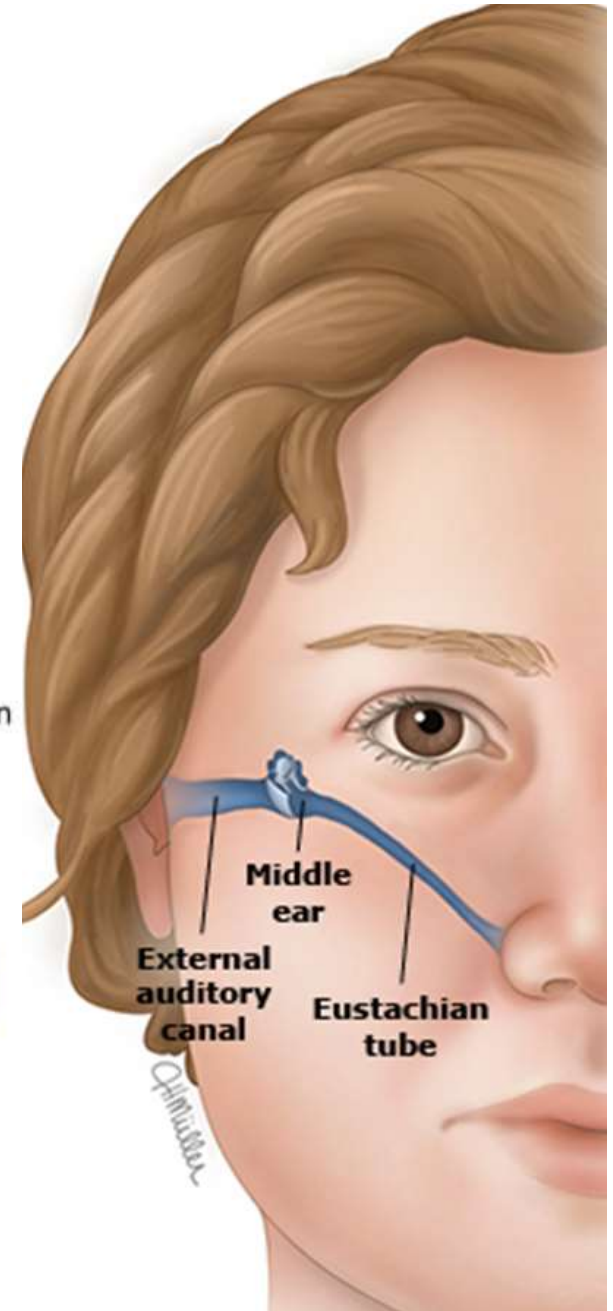
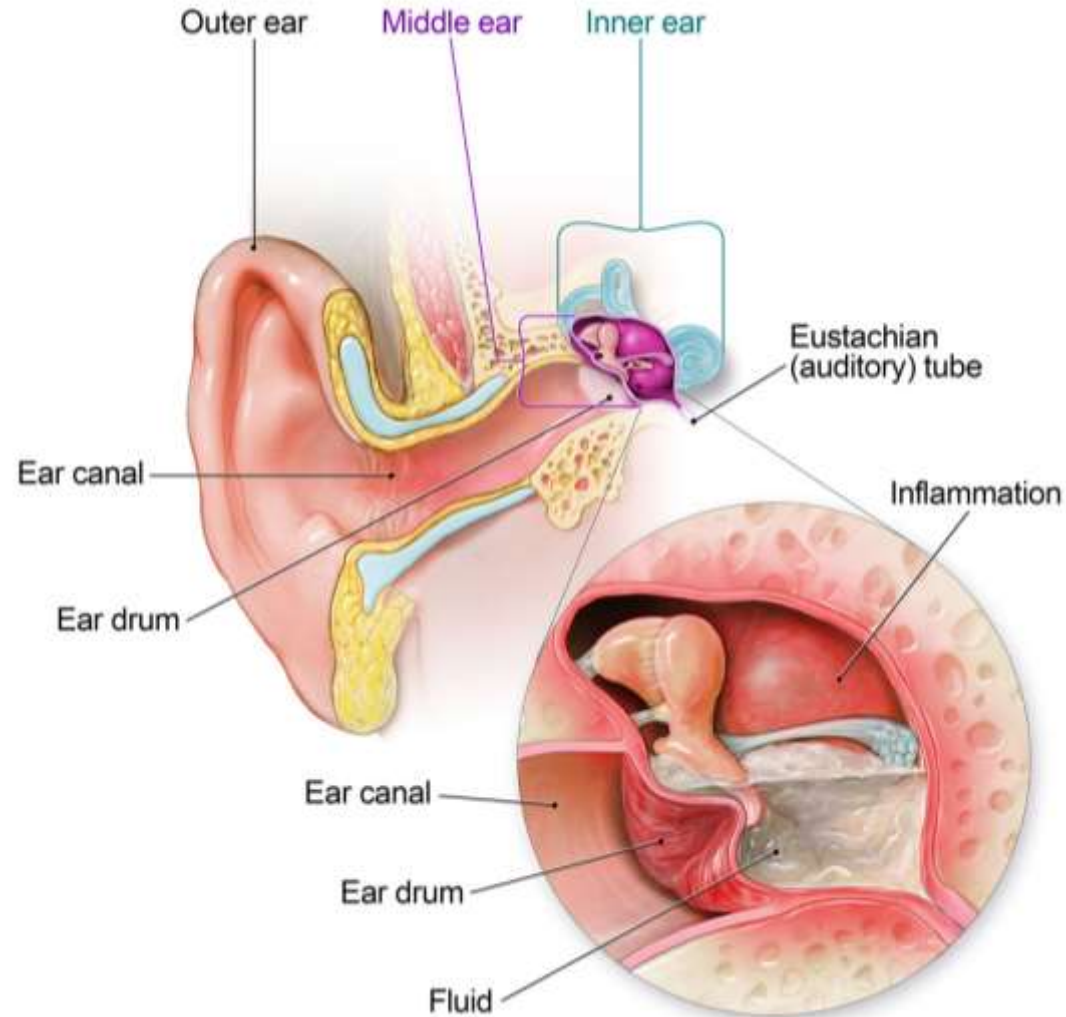
