

## CHARACTERISTICS OF SECOND-LINE DRUGS FOR MTB

| Drug         | Bactericidal | MIC (ug/ml) | Serum Level  | Dosing  | Remarks   | Side Effects   |
|--------------|--------------|-------------|--------------|---|---|--|
| Streptomycin | Yes          | 0.25-2.0    | ~ 25         | 15mg kg/day<br>5-7 days/wk                                      | Initial dosing  | Lichenoid eruptions, renal toxicity, giddiness, perioral numbness, hypersensitivity, vestibular toxicity/ototoxicity, renal toxicity.  |
|              |              |             |              | 15-20mg/kg/ 2-3 days/wk<br>After culture conversion             |   |  |
| Amikacin     | Yes          | 0.5-1.0     | ~ 25         | 15mg kg/day<br>5-7 days/wk                                      | Initial dosing<br>Adjust dose/interval for renal insufficiency.   | Vestibular toxicity, ototoxicity, renal toxicity.  |
|              |              |             |              | 15-20mg/kg/ 2-3 days/wk<br>After culture conversion             |   |  |
| Capreomycin  | Yes          | 1.25-2.5    | ~ 25         | 15mg kg/day<br>5-7 days/wk                                      | Initial dosing<br>Age>59  | Vestibular toxicity/ototoxicity, hypokalemia, hypocalcemia, hypomagnesemia, eosinophilia, renal toxicity.  |
|              |              |             |              | 15-20mg/kg/ 2-3 days/wk<br>After culture conversion             |   |  |
| Moxifloxacin | Yes          | 0.25-0.5    | 4-6          | 400mg/qd  | No modification of dose in renal failure.   | Class Effect: Al, Mg, Ca antacids, sucralfate and milk based enteral supplements inhibit absorption. GI upset, dizziness, hepatitis, hypersensitivity, photosensitivity, headaches, tendonitis, tendon rupture, insomnia, psychosis, agitation, depression, paranoia, seizures, thrush, peripheral neuropathy<br><br>Good CNS penetration. |
| Levofloxacin | Yes          | 0.5-1.0     | 8-12         | 500-1000 mg/qd (usual 750)                                      | Adjust dose for creat cl <30  |  |
| Rifabutin    | Yes          | >2.0        | 0.3-0.9      | 450mg daily   | Extensive drug interactions: P-450 induction (less than Rifampin). Leads to decreased levels of: PIs, methadone, oral contraceptives, diabetic meds, fluconazole and others (see Physicians' Desk Reference for potential interaction with all concomitantly administered prescription drugs). Concentrates in macrophages. | Decreased white blood count, decreased platelet count, arthralgia, renal impairment, hyperpigmentation, uveitis, discoloration of body fluids, flushing, erythema of head and trunk, GI upset, hepatitis, nausea.  |
| Ethionamide  | Weak         | 0.3-1.2     | 1-5          | 250mg BID or TID<br>OR<br>250mg am/500 mg/hs<br>or 500 mg daily | Increase dose gradually. Monitor liver function/thyroid function. Increases effect of cycloserine.  | Peripheral neuropathy, nausea, vomiting, abdominal pain, hypothyroidism, salivation, metallic taste, hepatitis, giddiness, headache, hypersensitivity, alopecia, gynecomastia, hypotension, impotence, behavior changes, menstrual irregularity, hypoglycemia, photosensitivity.   |
| PAS          | No           | 8.0         | 20-60 (6 hr) | 4gm BID<br>Or<br>4gr A.M. 2gm hs<br>Or<br>6gr QD                | Diarrhea improves with time; increase dose gradually, mix with acidic juice or applesauce, avoid Benadryl. Monitor thyroid function.  | GI upset, diarrhea (self limiting), nausea, hypothyroidism, lichenoid eruptions, hypokalemia, hepatitis, thrombocytopenia, increased acidosis in patient with renal failure.   |
| Clofazamine  | Weak         | 0.12        | 0.5-2.0      | 300mg daily x 2 mo then 100mg daily                             | Skin problems limited by sunscreen, lubricants helpful  | Hyperpigmentation, GI complaints, acne flare, retinopathy, ichthyosis, sunburn.  |
| Cycloserine  | No           | N/A**       | 20-35        | 250mg BID or 250mg AM/500 mg/hs                                 | Avoid in patients with seizures/psychotic disease or ETOH abuse; check level before increasing dose >500 QD. Administer with pyridoxine 100 mg QD.  | Lichenoid eruption, agitation, psychosis, depression, seizures, dizziness, headache, slurred speech, insomnia, Steven's Johnson Syndrome. Adjust dose in renal insufficiency.  |
| Linezolid    | Unknown      | 0.25-0.5    | 12-24        | 600mg daily   | Pyridoxine 100 mg daily.  | Peripheral neuropathy, optic neuritis (reversible), anemia, thrombocytopenia, neutropenia, headache, GI upset, rash, serotonin syndrome, lactic acidosis   |



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