

# Rifampin (4R) for the Treatment of TB Infection

**NOTE: It is imperative to rule out active TB disease in all persons prior to initiating treatment for TB infection**

## How is rifampin prescribed to treat TB infection?

Rifampin is taken once daily for 4 months to treat TB infection.

## Is the regimen effective?

4 months of daily rifampin is clinically equivalent and less toxic compared to 6-9 months of isoniazid. 3 months of daily rifampin + isoniazid also is as effective as 6 months or more of isoniazid.

## What are the advantages of this regimen?

- Reduces the treatment time by over 50% (compared to 9 months of isoniazid)
- Higher rates of treatment completion which increases treatment effectiveness
- Several fold lower rates of hepatotoxicity

## Who should be considered for treatment with 4 months of rifampin for TB infection?

The California Department of Public Health TB Control Branch and the California TB Controllers Association recommend four months of rifampin as an equal alternative to 9 months of daily isoniazid or 12 weekly doses of isoniazid + rifapentine. It should be considered for:

- Persons with TB infection of any age
- Adults and children exposed to isoniazid-resistant TB

## Who is NOT recommended for treatment with 4 months of rifampin?

- Individuals having drug interactions with rifampin that are difficult to manage. Rifamycins are inducers of

cytochromes P4503A4 & P4502C8/9 and decrease blood levels of numerous medications (e.g., transplantation drugs, oral contraceptives, warfarin, sulfonylureas, opioids, steroids, antihypertensives, etc.). In some cases, rifabutin may be substituted for rifampin

- Rifampin is contraindicated in HIV-positive persons being treated with certain combinations of antiretroviral drugs (ARVs). In some cases, rifabutin may be substituted for rifampin. For more information on interactions with ARVs see: <https://clinicalinfo.hiv.gov/en/guidelines/adult-and-adolescent-arv/whats-new-guidelines>
- Persons presumed infected with *M. tuberculosis* resistant to rifampin
- Individuals who have had prior adverse events or hypersensitivity to rifamycins

## What are the doses?

Drug	Dosage	Max dose
Rifampin	<3.75 kg = 10 mg/kg	600 mg
	3.75 – 6 kg = 75 mg	
	6.1 – 10 kg = 150 mg	
	10.1 – 15 kg = 225 mg	
	15.1 – 20 kg = 300 mg	
	20.1 – 30 kg = 450 mg	
	Over 30.0 kg = 600 mg	
Rifabutin	5 mg/kg for adults	300 mg
	Children not recommended	
Rifampin and Rifabutin capsules can be opened and the contents mixed with semi-solid food for patients who are unable to swallow pills.		



# Rifampin (4R) for the Treatment of TB Infection -*continued*

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## What are the possible side effects?

- GI upset
- Hepatotoxicity
- Hypersensitivity reaction (rash and pruritis, flu-like syndrome, thrombocytopenia, hemolytic anemia, ARF, & TTP)
- Hematologic abnormalities
- Orange discoloration of body fluids (universal)

## What type of monitoring do I need to do?

- Monthly interviews and brief physical examinations to identify treatment-associated adverse events
- Baseline hepatic chemistry is recommended for patients with specific conditions:
  - HIV-positive
  - Liver disorders
  - Pregnancy and 3-6 months postpartum
  - Regular alcohol use
  - Consider also for older persons and those taking medications for chronic medical conditions
- If baseline hepatic chemistry testing is abnormal, continue with at least monthly testing as indicated. More frequent testing, e.g. weekly or biweekly, is appropriate until the pattern for the patient's hepatic chemistry testing is established
- If planning to use INH + Rifampin regimen, please see guidelines "Isoniazid (INH) for the Treatment of TB Infection" regarding additional considerations when using isoniazid

## What is completion therapy?

- Defined as completing at least 120 doses within a 6-month period
- 3 months of daily INH plus rifampin: complete 90 doses within 4 months

## What should be done when treatment is completed?

- Patients should receive written documentation of TST or IGRA testing results, CXR results, names and dosages of medications, and duration of treatment which can be presented anytime TB testing is requested

- Providers should re-educate patients about the signs and symptoms of active TB disease and advise them to contact a medical provider if these symptoms develop
- Repeat CXRs are not indicated unless TB symptoms suggestive of TB disease are present

## Resources

Los Angeles County TB Control Program  
<http://www.publichealth.lacounty.gov/tb>  
213-745-0800

California Department of Public Health  
Tuberculosis Control Branch (TBCB)  
<http://www.cdph.ca.gov/programs/tb/Pages/default.aspx>  
510-620-3000

California TB Controllers Association  
<http://www.ctca.org/>  
510-479-6139

Centers for Disease Control and Prevention  
Division of Tuberculosis Elimination  
<http://www.cdc.gov/tb/>  
800-232-4636

Curry International Tuberculosis Center  
Warmline Consultation Service  
<http://www.currytbcenter.ucsf.edu/>  
877-390-6682 or 415-502-4700