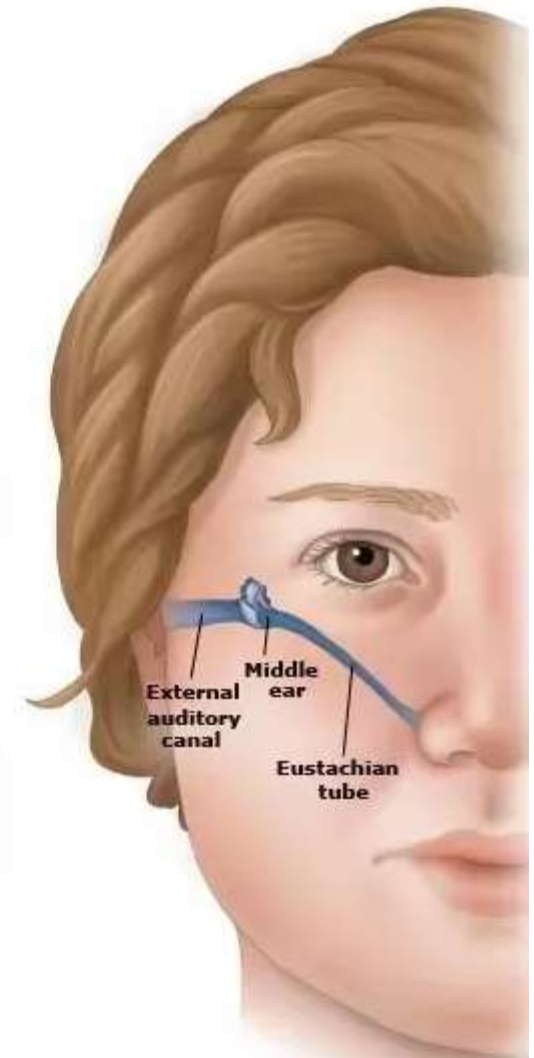
