

## TREATMENT OF TUBERCULOSIS IN CHILDREN - 2019

STAGES OF TB	SKIN TEST or IGRA	CXR	SYMPTOMS/ PHYSICAL	TREATMENT
<b>Exposure</b> Child ≤4 years of age Household <b>Contact</b> with adult with active pulmonary disease	Negative	Normal	None/ Normal	Meds: Rif or INH window prophylaxis Duration: 8-10 weeks Repeat skin test: 8-10 wks after last exposure, if positive ≥ 5mm, see LTBI
<b>Latent TB infection (LTBI)</b> Not contagious	<b>Positive</b>	Normal	None/ Normal	Treatment Options: <ul style="list-style-type: none"> <li>• Rifampin x 4 months or</li> <li>• 3HP (INH and Rifapentine) once weekly x 12 weeks (age ≥ 2 yrs &amp; DOPT only) or</li> <li>• INH x 9 months (completion poor)</li> </ul>
<b>Disease</b> Pulmonary, lymph node disease, extrapulmonary, bone/joint, miliary or meningitis  Note: <ul style="list-style-type: none"> <li>• Children ≤ 10 usually not contagious</li> <li>• Adults and teens with AFB + pulmonary TB are contagious</li> <li>• Extrapulmonary TB is not contagious</li> </ul>	90% positive  Note: 50% have false negative PPD early in meningitis and miliary disease	<b>Abnormal CXR</b> or other evidence of disease such as labs, exam, CSF or pathology	Half of children have symptoms, half are asymptomatic  Note: Most adults with TB disease have cough and other symptoms	Meds: INH, RIF, PZA, EMB Duration: <ul style="list-style-type: none"> <li>• 6-9 months for pulmonary and/or lymph node disease</li> <li>• 9-12 months for disseminated disease including miliary, meningitis &amp; bone/joint TB</li> </ul> Stop PZA after 2 months. Stop EMB if susceptible to INH and RIF. Continue INH & RIF to completion. DOT standard. Meningitis: <ul style="list-style-type: none"> <li>• Rifampin 20-30 mg/kg/day</li> <li>• Steroids standard first 6-8 weeks</li> <li>• Ethionamide may be substituted for EMB for better CNS penetration</li> </ul>

INH = Isoniazid, RIF = Rifampin, PZA = Pyrazinamide, EMB = Ethambutol, 3HP = INH and Rifapentine, DOT = directly observed therapy, DOPT = directly observed preventive therapy, VDOT = video DOT, ESAT = enhanced self-administered therapy. IGRA = Interferon gamma release assay (Quantiferon or TSPOT)

### **Dosing range for daily, twice weekly, and maximum doses, as well as forms available for the first line anti-tuberculosis medications. Note: #Rifampin dose varies by age of child.**

#### DAILY DOSE RANGE

	Isoniazid (INH)*	Rifampin (RIF)# Age > 2 yrs	Rifampin (RIF)# Age: Birth- 2 yrs	Pyrazinamide (PZA)	Ethambutol (EMB)
	10-15 mg/kg/day	15-20 mg/kg/day	20-30 mg /kg/day	30-40 mg/kg/day	15-25 mg/kg/day
<b>Weight (kg)</b>	<b>Dose, mg</b>	<b>Dose, mg</b>	<b>Dose, mg</b>	<b>Dose, mg</b>	<b>Dose, mg</b>
3-5	50	50-75	75-100	125	50-100
6-9	100	100-150	150-200	250	150
10-15	150	150-300	200-300	375-500	250
16-20	200	300	450	500-750	300
21-25	300	300-450	450-600	750	400
26-30	300	450-600	600	1000	600-700
31-45	300	600	600	1250-1500	800
46-50	300	600	600	1500-2000	1000
50+	300	600	600	2000	1000
<b>TWICE A WK DOSE:</b>	20-30 mg/kg/dose	15-20 mg/kg/dose	20-30 mg/kg/dose	50 mg/kg/dose	50 mg/kg/dose
<b>Maximum Doses:</b>	Daily: 300 mg Twice wkly: 900 mg	Daily: 600 mg Twice wkly 600 mg	Daily: 600 mg Twice wkly 600 mg	Daily: 2000 mg Twice wkly: 2000 mg	Daily: 1000 mg Twice wkly: 2500 mg
<b>Forms Available:</b>	Scored tablets: 100 mg 300 mg Syrup: 10 mg/ml*	Capsules: 150 mg 300 mg Syrup: compounded	Capsules: 150 mg 300 mg Syrup: compounded	Scored tablets: 500 mg	Tablets: 100mg 400 mg

\*Most experts advise against using INH syrup because it is frequently associated with diarrhea. May crush tabs.  
 #For Rifampin many experts recommend 20-30 mg/kg/day for infants and toddlers (<2yrs) as well as for older children with meningitis or disseminated disease. May open and sprinkle capsules or compound syrup.