simcoe muskoka
DISTRICT HEALTH UNIT

LATENT TUBERCULOSIS TREATMENT GUIDELINES

Initiate treatment for latent tuberculosis ONLY after active tuberculosis is ruled out.
TB medication for latent TB treatment and active TB treatment are <u>available FREE through Public Health</u>.

DRUG	DOSE AND DURATION	COMMENTS
Isoniazid (INH)	**Adults:** 5mg/kg per day up to maximum of 300mg daily for 9 months **Children:** 10-15mg/kg per day up to a maximum of 300mg daily for 9 months	The current standard for treatment of LTBI is self-administered isoniazid (INH) taken daily for 9 months, as this shows the best evidence of efficacy (90% efficacy, CTS, 2014). The decision to treat LTBI should be individualized, with consideration of the risks of therapy from adverse events, such as hepatotoxicity, balanced against the risk of development of active disease. There are a number of conditions that increase the risk of reactivation of active TB from LTBI with the strongest risk factor being HIV infection. Please see page 2 for a list of reactivation risk factors. Because of greater risk of hepatotoxicity in the post-partum period, treatment of LTBI should be deferred in pregnant women until 3 months postpartum unless they are at very high risk of disease (HIV-infected, close contacts, documented TST conversion). Treatment can be safely given to women who are breastfeeding.
Pyridoxine (Vitamin B6)	25 mg daily Children 1mg/kg max 25 mg	Pyridoxine (vitamin B6) should be given to minimize the risk of neuropathy in people with risk factors for pyridoxine deficiency (such as malnourished or pregnant individuals) or for neuropathy (patients with diabetes or renal insufficiency). The *Tuberculosis Information for Health Care Providers, 5th edition* recommends the routine use of Pyridoxine during INH treatment.

MONITORING FOR PATIENTS ON INH

INH can induce hepatotoxicity which is usually reversible by stopping the INH. The risk of hepatotoxicity increases with age:

- < 20 years old – 0.1%-0.2%
- 20-34 years old – .025%
- 35-49 years old – 0.5-0.75%
- 50-64 years old – 1.0%-1.75%
- ≥ 65 years old – 2.0%-3%

Those at increased risk of hepatotoxicity:

1. Advanced age.
2. Preexisting liver disease.
3. Daily alcohol consumption/alcoholism.

- Baseline CBC and Liver Function Tests (AST and ALT) performed to monitor the patient for liver toxicity.
- Recommended follow-up for patients on LTBI treatment is: repeat LFT's at 4 weeks in patients ≥ 35 yrs; repeat LFT's monthly in patients > 50 yrs or with liver-associated risk factors or disease. All patients should be scheduled for an office visit for medical assessment at 4 and 8 weeks and at least every 2 months until treatment is finished.
- The patient should be advised of potential toxic effects and asked to report symptoms. In the event that they have symptoms and cannot reach a caregiver, they should stop INH on their own.
- INH should be withheld if the AST or ALT level exceeds five times the upper limit of normal without symptoms or when the AST or ALT level exceeds three times the upper limit in the presence of symptoms.

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REACTIVATION	
After infection with M. tuberculosis, early primary TB disease develops in 5% of people unless they first receive treatment for latent infection. Rapid progression to primary active TB is most frequent in infants and young children, and in persons who are immune-compromised. In another 5% of infected people there is later development of reactivation TB in the absence of treatment for latent TB infection (LTBI). Risks are much higher for people with immune compromise, notably HIV infection. In the remaining 90%, progression to active disease never occurs.	
RISK FACTOR	**MEDICAL CONDITION OR THERAPY**
High Risk	Acquired immunodeficiency syndrome (AIDS), Human Immunodeficiency virus infection (HIV), Transplantation (related to immune-suppressant therapy), Silicosis, Chronic renal failure requiring hemodialysis, Carcinoma of head and neck, Recent latent TB infection (≤2 years), Abnormal chest x-ray – fibronodular disease.
Moderate Risk	Tumour necrosis factor alpha inhibitors, Diabetes mellitus (all types), Treatment with glucocorticoids (≥15mg/d prednisone), Young age when infected (0-4 years).
Slightly Increased Risk	Heavy alcohol consumption (≥3 drinks/day), Underweight (<90% ideal body weight), Cigarette smoker (1 pack/day), Abnormal chest x-ray – granuloma.
Low Risk	Person with positive TST, no known risk factor, normal chest x-ray (“low risk reactor”).
Very Low Risk	Person with positive two-step TST (booster phenomenon), no other known risk factor and normal chest x-ray.

PLEASE CONTACT THE SIMCOE MUSKOKA DISTRICT HEALTH UNIT COMMUNICABLE DISEASE TEAM FOR FURTHER ASSISTANCE AT 705-721-7520 EXT. 8809 or 1-877-721-7520 EXT. 8809

References:
Canadian Lung Association. Canadian Thoracic Society. Public Health Agency of Canada. Canadian tuberculosis standards (CTS) 7th edition (2014). Available at: http://strauss.ca/OEMAC/wp-content/uploads/2013/11/Canadian_TB_Standards_7th-edition_English.pdf Ontario Lung Association, 2015. Tuberculosis Information for Health Care Providers, 5th edition. Available at: http://www.on.lung.ca/document.doc?id=2544