LIVINGSTON COUNTY HEALTH DEPARTMENT

2300 East Grand River Avenue, Suite 102
Howell, Michigan 48843-7578
www.lchd.org

PERSONAL/PREVENTIVE HEALTH SERVICES
P: (517) 546-9850
F: (517) 546-6995

ENVIRONMENTAL HEALTH SERVICES
P: (517) 546-9858
F: (517) 546-9853

Latent Tuberculosis Infection (LTBI) Treatment Recommendations

Clinical Pearls

- Primary care physicians can treat LTBI! It's no different than treating any other condition!
- LTBI is not contagious. Caring for patients with LTBI does not pose a risk to staff or other patients.
- Why should LTBI treatment be prescribed? If untreated, up to 10% of infected individuals will develop active TB disease over their lifetime. Active TB requires longer treatment with more side effects. Treating sooner is better!
- LTBI treatment should be initiated **only after** active TB disease has been ruled out.

Work Up

1. High-risk patient identified (by clinician or occupational screening program). Positive screening test (IGRA or TST) suggests LTBI.
2. Clinical evaluation for signs or symptoms suggestive of active TB (an initial phone screen can be done if there is a concern for pulmonary symptoms)
    a. Signs and symptoms suggestive of active TB include fever, cough, chest pain, weight loss, night sweats, hemoptysis, fatigue, and decreased appetite.
3. Chest x-ray to differentiate between latent disease and active pulmonary disease.

Clinical Picture	Diagnosis	Treatment – Next Steps
• IGRA or TST: Positive • CXR: Typically normal. May show e/o old TB disease (nodular or fibrotic lesions*; calcified granulomas) • No symptoms	LTBI	• 4R or 3HP • See page two for additional information • No need to report to health dept
• IGRA or TST: Positive (usually) • CXR: Abnormal (usually) • TB symptoms	Rule out active TB	• Collect 3 early morning, sputum specimens on 3 different days • Isolate from others • Report to health department

* High priority to treat LTBI

Frequently Asked Questions

1. **Should I check liver enzyme levels (LFTs)?** Only if there is concern for or PMH of contributing factors for liver disease (heavy alcohol use, IVDU, etc.), recently post-partum (within 3 months of delivery), or HIV infection.
2. **Does LTBI treatment require directly observed therapy (DOT)?** DOT is only recommended if 3HP is prescribed.
3. **Is additional testing needed after LTBI treatment is completed?** No additional testing is needed.
4. **How does the BCG (aka TB vaccine) affect testing?** History of BCG vaccine generally causes positive TST reaction. Order IGRA lab test to determine whether the patient has LTBI.
5. **Where can I get the medication?** Many pharmacies carry these medications. 3HP may need to be ordered through a specific pharmaceutical supplier.
6. **What are possible side effects?** LTBI medications are very well tolerated. See adverse reactions on next page.
7. **How often do I need to monitor my patients?**
    - Evaluate at least monthly for adherence to regimen, signs and symptoms of TB, and adverse reactions. Counsel patients to contact you immediately if they experience adverse reactions.
    - For those patients who underwent baseline LFT testing, testing is recommended monthly.

Recommended LTBI Treatment Options

Short course rifamycin based regimens are the preferred LTBI treatment option. Either:

- **3HP**: Three months of once-weekly Isoniazid (INH) plus Rifapentine (RPT) – *Directly observed therapy* (DOT) is recommended for this regimen.
- **4R:** Four months of daily Rifampin (RIF)

Drug(s)	Duration	Dose	Frequency	Total Doses
3HP Isoniazid (INH)* and Rifapentine (RPT)[†]	3 months	Adults and Children aged 12 years and older: INH: 15 mg/kg rounded up to the nearest 50 or 100 mg; 900 mg maximum RPT: 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 maximum Children aged 2–11 years: INH*: 25 mg/kg; 900 mg maximum RPT[†]: as above	Once weekly	12
4R: Rifampin (RIF)[§]	4 months	Adults: 10 mg/kg Children: 15–20 mg/kg[‖] Maximum dose: 600 mg	Daily	120

*Isoniazid (INH) is formulated as 100 mg and 300 mg tablets.
[†]Rifapentine (RPT) is formulated as 150 mg tablets in blister packs that should be kept sealed until use.
[§]Rifampin (rifampicin; RIF) is formulated as 150 mg and 300 mg capsules.

Source: Treatment Regimens for Latent TB Infection | TB | CDC

Adverse Reactions:

Isoniazid – Elevated liver enzymes; hepatitis (less than 1%); peripheral neuropathy (<1%, those at higher risk include pregnant women, people with HIV infection, diabetes, alcoholism, malnutrition, chronic renal disease, older individuals. For these individuals, supplemental B6 can be administered).

Rifampin and Rifapentine – Discoloration of body fluids; hepatoxicity (0.6%); self-limited cutaneous reaction (itching or rash); GI symptoms (nausea, anorexia, mild abdominal pain. For these patients, consider taking dose at night). Rarely hypersensitivity reactions. Review med list as CYP enzyme inducer and can interact with meds such as warfarin, oral contraceptives, etc. Rifampin/rifapentine may interact with some anti-retroviral medications taken by patients living with HIV so it is recommended to discuss medications with their HIV treatment provider or review the NIH website.

Source: Adverse Events During Treatment | TB | CDC

Updated: January 18, 2023