

PROVIDER'S GUIDE TO LATENT TUBERCULOSIS TREATMENT IN HIV

The purpose of this guide is to provide HIV practitioners with a quick reference for the treatment of latent tuberculosis infection (LTBI) in patients on antiretrovirals. The CDC and National Tuberculosis Controllers Association preferentially recommend short-course rifamycin-based, 3- or 4-month LTBI treatment regimens over 6- or 9-month isoniazid monotherapy. Many antiretrovirals (ARVs) are CYP3A4 substrates, which limits the use of rifamycins without modification of ARV regimens. The HIV practitioner should discuss risks vs benefits of shorter LTBI therapy that may require ARV modification vs longer LTBI therapy with potentially more side effects but less drug interactions.

Regimen	Medications	Duration	Dosing for Adults	Frequency	Potential Disadvantages
3HP	INH + RPT	3 months	INH: 15 mg/kg; max dose is 900 mg RPT: 10–14.0 kg - 300 mg 14.1–25.0 kg - 450 mg 25.1–32.0 kg - 600 mg 32.1–49.9 kg - 750 mg ≥50.0 kg - 900 mg max dose	Once weekly	<ul style="list-style-type: none"> Medication cost Multiple pills taken simultaneously (i.e., 10 pills once weekly compared with 2-3 daily) Potential for systemic drug reaction or influenza-like syndrome that can include syncope and hypotension Patients >65 years are at an increased risk of hypertensive events and middle aged (35-65 years) patients are at increased risk of systemic drug reactions (flu-like syndrome and urticaria)
3HR	INH + RIF	3 months	INH: 5 mg/kg; max dose is 300 mg RIF: 10 mg/kg; max dose is 600 mg	Daily	<ul style="list-style-type: none"> Many drug interactions Hepatotoxicity Rifabutin has fewer or less pronounced drug interactions and may be used in place of RIF when RIF is contraindicated due to drug-drug interactions and 3HP or INH cannot be used
4R	RIF	4 months	RIF: 10 mg/kg; max dose is 600 mg	Daily	<ul style="list-style-type: none"> Many drug interactions Rifabutin has fewer or less pronounced drug interactions and may be used in place of RIF when RIF is contraindicated due to drug-drug interactions and 3HP or INH cannot be used
6H	INH	6 months	INH: 5 mg/kg; max dose is 300 mg	Daily	<ul style="list-style-type: none"> Hepatotoxicity Early discontinuation due to adverse effects
			INH: 15 mg/kg; max dose is 900 mg	Twice weekly	
9H	INH	9 months	INH: 5 mg/kg; max dose is 300 mg	Daily	<ul style="list-style-type: none"> Hepatotoxicity Early discontinuation due to adverse effects
			INH: 15 mg/kg; max dose is 900 mg	Twice weekly	

INH = isoniazid; RIF = rifampin; RPT = rifapentine

Preferred Regimen in HIV

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DRUG INTERACTIONS BETWEEN LATENT TUBERCULOSIS INFECTION TREATMENT AND ANTIRETROVIRALS

LTBI Medication	NRTIs	NNRTIs	INSTIs	PIs	Entry Inhibitors
Isoniazid	TAF	DOR	BIC	All PIs	MVC
	TDF	RPV	DTG		IBA
	3TC	EFV	CAB		FTR
	FTC	ETR	EVG		
	ABC	NVP	RAL		
Rifampin	TAF	DOR	BIC	All PIs	MVC 600 mg BID
	TDF	RPV	DTG 50 mg BID		IBA
	3TC	EFV 600 mg daily	CAB		FTR
	FTC	ETR	EVG		
	ABC	NVP	RAL 800 mg BID		
Weekly rifapentine	TAF	DOR	BIC	All PIs	MVC 600 mg BID in absence of PI
	TDF	RPV	DTG (if suppressed)		IBA
	3TC	EFV	CAB		FTR
	FTC	ETR	EVG		
	ABC	NVP	RAL		

KEY: 3TC = lamivudine; ABC = abacavir; BIC = bictegravir; CAB = cabotegravir; DOR = doravirine; DTG = dolutegravir; EFV = efavirenz; ETR = etravirine; EVG = elvitegravir; FTC = emtricitabine; FTR = fostemsavir; IBA = ibalizumab; INSTI = integrase strand transfer inhibitor; LTBI = latent tuberculosis infection; MVC = maraviroc; NRTI = nucleoside reverse transcriptase inhibitor; NNRTI = non-nucleoside reverse transcriptase inhibitor; NVP = nevirapine; PI = protease inhibitor; RAL = raltegravir; RPV = rilpivirine; TAF = tenofovir alafenamide; TDF = tenofovir disoproxil fumarate

- References:**
- Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents with HIV. Department of Health and Human Services. Available at <https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-arv/whats-new-guidelines>. Accessed Feb 7, 2023.
 - Sterling TR, Njie G, Zenner D, et al. Guidelines for the Treatment of Latent Tuberculosis Infection: Recommendations from the National Tuberculosis Controllers Association and CDC, 2020. *MMWR Recomm Rep* 2020;69(No. RR-1):1–11.
 - Guidelines for the Prevention and Treatment of Opportunistic Infections in Adults and Adolescents with HIV. Department of Health and Human Services. Available at <https://clinicalinfo.hiv.gov/sites/default/files/guidelines/documents/adult-adolescent-oi/guidelines-adult-adolescent-oi.pdf>. Accessed Feb 7, 2023.

No interactions expected

Not recommended

Dose adjustment required