

DRUG-RESISTANT-TB TREATMENT DOSING TABLE FOR CHILDREN 2024

(< 46 kg and < 15 years)

		WHO Group A						WHO Group B							
		Levofloxacin (LFX) (preferred quinolone)	Moxifloxacin (MFX)	Bedaquiline (BDQ)		Linezolid (LZD)		Terizidone (TRD) [#]	Clofazimine (CFZ)						
Formulations	100 mg DT** OR 10 mg/mL suspension	250 mg tablet OR 500 mg tablet OR 25 mg/mL suspension	400 mg tablet	20 mg DT		100 mg tab OR 10 mg/mL suspension		20 mg/mL suspension	150 mg DT** OR 15 mg/mL suspension	600 mg tablet OR 60 mg/mL suspension	250 mg capsule	50 mg DT** OR 5 mg/ml suspension	100 mg gel capsule	Formulations	
Target dose	15-20 mg/kg/day		10 - 15 mg/kg/day		Once daily loading dose for 14 days then thrice weekly (TIW) dosing M/W/F				1 - 15 kg: 15 mg/kg per day; ≥ 15 kg: 10-12 mg/kg daily		7 - 29.9 kg: 15 - 20 mg/kg; ≥ 30 kg: 10 - 15 mg/kg		2 - 5 mg/kg when given daily		Target dose
MDD	1.5g		400 - 800 mg		Loading dose: 400 mg daily; Maintenance dose: 200 mg M/W/F				600 mg		750 mg		100 mg		MDD
In general, for older children able to swallow tablets/capsules whole, avoid crushing and mixing tablets/capsules with water, as this may reduce palatability (tastes worse than swallowing tablets whole). Discard any unused portion of a non-commercial solution. Dispersible tablets (DT) can either be dispersed in a liquid or mixed with a soft or semi-soft food such as a spoonful of yoghurt or porridge															
Practical advice	For a 10 mg/mL suspension: crush and disperse 1 x 100 mg DT in 10 mL water	For a 25 mg/mL suspension: crush and disperse 1 x 250 mg tablet in 10 mL water	For 40 mg/mL suspension: crush and disperse 1 x 400 mg tablet in 10 mL water	A daily loading dose for 2 weeks, followed by a maintenance dose given three times a week for 22 weeks. If treatment is interrupted see Table on Bedaquiline interruptions on next page for guidance on reloading. For 10 mg/mL suspension: Crush and disperse 1 x 100 mg tablet in 10 mL water. Vigorous stirring/shaking is needed prior to administering the 100 mg tablet crushed and suspended in water				Once reconstituted, must be used within 21 days	For 15 mg/mL suspension: crush and disperse 1 x 150 mg DT in 10 mL water	For 60 mg/mL suspension: crush and disperse 1 x 600 mg tablet in 10 mL water	For 25 mg/mL suspension: Open capsule and mix contents with 10 mL water	The 50 mg DT is preferred for children < 24 kg. For 5 mg/mL suspension: crush and disperse 1 x 50 mg DT in 10 mL water	Dosing interval changes as weight of child increases. Soften 1 x 100 mg capsule in 10ml of water or yoghurt and administer entire volume [‡]		Practical advice
