

Tips for Treating Latent TB Infection in Children

Including Window Prophylaxis

Who should be treated?

- ▶ **Children with latent tuberculosis (TB) infection (LTBI)** - where LTBI is defined as a positive TB screening test (tuberculin skin test [TST] or interferon gamma release assay [IGRA] blood test) and no evidence of active disease on chest x-ray (CXR) or physical exam.
- ▶ **Children in the window period after exposure** - Children <5 years old who have been in contact with an infectious adult or teen in the past 8 weeks and who have a negative TB screening test are still in the window period for test conversion. These children should have a physical exam and CXR. If there is no evidence of active disease, they should be treated with 'window prophylaxis' and retested 8-10 weeks after the break in contact with the infectious source.
- ▶ **Children who are in contact with a source that has drug resistance** - Whether the infectious source has multidrug-resistant (MDR) or other drug resistant TB, children who are exposed or infected should be treated in consultation with an expert in tuberculosis.

What are the treatment regimens?



- ▶ **3HP** - (isoniazid [INH] and rifapentine [RPT]) is approved for children ≥ 2 years of age. This regimen allows a child to be treated with only 12 weekly doses of medication.
- ▶ **4R** - (rifampin [RIF] daily for 4 months) is safe and effective for children that cannot take 3HP.
- ▶ **3HR** - (INH and RIF dosed daily for 3 months) though not used as commonly in the United States (US) as in the United Kingdom, is an effective short-course treatment regimen.
- ▶ **6H** - (INH dosed daily or twice weekly [BIW]) is effective, but the least desirable, as only 50% of patients are likely to complete the necessary 6 months course.
- ▶ Infants who are exclusively breastfed, pregnant teens and children with poor diets or who are immune suppressed should receive pyridoxine (Vitamin B6) 1-2 mg/kg with each dose of INH.

What are helpful administration tips?

- ▶ To help with swallowing pills, children can practice by swallowing similarly sized candies.
- ▶ For children who cannot swallow pills, TB medications can be crushed (or capsules opened) and mixed with a small amount of food (syrup, applesauce, etc.).
- ▶ Mixing should be done immediately before dosing and discarded if not administered within 30 minutes of mixing.



What are the monitoring recommendations?

- ▶ Medication doses should be adjusted based on weight change, if needed.
- ▶ Children tolerate treatment very well. Routine laboratory monitoring is not necessary unless the child takes other medications metabolized through the liver or has liver disease.
- ▶ Children taking other medications or who have underlying liver conditions should have a monthly CBC (complete blood count) as well as a metabolic panel that contains liver function tests (LFTs).
- ▶ Children with symptoms that suggest medication toxicity (e.g. recurrent vomiting, decreased appetite, abdominal pain) should have their LFTs checked.



Treatment Regimens and Dosing Recommendations for Treating Children with LTBI

(Including Window Prophylaxis)

LTBI Regimen	Number of Doses	< 2 years old	Age 2 - 11 years old	Age 2 - 17 years old	Maximum dosage
3HP Isoniazid (INH) Rifampentine (RPT)	12 doses once weekly	Not Approved	25 mg/kg	15 mg/kg	900 mg/dose
				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	900 mg/dose
4R Rifampin (RIF) monotherapy	120 daily doses	20-30 mg/kg daily	10-20 mg/kg daily		600 mg daily
3HR Rifampin (RIF) + Isoniazid (INH)	90 daily doses	Rifampin (RIF) and Isoniazid (INH) dosages are the same as for monotherapy			
	130 daily or 52 twice weekly (BIW) doses	10-15 mg/kg daily or 20-30 mg/kg BIW			300 mg daily or 900 mg BIW

Centers for Disease Control and Prevention. (2014, October 10). TB in Children. Retrieved from <https://www.cdc.gov/tb/topic/populations/tbinchildren/default.htm>

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