

Anaerobic Bacterial Infections

Antibiotic Considerations

- **1st Choice antibiotics for anaerobic infections**

- **Metronidazole (Flagyl)**

- Very good coverage of gram-negative anaerobic bacteria
- Less reliable against gram-positive anaerobic bacteria

- **Beta-lactam/beta-lactamase inhibitor antibiotics**

- E.g. - Augmentin, Zosyn, Unasyn

- **Carbapenems**

- Broadest anaerobic organism coverage of the beta-lactams
 - Ertapenem, meropenem, imipenem

- **Variable Activity**

- **Clindamycin**

- B. Fragilis- 20-60% of strains are resistant
- Some Clostridia species are resistant
- Used to be a DOC for anaerobic infections, however, resistance is increasing-

- **Moxifloxacin**

- only Fluoroquinolone with predicted anti-anaerobic activity, however, increased resistance is developing

- **Vancomycin**

- Active against gram + anaerobes and inactive against gram - anaerobes

- **Tetracyclines**

- Inactive against most strains of B. fragilis
 - Doxycycline and Minocycline are somewhat more active than tetracycline

- **Limited Activity**

- **Penicillins, cephalosporins, bactrim, aminoglycosides, and macrolides** show limited activity against anaerobes due to widespread resistance and should not be used to empirically treat anaerobic infections