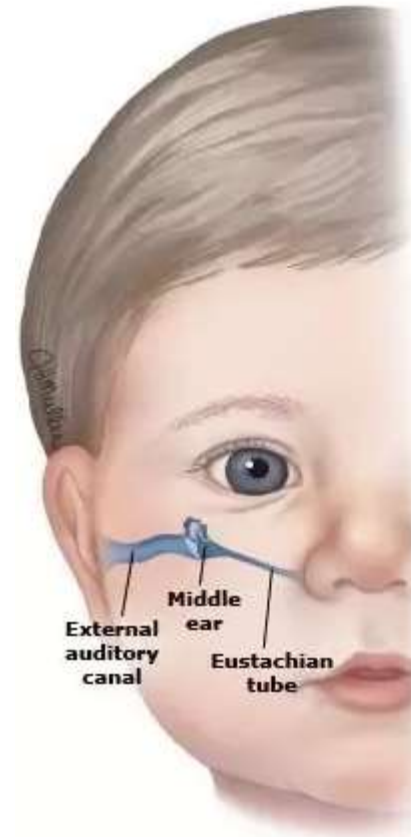
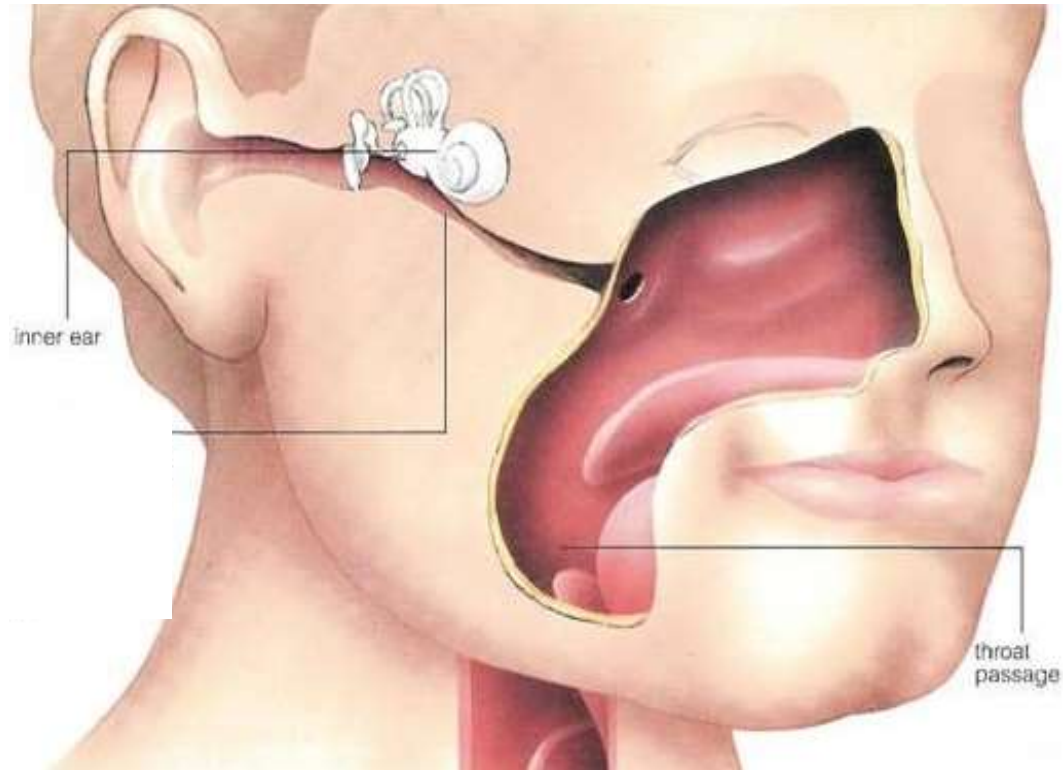


