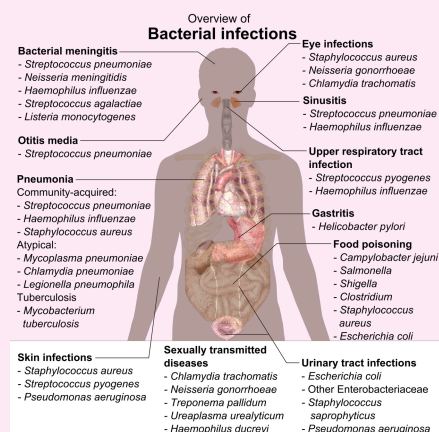


### Bacterial Infections Based on Bugs



### When Prophylaxis is Appropriate

- Prosthetic heart valve/valvular disease + dental/oral procedures
- infective endocarditis
- GU/GI procedures
- Rheumatic fever (recurrence)
- People in contact with meningococcal disease
- Surgical
- People at high risk/in contact with TB
- People at high risk/in contact with HIV

### Medically Important Microorganisms

- G+/G- cocci
- G+/G- bacilli
- Anaerobes
- Spirochetes
- Mycoplasma
- Chlamydia

### General AE of ABX

- Vomiting
- Severe watery diarrhea
- Abdominal cramps
- Allergic rxn

### Antibiotic Spectra

- Narrow Spectrum** Active against single or limited group of microorganisms
- Extended Spectrum** Effective against G+ and some G-
- Broad Spectrum** Effective against both G+ and G-

### Static Vs. Cidal

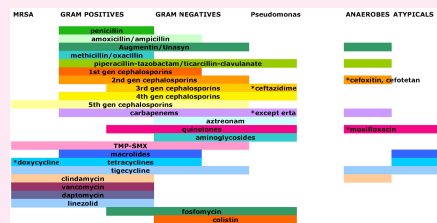
- Bacteriostatics**
  - inhibit growth without causing death
  - Sulfonamides (*DNA synthesis*), Chloramphenicol (*transcription and translation*)
  - Relies on INTACT immune system to clear nongrowing/viable bacteria
- Bactericidal**
  - Kill bacteria
  - PCN (cell wall inhibitor)
  - Can be given to patients with COMPRO-MISED immunity

### Empiric Treatment - Match the Bug to Location

- G+ cocci Skin
- G- bacilli Urethras
- G+, G-, anaerobes Large Intestine

### Drug Distribution

### Antibiotic Activity



### Site of Action of ABX

- Cell Wall Inhibitors**
  - Fosfomycin
  - Cycloserine
  - Vanco
  - PCN
  - CPN
  - Monobactams
  - Carbapenems
  - Ethambutol
  - Pyrazinamide
  - Isoniazid
- DNA Synthesis & Integrity Inhibitors**
  - Sulfonamides
  - Trimethoprim
  - Quinolones

- Transcription & Translation Inhibitors**
  - Rifampin
  - AGs
  - Spectinomycin
  - Tetracyclines
  - Macrolides
  - Chloramphenicol
  - Streptogramins
  - Oxazolidinones

