometimes ear discharge
- Assoc with swimming, canal instrumentation, narrow canals, eczema
- Exam: swollen canal with exudate, pain when pulling on tragus to examine ear, no fever
- Slide 3 for treatment options

### Completely normal exam?

- Eustachian tube dysfunction associated with nasal congestion
- Referred pain from dental or sore throat source

# Otitis Media

## Case Definition

1. Moderate to severe bulging of TM OR new onset otorrhea not due to otitis externa
2. Mild bulging of TM and recent (< 48 hours) pain or intense erythema
3. Must have evidence of middle ear effusion (via pneumatic otoscopy or bulging/AFL/bubbles/otorrhea)

AAP Treatment Guidelines		
Age	6-23 months	24months +
Otorrhea with AOM	Antibiotics*	Antibiotics*
Unilat or Bilat w/ Severe Symptoms*	Antibiotics*	Antibiotics*
Bilat w/o otorrhea	Antibiotics*	Abx or obs option
Unilat w/o otorrhea	Abx or obs option	Abx or obs option
PE tubes w/otorrhea	Fluoroquinolone +/- steroid drops	

### \*Severe Symptoms:

Fever  $\geq$  39  
 Otalgia > 48 hrs  
 Mod-severe otalgia

Reference: The Diagnosis and Management of Acute Otitis Media, Clinical Practice Guideline from the AAP, Pediatrics Vol. 131, No. 3, March 1, 2013

- 1<sup>st</sup> line antibiotic: Amoxicillin 80-90 mg/kg/day divided BID (max 1gm BID); Augmentin if Amox in last 30 days or purulent conjunctivitis or h/o Amox-resistant OM in past, max 875/125mg BID
- 2<sup>nd</sup> line antibiotic: Augmentin 90 mg/kg/day divided BID (use Augmentin ES 600mg/5mL), max 875/125mg BID
- Alternatives: Cefdinir 14mg/kg/day divided qD-BID, Cefuroxime 30mg/kg/day divided BID, Cefpodoxime 10mg/kg/day divided BID, Ceftriaxone 50mg/kg IM or IV x 1-3 days, Clindamycin 30-40mg/kg/day divided TID w/ or w/o 3<sup>rd</sup> gen cephalosporin (with if giving for treatment failure)

# Otitis Externa

## Case Definition

1. Rapid onset (generally within 48 hours) in the past 3 weeks, AND
2. Symptoms of ear canal inflammation, which include: otalgia (often severe), itching, or fullness, WITH OR WITHOUT hearing loss or jaw pain, AND
3. Signs of ear canal inflammation, which include: tenderness of the tragus, pinna, or both OR diffuse ear canal edema, erythema, or both WITH OR WITHOUT otorrhea, regional lymphadenitis, TM erythema, cellulitis of pinna/adjacent skin

Condition	Antibiotics	Approx local cost
Mild: minimal canal edema, intact TM	Ofloxacin 5 (6mo-12yo) to 10 (13yo+) gtt qDay x 7 days OR Cortisporin $\geq$ 2yo: 3-4 gtt TID-QID x 10 days	\$18 / 5mL \$22 / 10mL
Mild, possible perforated* TM or h/o PE tubes	Ofloxacin 5 (6mo-12yo) to 10 (13yo+) gtt qDay x 7 days	\$18 / 5mL
Moderate: partially occluded canal, moderate canal edema, intact TM	Cortisporin $\geq$ 2yo: 3-4 gtt TID-QID x 10 days	\$22 / 10mL
Moderate: partially occluded canal, moderate canal edema, possible perforated* TM or h/o PE tubes	Ciprodex or Cipro HC: $\geq$ 6mo 4 gtt BID x 7 days [Cipro ophth formulation is OK for ears if insurance not covered; reverse is not true]	\$213 / 7.5 mL ciprodex \$300 / 10 mL ciproHC
Severe: complete occlusion	As for moderate + <a href="#">place wick</a>	As for moderate
Consider malignant if: DM, immunodeficient, periauricular infection, pain out of proportion	Systemic abx against <i>Staph aureus</i> , <i>Pseudomonas</i>	n/a

\* If possibly perforated TM and insurance won't cover fluoroquinolone, consider cortisporin but must be SUSPENSION

References: Clinical Practice Guideline: Acute Otitis Externa. Otolaryngol Head Neck Surg 2014;150(1 Suppl):S1-S24, Nationwide Children's: Topical Otic Therapy Recommendations for Bacterial Acute Otitis Externa (AOE), GoodRx app for local prices