Acute Otitis Media

General Principles:

- ✓ Otitis media: an inflammation of the middle ear
- ✓ Bacteria: > 70- 90% of cases, common: *S. pneumoniae*, *H. Influenzae*, *M. catarrhalis*
- ✓ Usually follows a viral URI that impairs the mucociliary apparatus & causes Eustachian tube dysfunction in the middle ear





Children tend to be more susceptible to otitis media than adults because the anatomy of their Eustachian tube is shorter and more horizontal, facilitating bacterial entry into the middle ear.

Diagnosis:

✓ Clinical Presentation:

- Acute onset of otalgia (ear pain)
- For parents of young children, irritability and tugging on the ear are often the first clues that a child has acute otitis media.

CLINICAL PRESENTATION

Acute Otitis Media

General

- Cases of acute otitis media often follow viral upper respiratory tract infections. Nonverbal children with ear pain might hold, rub, or tug their ear. Infants might cry, be irritable, or have difficulty sleeping.

Signs and Symptoms

- Bulging of the tympanic membrane
- Otorrhea
- Otalgia (considered to be moderate or severe if pain lasts at least 48 hours)
- Fever (considered to be severe if temperature is 39°C [102.2°F] or higher)

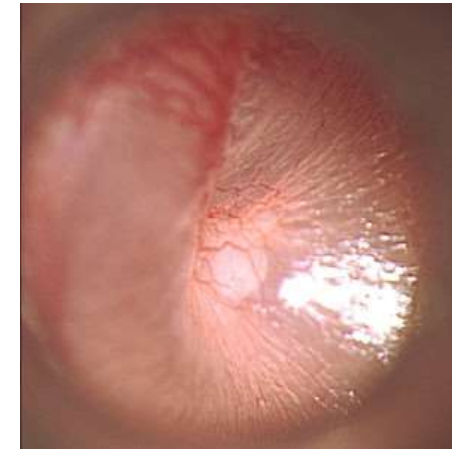
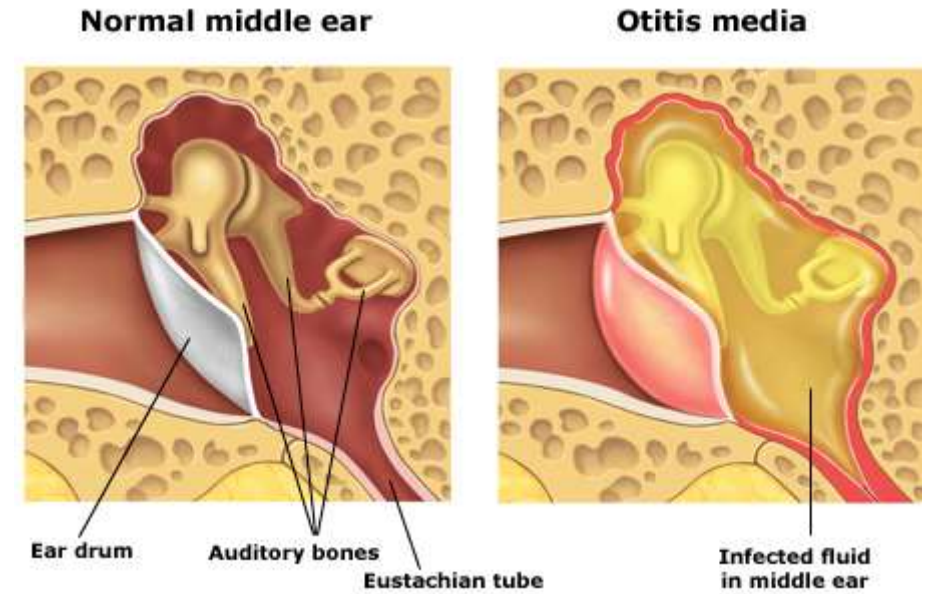
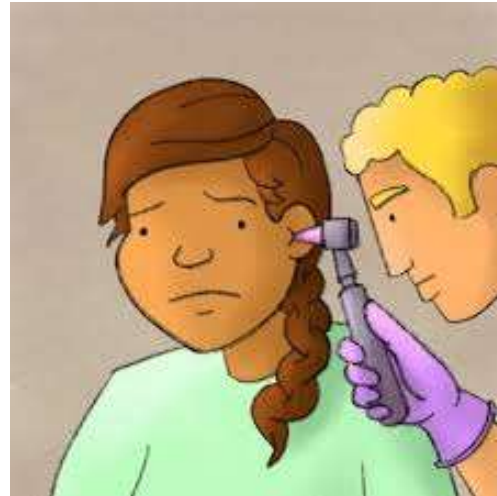


✓ Diagnostic Testing:

- Middle ear effusion identified based on Pneumatic otoscopy and/or tympanometry & either:

