

| Organism | Appropriate drugs |
|--|---|
| Gram positive: Skin, Head, Chest | Penicillin, Erythromycin, First generation Cephalosporins |
| Both gram positive and gram negative, not the best for either, problematic side-effects | Amoxicillin, Second generation Cephalosporins |
| Gram negative: Abdomen, Kidneys, Whole body | Cotrimoxazole, Chloramphenicol, Ciprofloxacin, Third generation Cephalosporins; occasionally Doxycycline. |
| Acid fast bacteria: TB and Leprosy | Rifampin for both; Streptomycin, Ethambutol, Pyrazinamide for TB; Dapsone for Leprosy. |
| Intermediate organisms: Rickettsiae which cause whole-body infections with rashes. | Chloramphenicol, some Cephalosporins, Doxycycline |
| Intermediate organisms: Spirochetes which cause syphilis, some skin diseases related to syphilis, and whole-body infections with rashes. | Penicillin, Doxycycline |

| | Gram Pos | Gram neg | Intermed | Acid Fast |
|-------------|-----------------|---|---------------------------|-------------------------|
| Above waist | Rapid onset | | | Slow onset |
| Below waist | | Rapid onset | | Slow onset |
| Whole body | | Rapid onset, little or no rash, usually | Rapid onset, usually rash | Slow onset, rarely rash |
| Skin | Variable onset | | Rapid onset | Very slow onset |

The triangle on the following page is a summary of the presentation of three illnesses due to intermediate organism: typhus, spotted fever, and relapsing fever. Each of these is transmitted by two different insects. They all present with fever, headache, general body pains, and (usually) rash. With typhus the general illness precedes the fever by a matter of days. With relapsing fever, the onset is most sudden, over a matter of minutes to hours.

All these diseases are effectively treated with doxycycline. There are a number of other diseases that also present similarly, which may be indistinguishable. One is malaria which requires its own drugs. Another is leptospirosis which responds to doxycycline. Most of the others are viral, which require supportive care only in developing areas. You will not be able to distinguish viral from intermediate organism diseases. Therefore you will end up treating some viral illnesses with doxycycline. So be it.

INTERMEDIATE ORGANISMS: SPIROCHETES AND RICKETTSIAE