Wt. (kg)	Consult with a clinician experienced with DR-TB prescribing for children weighing < 5 kg. Refer to adult guidelines in children > 46 kg and > 15 years of age												Wt. (kg)		
3 - 4.9	5 mL OR 0.5 x 100 mg DT daily	2 mL daily	1 mL daily	20 mg DT		100 mg tab OR 10 mg/mL solution		2 mL daily	2.5 mL daily		1 mL daily	2-4 mL daily		3 - 4.9	
				Loading dose daily for 2 weeks	Maintenance dose M/W/F for 22 weeks	Loading dose daily for 2 weeks	Maintenance dose M/W/F for 22 weeks								
5 - 6.9	1 x 100 mg DT daily	2 mL daily	2 mL daily	< 3 months: 1.5 x 20 mg DT daily	< 3 months: 0.5 x 20 mg DT M/W/F	< 3 months: 3 mL daily	< 3 months: 1 mL M/W/F	4 mL daily	5 mL OR 0.5 x 150 mg DT daily	1.25 mL daily	2 mL daily	5 mL daily	1 x 100 mg cap M/F	5 - 6.9	
				≥ 3 months: 3 x 20 mg DT daily	≥ 3 months: 1 x 20 mg DT M/W/F	≥ 3 months: 6 mL daily	≥ 3 months: 2 mL M/W/F								
7 - 9.9	1.5 x 100 mg DT daily	5 mL OR 0.5 x 250 mg tab daily	3 mL daily	< 3 months: 1.5 x 20 mg DT daily	< 3 months: 0.5 x 20 mg DT M/W/F	< 3 months: 3 mL daily	< 3 months: 1 mL M/W/F	6 mL daily	1 x 150 mg DT daily	2.5 mL daily	5 mL daily	5 mL daily	1 x 100 mg cap M/F	7 - 9.9	
				3 to < 6 months: 3 x 20 mg DT daily	3 to < 6 months: 1 x 20 mg DT M/W/F	3 to < 6 months: 6 mL daily	3 to < 6 months: 2 mL M/W/F								
10 - 15.9	2 x 100 mg DT daily	1 x 250 mg tab daily	5 mL daily OR 0.5 x 400 mg tab	3 - < 6 months: 3 x 20 mg DT daily	3 - < 6 months: 1 x 20 mg DT M/W/F	3 - < 6 months: 6 mL daily	3 - < 6 months: 2 mL M/W/F	8 mL daily			1 x 250 mg cap daily	1 x 50 mg DT daily	1 x 100 mg cap M/W/F	10 - 15.9	
				≥ 6 months: 6 x 20 mg DT daily	≥ 6 months: 3 x 20 mg DT M/W/F	≥ 6 months: 12 mL daily [‡]	≥ 6 months: 6 mL M/W/F								
16 - 23.9	3 x 100 mg DT daily	1.5 x 250 mg tab daily	7.5 mL daily	10 x 20 mg DT daily	5 x 20 mg DT M/W/F	2 x 100 mg tabs daily	1 x 100 mg tab M/W/F	11 mL daily	2 x 150 mg DT daily ^{###}	5 mL daily OR 0.5 x 600 mg tab daily	2 x 250 mg caps daily	2 x 50 mg DT daily	1 x 100 mg cap daily	16 - 23.9	
24 - 29.9	5 x 100 mg DT daily	2 x 250 mg tab daily OR 1 x 500 mg tab daily	1 x 400 mg tab daily	20 x 20 mg DT daily	10 x 20 mg DT M/W/F	4 x 100 mg tabs daily	2 x 100 mg tabs M/W/F	14 mL daily							
30 - 35.9		1.5 x 500 mg tab OR 3 x 250 mg tabs daily		1 x 400 mg tab daily	20 x 20 mg DT daily	10 x 20 mg DT M/W/F	4 x 100 mg tabs daily	2 x 100 mg tabs M/W/F	15 mL daily	3 x 150 mg DT daily	7.5 mL daily	2 x 250 mg caps daily	2 x 50 mg DT daily	1 x 100 mg cap daily	30 - 35.9
36 - 45.9			20 mL daily		20 x 20 mg DT daily	10 x 20 mg DT M/W/F	4 x 100 mg tabs daily	2 x 100 mg tabs M/W/F	20 mL daily						