1) moderate-to-severe bulging of the TM or new onset otorrhea or

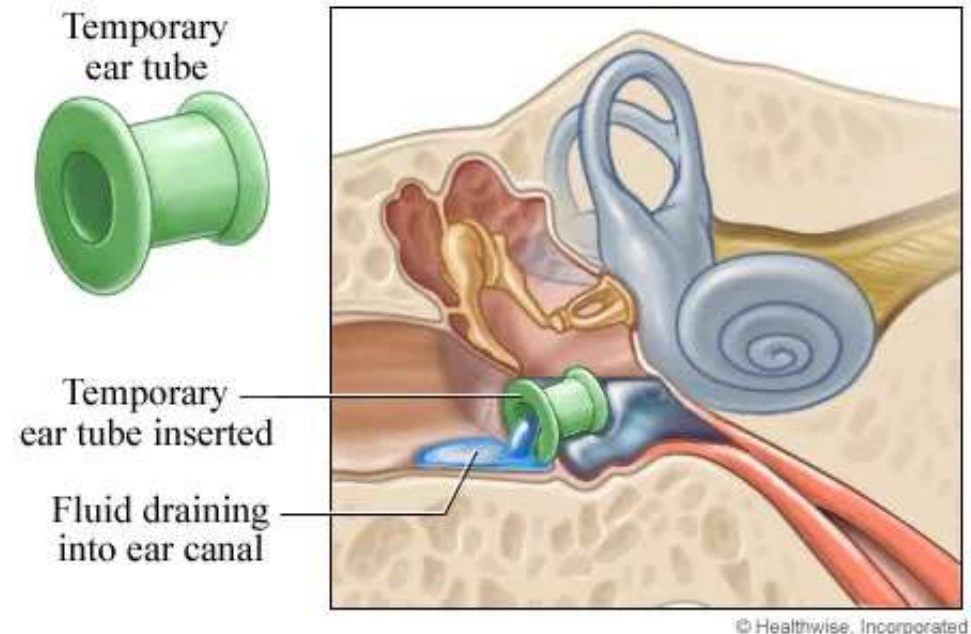
2) mild bulging of the tympanic membrane and onset of ear pain within the last 48 hours or intense erythema of the tympanic membrane.

