

# ADULT HIV AND TB DRUG DOSING

## INCLUDING RENAL DOSE ADJUSTMENTS

May 2024, Version 3

### NEED HELP?

Contact the TOLL-FREE National HIV & TB Health Care Worker Hotline

0800 212 506 / 021 406 6782

Alternatively "WhatsApp" or send an SMS or "Please Call Me"

to 071 840 1572

[www.mic.uct.ac.za](http://www.mic.uct.ac.za)



### ANTITUBERCULOUS DRUGS

#### When used as fixed-dose combination:

Treatment phase	Intensive phase - daily for 2 months	Continuation phase – daily for 4 months		eGFR < 30 mL/min
Body weight (kg)	RHZE (150,75,400,275)	RH (150,75)	RH (300,150)	
25 – 37.9 kg	2 tablets	2 tablets		RH: Unchanged. RHZE: Dosing adjustment needed for pyrazinamide and ethambutol. See individual agents below.
38 – 54.9 kg	3 tablets	3 tablets		
55 – 70.9 kg	4 tablets		2 tablets	
≥ 71 kg	5 tablets		2 tablets	

#### When used as single agents: (for severely underweight patients please consult the Hotline)

Drug	Target dosing	Standard adult dose	eGFR < 30 mL/min
Amikacin	15 – 20 mg/kg daily	46 – 55.9 kg: 750 – 1000 mg daily ≥ 56 kg: 1000 mg daily	Stop amikacin. If essential, use with therapeutic drug monitoring
Bedaquiline	If bedaquiline treatment interrupted for > 2 weeks, call the hotline for advice on restarting	≥ 30 kg: 400 mg daily for 2 weeks then 200 mg three times a week (M/W/F) until completed <b>OR</b> BPaL-L regimen only: 200 mg daily for 8 weeks then 100 mg daily	Unchanged (but dosing not established in severe renal impairment, use with caution)
Clofazimine	2 – 5 mg/kg daily	100 mg daily	Unchanged
Delamanid		30 – 45.9 kg: 50 mg 12 hourly ≥ 46 kg: 100 mg 12 hourly	Unchanged (but dosing not established in severe renal impairment, use with caution)
Ethambutol	15 – 25 mg/kg daily	30 – 45.9 kg: 800 mg daily 46 – 69.9 kg: 1200 mg daily ≥ 70 kg: 1600 mg daily	Standard dose given three times weekly
Ethionamide (can be given in 2 divided doses to improve tolerance)	15 – 20 mg/kg daily	30 – 45.9 kg: 500 mg daily 46 – 69.9 kg: 750 mg daily ≥ 70 kg: 1000 mg daily	Unchanged
Isoniazid (high dose)	10 – 15 mg/kg daily	30 – 45.9 kg: 450 mg daily ≥ 46 kg: 600 mg daily	Unchanged
Levofloxacin	15 – 20 mg/kg daily	30 – 45.9 kg: 750 mg daily ≥ 46 kg: 1000 mg daily	Standard dose given three times weekly
Linezolid	10 mg/kg daily	30 – 35.9 kg: 300 mg daily ≥ 36 kg: 600 mg daily	Unchanged
Moxifloxacin		≥ 30 kg: 400 mg daily	Unchanged
Para-aminosalicylic acid	200 – 300 mg/kg daily	30 – 69.9 kg: 4 g 12 hourly ≥ 70 kg: 4 – 6 g 12 hourly	4 g 12 hourly
Pretomanid		≥ 30 kg: 200 mg daily	Unchanged
Pyrazinamide (dose depends on which tablet strength is available)	20 – 30 mg/kg daily	30 – 35.9 kg: 1200 – 1250 mg daily 36 – 69.9 kg: 1500 – 1600 mg daily ≥ 70 kg: 2000 mg daily	25 – 35 mg/kg three times weekly
Rifabutin		300 – 450 mg daily Reduce dose to 150 mg daily if used in combination with a protease inhibitor.	Unchanged (but consider a dose reduction of 50% if toxicity is suspected)
Terizidone	10 – 15 mg/kg daily	30 – 45.9 kg: 500 mg daily ≥ 46 kg: 750 mg daily	250 mg daily or 500 mg three times weekly

