Rifampin for Non-Mycobacterial Infections

**Antibiotic Class:** Rifamycin

**Antimicrobial Spectrum:**
*Staphylococcus spp.* (including *aureus*), *Streptococcus spp.* (including *S. pneumoniae*), *Legionella spp.*, *B. fragilis*, *Y. pestis*, *C. burnetti*, *Neisseria meningitides*

**Mechanism of Action:** Rifamycins bind to and inhibit DNA-dependant RNA polymerase

**Pharmacodynamics:** Concentration dependent killing (peak/MIC and AUC/MIC)

**Pharmacokinetics:**
Cmax: 8-24mg/L; Tmax: 1.5-2 hours; Bioavailability: 68%; Protein binding: 85%; Table 3

**Adverse Effects:**
Hepatic: hepatotoxicity, jaundice, hepatitis
Hematologic: Thrombocytopenia, hemolytic anemia
Kidneys: Acute renal failure, interstitial nephritis,
Other: shock, flu-like syndrome, body fluid discoloration (tears, sweat may be orange colored)

**Dosage:**
PO: 150mg, 300mg capsules
IV: 600mg as a 30 minute infusion

Dosing in adults:
Prophylaxis, Meningococcal infectious disease: 600 mg PO q12h x 2 days
Prosthetic valve endocarditis (S. *aureus*): 900-1200 mg/day PO/IV divided q8h, in combination with anti-staphylococcal penicillin with or without gentamicin
Synergistic activity against Staphylococcal infections: 300-600 mg IV/PO q12h
Table 6

Disease state based dosing:
Hepatic failures: No specific recommendations, however, half-life is prolonged in patients with hepatic insufficiency
Renal failures: No adjustment necessary.

**Contraindications/Warnings/Precautions:** Precautions: Hepatic impairment

**Drug Interactions:**
Due to its known induction of P450 liver isoenzymes, caution should be exercised when administering this agent with other drugs metabolized in the liver. Please see the “Drug Interactions” section in the text/website for a complete list of relevant interactions. Heparin may negate the action of rifampin.

**Pregnancy:** Category C: Risk unknown. Human studies inadequate

**Monitoring Requirements:**
Toxic: baseline liver function tests, bilirubin, serum creatinine, complete blood count and platelet count.

**Brand names/Manufacturer:**
Rifampin (Various manufacturers worldwide)
Rifadin - Hoechst Marion Roussel
Rimycin - Alphapharm
Rofact - Valeant Pharmaceuticals