

## ANTIBIOTICS:

- Penicillin (G = IV/IM; VK = PO): all strep (GBS, GAS), syphilis, sometimes mouth abscesses (PCN G).
  - Amox: AOM (S. pneumo (80mg/kg 2<sup>o</sup> resist), H. flu, Moraxella), GAS (strep throat), simple UTI.
  - Pipercillin, Ticarcillin, Carbeincillin: slight pseudomonas coverage.
  - Ampicillin: Listeria, enterococcus.
  - Augmentin (amox/clavulanic acid): Gram +, anaerobes; failed OM, PNA, UTI.
  - Unasyn (amp/sulbactam) = IV Augmentin.
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- Zithromax: Atypicals (mycoplasma/chlamydia pneum), sinusitis, STD's, OM (try to avoid), pertussis. (↑ Resistance potential – in body x 10 days; subtherapeutic at end.)
  - Tetracycline: Rickettsial, Lyme. (> 8-10 y/o w/ permanent teeth to avoid yellow stain.)
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- Cephalosporins:
    - 1<sup>st</sup> Gen = cephazolin, cephalexin/Keflex: skin infection (boils), lymphadenitis, surgical prophylaxis. (Will not cover MRSA).
    - 2<sup>nd</sup> Gen = cefurox: PNA, endocarditis, UTI.
    - 3<sup>rd</sup> Gen = ceftriaxone, cefotax, ceftaz: PNA, GNR sepsis, meningitis.  
Ceftaz w/ pseudomonal coverage: F&N.
    - 4<sup>th</sup> Gen = Cefipime: similar to 3<sup>rd</sup> gen coverage, but extended spectrum, including MDR Gram neg's like Enterobacter & Klebsiella; + pseudomonas coverage. Some MRSA. Less likely to induce beta-lactamases (good for nosocomial infections).
  - Vanc: All Gram +, esp in dialysis (lots of MRSA), line infections, covers enterococcus (cephalosporin's don't).
  - Clinda: Anaerobic infections above diaphragm, Gram + (incl. MRSA; if resist to erythro, can develop resist to clinda → do "D test"), TSS (toxin production).  
Can cause C. diff. PO tastes bad.
  - Flagyl: Anaerobic infections below diaphragm, C. diff (if fails x 2, use PO vanc).
  - Bactrim: MRSA, but no regular strep, PCP prophylaxis, UTI in older kids (don't use in younger kids due to risk of sulfa rxn).
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- Aminoglycosides: like 3<sup>rd</sup> gen cep, but ↑ anti-pseudomonal; aerobic Gram neg only; neonatal infections (GBS, E. Coli; use amp for Listeria). Come IV only.
  - Quinolones: Avoid in kids (cause cartilage defects in beagles). Can use for UTI's (cipro), PNA (Levaquin), & pseudomonas.
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- Aztreonam: Broad spectrum, Gram neg.
  - Meropenam: Broad spectrum, esp gut organisms/pancreatitis. No MRSA.
  - Zosyn (pip/tazobactam): Broad spectrum. No MRSA.
  - Linezolid: Super Gram + (including MRSA).
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- Prophylaxis:
    - Strep pneumo: PCN VK (sickle cell) – 125mg BID until 3 y/o, then 250mg BID.
    - PCP: Bactrim, Pentamidine (neutropenic kids).
    - Fungal: Diflucan (neutropenic kids).

**2004 AAP Clinical Practice Guidelines for AOM**

1. Initial Antibacterial Therapy vs. Observation in Children with AOM:

Age	Certain Diagnosis*	Uncertain Diagnosis
< 6 months	Antibacterial therapy	Antibacterial therapy
6 months to 2 years	Antibacterial therapy	Abx if severe; observation if nonsevere**
≥ 2 years	Abx if severe; observation if nonsevere	Observation

\*Certain diagnosis meets all 3 criteria: rapid onset, signs of middle ear effusion, & signs/symptoms of middle ear inflammation.  
 \*\*Nonsevere illness = mild otalgia & fever <39°C in past 24 hrs. Severe illness = moderate to severe otalgia or fever ≥39°C.  
 Observation is appropriate only when *fu* can be ensured in 48-72 hours & abx started if *sx*'s persist or worsen.

2. Recommended Antibacterial Agents:

Severity of Illness	At Dx if Tx'd Initially w/ Abx		If Observation Fails at 48-72°		Initial Abx Failure at 48-72°	
	Recommended	Alt for PCN all.	Recommended	Alt for PCN all.	Recommended	Alt for PCN all.
<b>Nonsevere**</b>	Amoxicillin 80-90 mg/kg/d divided BID	Non-type I: cefdinir, cefurox, cefprozime, Type I: azithro, clarithromycin.	Amoxicillin 80-90 mg/kg/d divided BID	Non-type I: cefdinir, cefurox, cefprozime, Type I: azithro, clarithromycin.	Augmentin 90 mg/kg/d / 6.4 mg/kg/d divided BID	Non-type I: ceftriaxone x 3d Type I: clinda.
<b>Severe*</b>	Augmentin 90 mg/kg/d / 6.4 mg/kg/d divided BID	Ceftriaxone x 1 or 3 days	Augmentin 90 mg/kg/d / 6.4 mg/kg/d divided BID	Ceftriaxone x 1 or 3 days	Ceftriaxone x 3 days	Clinda, ENT referral

\*Severe illness = moderate to severe otalgia or fever ≥39°C

\*\*Nonsevere illness = mild otalgia & fever <39°C in past 24 hrs

3. Treat ear pain with acetaminophen or ibuprofen.