**Only available via Section 21. Not available at all facilities; [‡]If there are any administration difficulties, consult with a TB hospital; [‡]Use 2 x 100 mg tabs in 20 mL water, and give 12 mL. Discard the rest; [#]hdINH and TZD: Only to be co-used after consultation with an expert; Add pyridoxine when INH or TZD is prescribed—see dosing under hdINH; ^{###}For weight band 16 - 23.9 kg: Clinicians may opt to administer 1.5 x 100 mg DT or 4 mL of the 60 mg/mL solution to ensure the dose does not exceed 10 - 12 mg/kg; cap = capsule; DT = dispersible tablet; M/W/F = administer medicines three times a week on a Monday, Wednesday and Friday; tab = tablet; MDD = maximum daily dose; TIW = three times a week

WHO Group C							Other medicines		
Delamanid (Dlm)		Ethionamide (Eto)	Para-aminosalicylic acid (PAS) ^{##}	Meropenem [†]	+ Amoxicillin/clavulanate	High-dose isoniazid (hdINH) [#]			
Formulations	25 mg DT**	50 mg tablet OR 5 mg/mL suspension	250 mg tablet OR 25 mg/mL suspension	4 g sachet	500 mg per vial (10 mL) 1 g powder per vial (20 mL)	250 mg / 62,5 mg in 5 mL suspension 250/125 mg tablet	100 mg tablet OR 10 mg/mL suspension	300 mg tablet	Formulations
Target dose	3 - 4 mg/kg/day		15 - 20 mg/kg/day	200 - 300 mg/kg/d	20 - 40 mg/kg IV every 8h	To be used with meropenem	15 - 20 mg/kg/day		Target dose
MDD	100 mg twice daily		1 g	8 g	2 g twice daily	250/125 mg three times a day	600 mg		MDD
Practical advice	Discard any unused portion of a non-commercial solution. Dispersible tablets (DT) can either be dispersed in a liquid or mixed with a spoonful of soft or semi-soft food such as yoghurt or porridge.								
	< 3 months: daily dosing ≥ 3 months: twice daily dosing	< 3 months: daily dosing ≥ 3 months: twice daily dosing; For 5 mg/mL suspension: disperse 1 x 50 mg in 10 mL water	For a 25 mg/mL suspension: Crush and disperse 1 x 250 mg tablet in 10 mL water	Ensure patient receives the special measuring spoon to measure the dose correctly. Administer with a spoonful of yoghurt or other soft food with low pH (e.g. apple puree, tomato or orange juice, mague or fermented potato)	Intravenous administration (only to be used with clavulanic acid)	To be given with each dose of the carbapenem. Oral administration, 30 min before IV meropenem. Dosing expressed as clavulanate. Once reconstituted, must be used within 7 days (confirm with specific product information)	For 10 mg/mL suspension: crush and disperse 1 x 100 mg tablet in 10 mL water Pyridoxine (vitamin b6) 1-2 mg/kg/day is always given with high dose INH: < 6 kg: 6.25 mg/d (¼ x 25mg tablet); ≥ 6kg but < 5 years: 12.5 mg/d; ≥ 5 year: 25 mg/d		Practical advice
Wt. (kg)	Consult with a clinician experienced with DR-TB prescribing for children weighing < 5 kg. Refer to adult guidelines in children > 46 kg and > 15 years of age								
3 - 4.9	1 x 25 mg DT daily	5 mL OR 0.5 x 50 mg tab daily	Consult with experienced clinician	300 mg (or 0.3 g) twice daily	50 mg (1 mL) IV three times a day	18,75 mg (1.5 mL) three times a day	5 mL daily OR 0.5 x 100 mg tab daily		3 - 4.9
5 - 6.9	< 3 months: 1 x 25 mg DT daily;	< 3 months: 5 mL OR 0.5 x 50 mg tab daily;	3 mL daily	750 mg (or 0.75 g) twice daily	100 mg (2 mL) IV three times a day	25 mg (2 mL) three times a day	1 x 100 mg tab daily		5 - 6.9
7 - 9.9	≥ 3 months: 1 x 25 mg DT twice daily	≥ 3 months: 5 mL OR 0.5 x 50 mg tab twice daily	5 mL daily OR 0.5 x 250 mg tab daily	1000 mg (or 1 g) twice daily	200 mg (4 mL) IV three times a day	37.5 mg (3 mL) three times a day	1.5 x 100 mg tabs daily		7 - 9.9
10 - 15.9	1 x 25 mg DT twice daily	5 mL OR 0.5 x 50 mg tab twice daily	1 x 250 mg tab OR 10 mL daily	2000 mg (or 2 g) twice daily	300 mg (6 mL) IV three times a day	62.5 mg (5mL) three times a day	2 x 100 mg tabs daily		10 - 15.9
16 - 23.9	2 x 25 mg DT in the morning and	10 mL (1 x 50 mg tab) in the morning and 5 mL (0.5 x 50 mg tab) at night	2 x 250 mg tabs daily	3000 mg (or 3 g) twice daily	450 mg (9 mL) IV three times a day	100 mg (8 mL) three times a day	3 x 100 mg tabs daily	1 x 300 mg tab daily	16 - 23.9
24 - 29.9	1 x 25 mg DT at night			3500 mg (or 3.5 g) twice daily	550 mg (11 mL) IV three times a day	250/125 mg tab three times a day [‡]	4 x 100 mg tabs daily	1.5 x 300 mg tabs daily	24 - 29.9
30 - 35.9				4000 mg (or 4 g) twice daily	1 g (1 vial) three times a day IV OR 2 g (2 vials) twice a day IV	250/125 mg tab three times a day or twice a day according to meropenem dosing [‡]	4.5 x 100 mg tabs daily		30 - 35.9
36 - 45.9	2 x 25 mg DT twice daily	1 x 50 mg tab twice daily							36 - 45.9

