

2024 TB DRUG DOSING CHART FOR CHILDREN / ADOLESCENTS <16 YEARS

WITH CONFIRMED/CLINICALLY DIAGNOSED DRUG-SUSCEPTIBLE/PRESUMED DRUG-SUSCEPTIBLE NON-SEVERE TB, SEVERE PULMONARY TB AND EXTRAPULMONARY TB (EPTB) excluding TB meningitis / central nervous system (CNS) TB / miliary TB (refer to chart on next page)

***Non-severe TB** = intrathoracic lymph node TB without airway obstruction, simple TB pleural effusion (i.e. NOT loculated effusion/empyema/associated pneumothorax), isolated perihilar opacities, consolidation involving less than an entire lobe with no cavities or miliary pattern, or isolated cervical lymph node TB
Severe pulmonary TB = children & adolescents <16 years who do not meet the criteria for non-severe TB

Treatment phase	Intensive phase Once daily, 7 days a week		Continuation phase Once daily, 7 days a week			Treatment phase
Duration	2 months		*Non-severe TB	Severe PTB & most EPTB	Bone & joint TB	Duration
			2 months	4 months	10 months	
Target dose (range)	Isoniazid (H): 10 (7-15) mg/kg; Rifampicin (R): 15 (10 - 20) mg/kg; Pyrazinamide (Z): 35 (30 – 40) mg/kg; Ethambutol (E): 20 (15 – 25) mg/kg					Target dose (range)
Body weight (kg)	HRZ	E	HR			Body weight (kg)
	50/75/150 mg dispersible tablet (scored) <u>OR</u> 50/75/150 mg/4 ml suspension ¹	400 mg tablet (not scored) <u>OR</u> 400 mg/8ml suspension ²	50/75 mg Dispersible tablet (scored) <u>OR</u> 50/75 mg/4 ml suspension ¹			
<2	Obtain expert advice					<2
2 – 2.9	½ tab	1 ml	½ tablet			2 – 2.9
3 – 3.9	¾ tablet (3 ml) ¹	1.5 ml	¾ tablet (3 ml) ¹			3 – 3.9
4 – 7.9	1 tablet	2.5 ml	1 tablet			4 – 7.9
8 – 11.9	2 tablets	½ tablet or 4 ml	2 tablets			8 – 11.9
12 – 15.9	3 tablets	¾ tablet or 6 ml	3 tablets			12 – 15.9
16 – 24.9	4 tablets	1 tablet or 8 ml	4 tablets			16 – 24.9
≥25	HRZE (75/150/400/275 mg) [#]		Choose one of the below options			≥25
			HR 75/150 mg tab	HR 150/300 mg tab		
25 – 29.9	2 tablets		2 tablets	1 tablet		25 – 29.9
30 – 34.9	3 tablets		3 tablets	-		30 – 34.9
35 – 64.9	4 tablets		4 tablets	2 tablets		35 – 64.9
≥65	5 tablets		5 tablets	-		≥65

¹ To make an oral suspension, for weight band 3–3.9 kg, for each dose, disperse 1 x HRZ 50/75/150 mg tablet (2 months intensive phase) or 1 x HR 50/75 mg tablet (continuation phase) in 4 ml of water, administer 3 ml, discard unused suspension. For other weight bands, an oral suspension can be made by dispersing the required number of tablets & fractions of tablets in a small amount of water (5-10 ml) and administering all of the suspension to the child orally or via nasogastric tube.

² If oral suspension required, for each dose, crush 1 x ethambutol 400 mg tablet to a fine powder, disperse in 8 ml of water to prepare a concentration of 400 mg/8 ml (50 mg/ml), administer required dose as indicated in above chart, discard unused suspension.

CHILDREN SHOULD BE TAUGHT AND ENCOURAGED TO SWALLOW WHOLE TABLETS OR, IF REQUIRED, FRACTIONS OF TABLETS SO AS TO AVOID LARGE VOLUMES OF LIQUID MEDICATION

*ELIGIBILITY CRITERIA FOR SHORTER 2 MONTHS CONTINUATION PHASE: ALL CRITERIA SHOULD BE MET

AT DIAGNOSIS

Clinical

- 3 months - <16 years at start of TB treatment
- Drug-susceptible pulmonary TB or cervical TB lymphadenitis (& no other extrapulmonary TB)
- First episode of TB treatment
- No danger signs[#] indicating severe illness at presentation
- No severe acute malnutrition
- No asymmetric or persistent wheezing
- If living with HIV, must be on ART for at least 3 months with viral load <1000 at TB diagnosis or in the previous 3 months
- If no CXR available at start of TB treatment, must be 3 months - <8 years, HIV negative and no acid-fast bacilli smear positive respiratory samples (if done)

Radiological – NONE of the following should be present

- Complicated intra-thoracic lymph node TB (airway compression/deviation and/or hyperinflation/collapse)
- Consolidation involving ≥1 lobe
- Complicated pleural effusion (loculated effusion, empyema, pneumothorax)
- Miliary pattern
- Cavities

AT FOLLOW-UP

Clinical

- Adherent to treatment
- Month 1: all TB symptoms & signs improved including weight
- Month 4: all TB symptoms and signs resolved & improving weight trend

Those not meeting the eligibility criteria should receive 4 months continuation phase (or 10 months for bone & joint TB)

[#] Refer to Table on next page

NEED HELP?