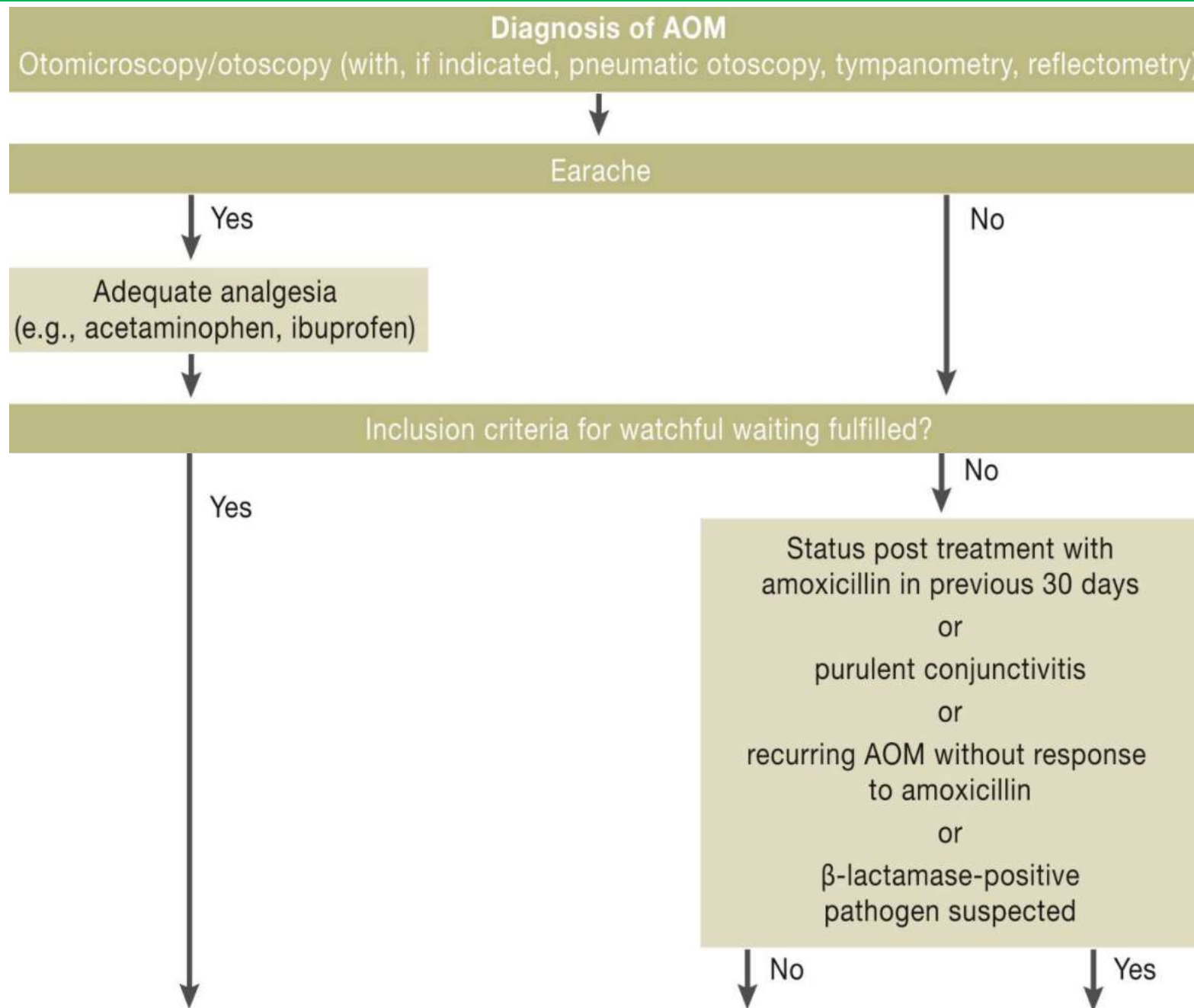


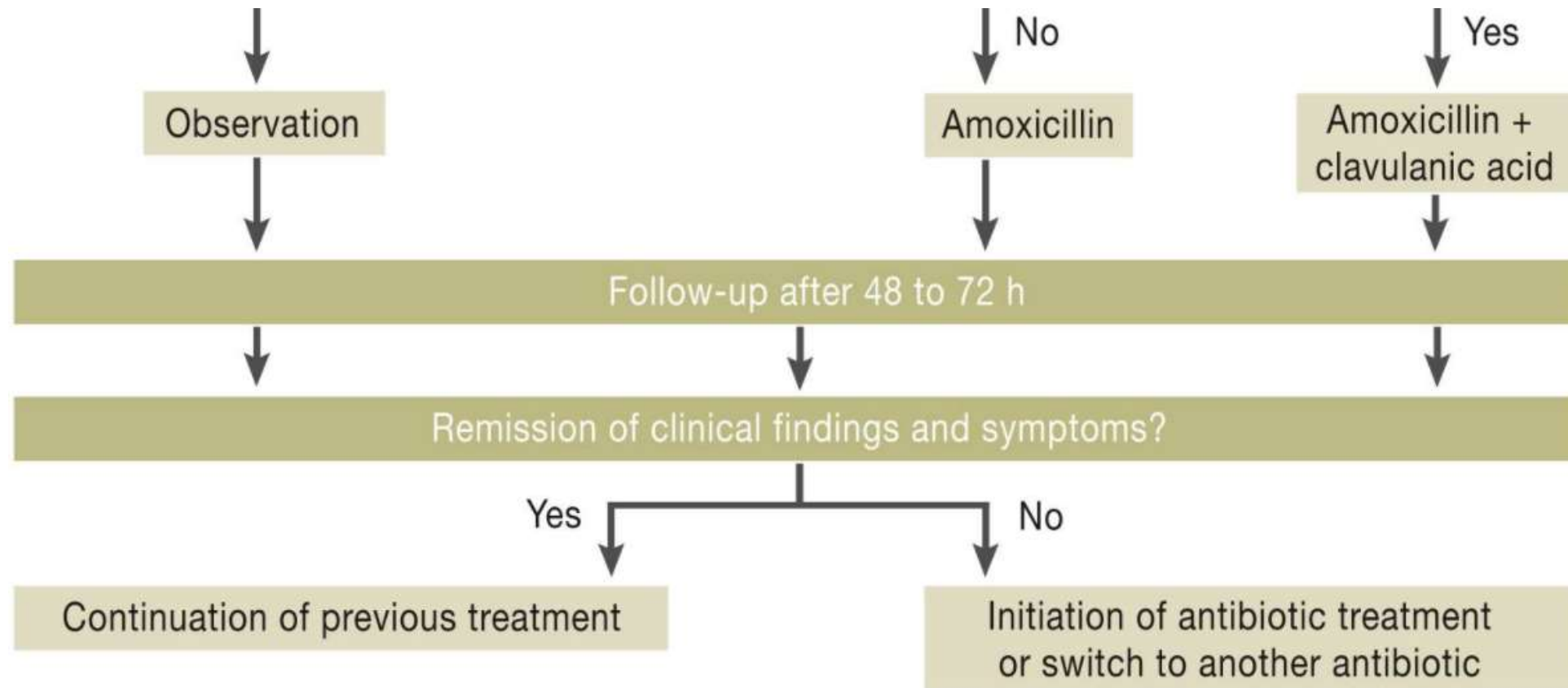
Treatment:

- ✓ Consider primary prevention of acute otitis media through the use of bacterial and viral vaccines.
- ✓ Recommended: pneumococcal conjugate vaccine & annual influenza vaccine to all children
- ✓ The central principle is to administer antibiotics quickly when the diagnosis is certain. Amoxicillin is the mainstay of therapy for most children.
- ✓ Exceptions include: children who have received amoxicillin in the last 30 days, have concurrent purulent conjunctivitis, or have a history of recurrent infection unresponsive to amoxicillin.
- ✓ These patients should receive amoxicillin-clavulanate instead of amoxicillin.
- ✓ The therapeutic strategy should be changed if complications develop or if symptoms fail to resolve within 3 days.

- ✓ Short-course treatment (5-7 days) is not recommended in children younger than 2 years of age.
- ✓ In children at least 6 years of age who have mild-to-moderate acute otitis media, a 5- to 7-day treatment course may be used.
- ✓ Recurrent acute otitis media is defined as at least three episodes in 6 months or four episodes in 1 year, with one episode in the preceding 6 months.
- ✓ Recurrent episodes are of concern because children younger than 3 years of age are at high risk for hearing loss and language and learning disabilities.
- ✓ Clinicians should not prescribe antibiotics as prophylaxis against recurrent episodes, but they may offer tympanostomy tubes (T tubes).
- ✓ Antibiotics do not reduce pain in the first 24 hrs so acetaminophen and ibuprofen to reduce pain.







Reference: Thomas JP, Berner R, Zahnert T, Dazert S. Acute otitis media--a structured approach [published correction appears in Dtsch Arztebl Int. 2016 Feb 19;113(7):113]. Dtsch Arztebl Int. 2014;111(9):151-160. doi:10.3238/arztebl.2014.0151

✓ Therapeutic strategy based on:

- Severe signs & symptoms → Uni or bilateral & ≥ 6 months → Antibiotic
- Mild signs & symptoms → Bilateral & 6-23 months → Antibiotic
- Mild signs & symptoms → Unilateral & 6-23 months → Watchful waiting
- Mild signs & symptoms → Uni or bilateral & > 2 years → Watchful waiting

✓ Watchful waiting based on joint decision-making with the parents

TABLE 126-1 Antibiotics and Doses for Acute Otitis Media

Antibiotic	Brand Name	Dose	Comments ^a
Initial Diagnosis			
Amoxicillin	Amoxil [®]	80-90 mg/kg/day orally divided twice daily	First line
Amoxicillin-clavulanate	Augmentin [®]	90 mg/kg/day orally of amoxicillin plus 6.4 mg/kg/day orally of clavulanate, divided twice daily	First line if certain criteria are present ^b
Cefdinir, cefuroxime, cefpodoxime	Omnicef [®] , Ceftin [®] , Vantin [®]	cefdinir (14 mg/kg/day orally in 1-2 doses), cefuroxime (30 mg/kg/day orally in two divided doses), cefpodoxime (10 mg/kg/day orally in two divided doses)	Second line or nonsevere penicillin allergy
Ceftriaxone (1-3 days)	Rocephin [®]	50 mg/kg/day IM or IV for 3 days	Second line or nonsevere penicillin allergy
Failure at 48-72 Hours			
Amoxicillin-clavulanate ^b	Augmentin [®]	90 mg/kg/day orally of amoxicillin plus 6.4 mg/kg/day orally of clavulanate, divided twice daily	First line
Ceftriaxone (1-3 days)	Rocephin [®]	50 mg/kg/day IM or IV for 3 days	First line or nonsevere penicillin allergy
Clindamycin	Cleocin [®]	30-40 mg/kg/day orally in three divided doses ± second- or third-generation cephalosporin	Second line or nonsevere penicillin allergy

IM, intramuscular; IV, intravenous; po, orally.

^aAmoxicillin-clavulanate 90:6.4 or 14:1 ratio is available in the United States; 7:1 ratio is available in Canada (use amoxicillin 45 mg/kg for one dose, amoxicillin 45 mg/kg with clavulanate 6.4 mg/kg for second dose).

^bIf a patient has received amoxicillin in the last 30 days, has concurrent purulent conjunctivitis, or has a history of recurrent infection unresponsive to amoxicillin.

Data from Reference 5.