



# LATENT TB INFECTION

## TREATMENT GUIDELINES

### for the health care provider

Latent tuberculosis infection (LTBI) is diagnosed when a person with a positive TB skin test has a chest x-ray which is negative for active TB disease. The Canadian Tuberculosis Standards recommends treating patients with LTBI.

#### Risk factors

##### *Patients with high risk for developing active TB:*

- Acquired immunodeficiency syndrome (AIDS).
- Human immunodeficiency virus (HIV) infection.
- Transplantation (related to immunosuppressant therapy).
- Silicosis.
- Chronic renal failure requiring hemodialysis.
- Carcinoma of the head and neck.
- Recent TB infection (< 2 years).
- Abnormal chest x-ray – fibronodular disease.

##### *Patients with moderate risk for developing active TB:*

- Treatment with glucocorticoids.
- Tumor necrosis factor (TNF)-alpha inhibitors.
- Diabetes mellitus (all types).
- Underweight (< 90% of ideal body weight; for most persons this is a body mass index of < 20).
- Young age when infected (0-4 years).
- Cigarette smoker (1 pack/day).
- Abnormal chest x-ray – granuloma.

(source: Long & Ellis, 2007)

## Treatment for LTBI

Before treatment for LTBI is started active TB must be ruled out.

### Special considerations

- If a patient is pregnant, postpone treatment until three months after delivery, except for women who are also HIV positive or those with a recent tuberculosis infection.
- Consider treatment for those who have resided or travelled in a high TB incidence country. Canada defines an endemic country as any country which has a positive smear rate of >15/100,000 population. Canada has a rate of 2/100,000 (Long & Ellis, 2007). The International TB Incidence Rate can be found at: [www.phac-aspc.gc.ca/tbpc-latb/itir\\_e.html](http://www.phac-aspc.gc.ca/tbpc-latb/itir_e.html).
- A history of BCG vaccination, with or without a BCG scar, **shouldn't** affect LTBI treatment decisions. It isn't possible to reliably distinguish between tuberculin reactions caused by BCG vaccination and those caused by natural TB infections. This means that patients with risk factors for disease should be considered for treatment of LTBI regardless of BCG vaccination status (MOHLTC, 2006).

### Contraindications of INH

Some patients shouldn't receive INH. Don't prescribe INH to patients who:

- Abuse alcohol daily.
- Are pregnant (see special considerations).
- Have acute liver disease.
- Have been treated with a course of TB medication in the past.
- Have had an adverse reaction to INH.
- Are taking any medications that are known to cause serious drug interactions with INH.
- Have peripheral neuropathy or a condition that is a high risk for developing peripheral neuropathy, e.g. diabetes.
- Have been in contact with INH resistant bacteria.
- Are unlikely to comply to treatment.

If you decide a patient shouldn't receive any treatment, you will need to assess the patient every year for risk factors and symptoms of active TB disease. This includes an annual chest x-ray.

### Isoniazid (INH)

Isoniazid is the recommended medication to treat LTBI. Your patients can get this medication for free from the Windsor-Essex County Health Unit with a prescription.

### Dosage

Daily Dosage of INH (to be continued for 9 months).

	Dose	Maximum dose
Children (12 yrs. and under)	10-15mg/kg	300mg/day
Adults (over 12 yrs.)	5 mg/kg	300mg/day

(source: MOHLTC, 2006)

- INH is available in 300mg tablets and scored 100mg tablets.
- Liquid INH is available at 10mg/mL.
- Along with INH, vitamin B6 (pyridoxine) 25mg/day is routinely prescribed.

### References

- Long, R., Ellis, E. (eds). (2007). *Canadian tuberculosis standards, 6th edition*. Ottawa: Public Health Agency of Canada.  
Ontario Ministry of Health and Long-term Care. (2006). *Tuberculosis Protocol, v.1*. Toronto, ON: Queen's Printer for Ontario.



### Liver Function Testing

Baseline liver function (ALT, AST) tests need to be done before starting INH. During INH treatment regular monitoring for hepatotoxicity is recommended for patients:

- With pre-existing liver disease.
- With a history of alcohol abuse.
- Who are older than 35 years.
- With a history of substance abuse.
- Who have recently given birth.
- Who are taking medications with the hepatotoxicity potential.
- Who are malnourished or underweight.
- With clinical evidence of hepatotoxicity.

(source: MOHLTC, 2006)

You must stop INH treatment if the AST or ALT test values are significantly (five times or more) higher than the upper limits of normal, clinical jaundice develops, or the patient experiences any symptoms of hepatotoxicity.