### ANTIRETROVIRALS

Drug	Standard adult dose	eGFR 30-50 mL/min	eGFR 15-30 mL/min	eGFR < 15 mL/min
Abacavir	600 mg daily OR 300 mg 12 hourly	Unchanged	Unchanged	Unchanged
Atazanavir/ritonavir	300 mg/100 mg daily Cannot be used with rifampicin. Replace rifampicin with rifabutin, and adjust the dose of rifabutin to 150 mg daily. Continue standard dose of atazanavir/ritonavir.	Unchanged	Unchanged	Unchanged
Darunavir/ritonavir	600 mg/100 mg 12 hourly OR 800 mg/100 mg daily (depending on mutations) Cannot be used with rifampicin. Replace rifampicin with rifabutin, and adjust the dose of rifabutin to 150 mg daily. Continue standard dose of darunavir/ritonavir.	Unchanged	Unchanged	Unchanged
Dolutegravir	50 mg daily If also on rifampicin: boosting of DTG required. The dosing frequency of DTG should be increased to 50 mg 12 hourly. If on TLD FDC, then add DTG 50 mg 12 hours after TLD. Continue boosting until 2 weeks after rifampicin discontinued.	Unchanged	Unchanged	Unchanged
Efavirenz	600 mg at night (or 400 mg if < 40 kg) The use of efavirenz with bedaquiline is contraindicated.	Unchanged	Unchanged	Unchanged
Etravirine	200 mg 12 hourly	Unchanged	Unchanged	Unchanged
Lamivudine	300 mg daily OR 150 mg 12 hourly	Unchanged	150 mg daily	50 mg daily
Lopinavir/ritonavir	400 mg/100 mg 12 hourly If also on rifampicin: Increase LPV/r to 800/200 mg twice daily slowly over 2 weeks with ALT monitoring. Continue double dose for 2 weeks after stopping rifampicin.	Unchanged	Unchanged	Unchanged
Rilpivirine	25 mg daily	Unchanged	Unchanged	Unchanged
Tenofovir alafenamide (TAF)	25 mg daily	Unchanged	Unchanged	Avoid *
Tenofovir disoproxil fumarate (TDF)	300 mg daily	Avoid	Avoid	Avoid *
Zidovudine	300 mg 12 hourly	Unchanged	Unchanged	300 mg daily

### DRUGS FOR PROPHYLAXIS OF OPPORTUNISTIC INFECTIONS

Drug	Standard adult dose	eGFR 10-50 mL/min	eGFR < 10 mL/min
Co-trimoxazole	800/160 mg daily	400/80 mg daily	400/80 mg three times per week
Dapsone	100 mg daily	No recommendation	No recommendation
Fluconazole	200 mg daily	100 mg daily	100 mg daily

### ASSESSING RENAL FUNCTION

- Creatinine is a waste product filtered by the kidneys. If serum creatinine (SCr) rises it is a sign that the kidneys are not working properly. As serum creatinine rises, the eGFR falls.
- The GFR can be estimated using various formulae, e.g. Modified Cockcroft-Gault, MDRD, CKD-EPI. The important point to remember is to consistently use the same formula for the same patient.
- For pregnant women with SCr > 85, discuss with an expert.
- Remember to re-assess kidney function periodically to avoid under-dosing if kidney function normalises.



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Largely based on NDOH Management of rifampicin-resistant TB guidelines, Sept 2023. Additional references available on request. ALT = alanine aminotransferase; FDC = fixed dose combination of rifampicin (R), isoniazid (H), pyrazinamide (Z) and ethambutol (E); RH = fixed dose combination of rifampicin and isoniazid; TLD = tenofovir + lamivudine + dolutegravir

\* May be used if patient is on haemodialysis