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

0800 212 506 /021 406 6782

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to 071 840 1572

www.mic.uct.ac.za



2024 TB DRUG DOSING CHART FOR CHILDREN / ADOLESCENTS <16 YEARS

WITH CONFIRMED/PRESUMED DRUG-SUSCEPTIBLE
TB MENINGITIS / CENTRAL NERVOUS SYSTEM (CNS) TB / MILIARY TB

Single phase of treatment: 6-9 months Once daily, 7 days a week

Target dose range & maximum doses	Isoniazid (H): 15-20 mg/kg, maximum dose 450 mg Rifampicin (R): 22.5-30 mg/kg, maximum dose 900 mg	Pyrazinamide (Z): 35-45 mg/kg, maximum dose 2 g	Ethionamide (Eto): 17.5-22.5 mg/kg, maximum dose 1 g	Target dose range & maximum doses
Formulation	HR 50/75 mg dispersible tablet (scored) OR 50/75 mg/4 ml suspension ³	Z 500 mg tablet (scored) OR 500 mg/8 ml suspension ⁴	Eto 250 mg tablet (not scored) OR 250 mg/8 ml suspension ⁵	Formulation
Body weight (kg)				Body weight (kg)
<2	Obtain expert advice			<2
2 – 2.9	³ / ₄ tablet (3 ml) ³	1 ml	1.5 ml	2 – 2.9
3 – 3.9	1 ¹ / ₂ tablets	2 ml	2 ml	3 – 3.9
4 – 4.9	<3 months: 1 ¹ / ₂ tablets ≥3 months: 2 tablets	2.5 ml	2.5 ml	4 – 4.9
5 – 5.9	2 ¹ / ₂ tablets	3 ml	3 ml	5 – 5.9
6 – 7.9	3 tablets	¹ / ₂ tablet or 4 ml	¹ / ₂ tablet or 4 ml	6 – 7.9
8 – 8.9	3 ¹ / ₂ tablets			8 – 8.9
9 – 9.9		³ / ₄ tablet or 6 ml	³ / ₄ tablet or 6 ml	9 – 9.9
10 – 11.9	4 tablets	1 tablet or 8 ml	1 tablet or 8 ml	10 – 11.9
12 – 12.9				12 – 12.9
13 – 14.9	4 ¹ / ₂ tablets		1 ¹ / ₄ tablets or 10 ml	13 – 14.9
15 – 15.9	5 tablets			15 – 15.9
16 – 16.9	6 tablets	1 ¹ / ₄ tablets or 10 ml	1 ¹ / ₂ tablets or 12 ml	16 – 16.9
17 – 17.9				17 – 17.9
18 – 19.9		7 tablets	1 ¹ / ₂ tablets	18 – 19.9
20 – 24.9	HR 150/300 mg tablet 3 tablets	1 ¹ / ₂ tablets	2 tablets or 16 ml	20 – 24.9
25 – 29.9		2 tablets	2 ¹ / ₂ tablets or 20 ml	25 – 29.9
30 – 34.9		2 ¹ / ₂ tablets	3 tablets or 24 ml	30 – 34.9
35 – 39.9		3 tablets	3 ¹ / ₂ tablets or 28 ml	35 – 39.9
40 – 49.9		3 ¹ / ₂ tablets	4 tablets or 32 ml	40 – 49.9
≥50		4 tablets	4 tablets or 32 ml	≥50

CHILDREN SHOULD BE TAUGHT AND ENCOURAGED TO SWALLOW WHOLE TABLETS OR, IF REQUIRED, FRACTIONS OF TABLETS TO AVOID LARGE VOLUMES OF LIQUID MEDICATION

³ To make an oral suspension for weight band 2 - 2.9 kg, for each dose, disperse 1 x HR 50/75 mg tablet in 4 ml of water, administer 3 ml, discard unused suspension. For other weight bands, an oral suspension can be made by dispersing the required number of tablets & fractions of tablets in a small amount of water (5-10 ml) and administering all of the suspension to the child orally or via nasogastric tube.

⁴ To make an oral suspension, crush 1 x 500 mg pyrazinamide tablet to a fine powder, disperse in 8 ml water to prepare a concentration of 500 mg/8 ml (62.5 mg/ml), administer required dose as indicated in above chart, discard unused suspension.

⁵ To make an oral suspension, crush 1 x 250 mg ethionamide tablet to a fine powder, disperse in 8 ml of water to prepare a concentration of 250 mg/8 ml (31.3 mg/ml), administer required dose as indicated in above chart, discard unused suspension.

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*DANGER SIGNS INDICATING SEVERE ILLNESS AT PRESENTATION IN CHILDREN >3 MONTHS OF AGE

Adapted from the WHO Operational handbook on TB Module 5, SA National 2022 IMCI guidelines and Chapter 15: Respiratory System of the STG and EML for paediatric hospitals in SA, 2013

General danger signs	Signs of severe respiratory illness (any)	Signs of severe dehydration (two or more)	Signs of meningitis (any)	Signs of severe anaemia (any)
<ul style="list-style-type: none"> Vomiting everything Convulsions Unconscious or lethargic Any signs of shock Unable to drink/breastfeed 	<ul style="list-style-type: none"> Chest indrawing Stridor in calm child Oxygen saturation <92% in room air Central cyanosis 	<ul style="list-style-type: none"> Unconscious or lethargic Sunken eyes Unable to drink or drinking poorly Skin pinch goes back very slowly 	<ul style="list-style-type: none"> Neck stiffness Bulging fontanelle Restless, continuously irritable 	<ul style="list-style-type: none"> Severe palmar pallor Hb <7 g/dl