

## **RIFAMPIN (RMP) Fact Sheet**

Rifampin is a rifamycin, a complex semisynthetic agent derived from the fungus *Streptomyces*.

- Dose: Usual 600 mg every day, 450 mg every for adults <110 pounds.
- Administration: Oral on empty stomach; IV
- Excretion: Hepatic
- Distribution: A dose of 10 mg/kg produces a peak concentration of 6 to 7 mcg/ml 1.5 – 2 hours after administration. Tissue concentration may exceed serum concentration, good CSF concentration in inflamed meninges, penetrates cell membranes and closed caseous lesions.

### **Adverse Reactions**

#### Hypersensitivity

1. Cutaneous syndrome
  - a. Occurs in up to 5% of patients on either daily or intermittent therapy.
  - b. Symptoms include flushing, pruritus (with or without rash), most commonly on face and scalp. Redness and watering of eyes may occur.
  - c. Usually occurs 2-3 hours after the dose.
  - d. Usually requires only symptomatic treatment, but if persistent, may require desensitization.
2. Generalized reactions and anaphylaxis are rare.

#### Hematologic

1. Thrombocytopenic purpura
  - a. Occurs more frequently with intermittent therapy, especially in higher doses. Can occur with daily therapy, especially if intermittently non-compliant. It rarely occurs in well supervised daily therapy.
  - b. Watch for the occurrence of Petechiae or purpura. With the occurrence of either hold rifampin therapy and notify OSDH TB Control Officer.
  - c. Thrombocytopenia is reversible if the drug is discontinued as soon as purpura occurs. Cerebral hemorrhage and fatalities have occurred when rifampin administration has continued or resumed after the appearance of purpura.

2. Hemolytic anemia and neutropenia rarely occur.

### Other Toxicities

1. GI side effects are occasionally seen. Relieved by food, however, this may decrease serum rifampin concentration.
2. Pseudomembranous colitis is rarely reported and can occur up to 9 months after completion of therapy.
3. Hepatotoxicity is uncommon, although an asymptomatic transient rise in liver enzymes is common and does not require discontinuation of therapy.
4. Renal failure: Acute tubular necrosis may occur with intermittent therapy or after temporary discontinuation and resumption of rifampin. Interstitial nephritis is rare.
5. "Influenza syndrome" is associated with intermittent therapy, especially with higher doses and larger intervals. It usually begins after 3-6 months of intermittent therapy, about 1-2 hours after the dose, subsiding after approximately 12 hours. Symptoms include fever, headache, malaise and bone pain.
6. "Respiratory syndrome" is dyspnea with or without wheezing occurring in similar circumstances to the influenza syndrome.
7. Reddish discoloration of body fluids. May permanently discolor soft contact lenses.
8. Menstrual disturbances may occur.

### **Drug Interactions**

Rifampin is known to induce the hepatic microsomal enzymes that metabolize many drugs resulting in a decrease in the therapeutic effects of the other drug, a partial list of such drugs is listed:

Acetaminophen (Tylenol)	Diazepam (Valium)	Propranolol (Inderal)
Anticoagulants, oral	Digoxin	Protease inhibitors
Barbiturates	Digitoxin	Quinidine
Beta-blockers	Disopyramide (Norpace)	Sulfones
Chloramphenicol	Estrogens	Sulfonylureas
Clofibrate (Atromid-5)	Ketoconazole (Nizoral)	Theophyllines
Contraceptives, oral	Methadone	Tolbutamide (Orinase)
Corticosteroids	Mexiletine (Mexitil)	Tocainide (Tonocard)
Cyclosporine (Sandimmune)	Phenytoin (Dilantin)	Verapamil (Calan)
Dapsone		Warfarin

### Fluothone (Halothane)

Hepatotoxicity and hepatic encephalopathy have occurred when rifampin and isoniazid were given after fluothane anesthesia.

### Indinavir (Crxivan)

Rifampin will reduce indinavir serum concentration. Indinavir will increase the rifampin serum concentration.

### Isoniazid

Isoniazid and rifampin coadministration may result in a higher

rate of hepatotoxicity than with either agent alone. If alterations in liver function tests occur, consider discontinuation of one or both agents.

Ketoconazole  
(Nizoral)

Treatment failure of either ketoconazole or rifampin may occur.

p-Aminosalicylic Acid (PAS)

PAS granules contain bentonite, which interferes with the gastrointestinal absorption of rifampin, significantly lowering rifampin blood levels. Impairment of rifampin absorption does not occur with PAS tablets.

Retonavir  
(Norvir)

Rifampin will reduce retonavir serum concentration. Retonavir will increase the rifampin serum concentration.

Saquinavir  
(Invirase)

Rifampin will reduce saquinavir serum concentration. Saquinavir will increase the rifampin serum concentration.

Zidovudine  
(Retnovir)

Rifampin decreases the zidovudine serum concentration.

### **Monitoring**

1. Follow platelet counts, with discontinuation of therapy if decreased ( $<50,000/\text{ml}^3$ ).
2. May need to check serum drug concentration of other drugs used concomitantly.
3. Check liver enzymes monthly if patient has underlying liver disease or alcoholism.