^{##}If sodium amino salicylate 1g tablets (Monopas[®]), accessed via section 21, is used, consult expert on administration; [†]In consultation with an experienced clinician, other carbapenems can be considered; [‡]Alternatively, use 10mL of the 250/62.5 mg/mL syrup two to three times day according to meropenem dosing; [#]hdINH and TZD: Only to be co-used after consultation with an expert; Add pyridoxine when INH or TZD is prescribed; MDD = maximum daily dose

MONITORING FOR ADVERSE REACTIONS TO DR-TB MEDICINES IN CHILDREN

TEST	FREQUENCY	COMMENT
FBC, neutrophil count and platelets	Baseline, at week 2, 4, 6 and 8, and then monthly	Hb < 8, neutrophils < 0.75x10 ⁹ /L or platelets < 50x10 ⁹ /L needs urgent intervention. Often caused by LZD. FBC abnormalities needs urgent attention. Discuss with a specialist
ECG	Baseline, at two weeks, at one month, and then monthly	QTcF > 450msec needs intervention. Also repeat ECG after 2 weeks if >60msec difference from previous QTcF result. If still raised consult with specialist. Fridericia's formula: QTcF: QT/RR(0.33)
Peripheral neuropathy (PN)	Baseline, then monthly	Can be caused by LZD, hdINH and TZD and may be permanent. LZD induced neuropathy occurs mostly with long-term use and does not respond to pyridoxine. Consult with TB specialist
Visual acuity/optic neuritis	Baseline, then monthly	Possible culprits: Ethambutol, LZD, rifabutin
ALT	Baseline, repeat if symptomatic for liver dysfunction	Symptoms of liver toxicity include: nausea and vomiting, right upper quadrant pain and tender liver, visible jaundice. Stop all medicines if ALT > 5 x ULN or if ALT > 3 x ULN with symptoms of liver dysfunction and discuss with an expert
K ⁺ and Mg ²⁺	Baseline, repeat if QTcF is prolonged or vomiting/diarrhoea/clinically unwell	
TSH (if using PAS and/or ethionamide)	Baseline and every 2 - 3 months	If TSH is increased, do free T4. Discuss deranged thyroid functions with a specialist

BEDAQUILINE INTERRUPTIONS

RELOAD AS BELOW AND CONTINUE NORMAL MAINTENANCE DOSE

Duration of interruption	Instructions for reloading
< 2 weeks	No reloading needed
2 - 4 weeks	3 days 400 mg [†] bedaquiline daily
1 - 12 months	7 days 400 mg [†] bedaquiline daily
> 12 months	14 days 400 mg [†] bedaquiline daily

[†]If the patient weighs between 16 and 30 kg, reload with 200 mg daily. If patient < 16kg, consult with an expert



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