## Treatment, Duration and Adherence

- The recommended drug for treatment of LTBI is isoniazid (INH).
- The optimal duration of treatment is **9 months** (270 daily doses or 78 twice weekly doses).  
- The daily treatment for an adult is with a dose of 5mg/kg to a maximum of 300mg daily.
- The twice weekly treatment for an adult is with a dose of 15mg/kg to a maximum 900mg per dose.
- If INH is not well tolerated, rifampin (RMP) can be used as an alternative. RMP is used for a period of **4 months of daily doses** (five days per week DOPT).

The number of total doses taken is far more crucial than the length of treatment duration. Much more emphasis should be put on treatment adherence for best curative results. This can be accomplished by using directly observed preventive treatment (DOPT).

## Direct Observed Preventive Treatment (DOPT)

- Preventive treatment will be administered by direct observation.
- DOPT requires the patient is observed swallowing each and every dose of medication.
- DOPT may be carried out by a health professional or a reliable person selected by and reporting to the health professional.

The optimal prophylaxis regimen is given daily. However, it is often more practical for the patient or the HCP to administer preventative treatment on a twice-weekly basis.

## Contraindications/Precautions for LTBI Treatment

Consideration for treatment of LTBI should not be given to individuals with:

- **Active TB disease.** Mono-treatment **does not** provide sufficient amounts of medication to treat active disease. Treating active disease with one antibiotic will result in acquiring anti-tuberculosis drug resistance.

- Previous **adverse reaction** to INH.

- Acute or chronic **liver disease** of any etiology.

Signs or symptoms that suggest illness or adverse drug effects should be reported to the attending physician and the OCPHO immediately.

## LTBI Treatment Regimen for Adults

Anti-TB treatment for adults can be offered in various ways, as described in **Tables 8.1** and **8.2**. Recommendations for LTBI treatment are made by an Internal Medicine Specialist, Pediatrician or Chief Public Health Officer (or Public Health Officer designate).
Table 8.1: Regimes for Treatment of Latent TB Infection

<table>
<thead>
<tr>
<th>Drug</th>
<th>Duration</th>
<th>Interval</th>
<th>Number of doses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NWT Regimen</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INH*</td>
<td>9 months</td>
<td>2x / week (DOPT)</td>
<td>78</td>
</tr>
<tr>
<td>INH*</td>
<td>9 months</td>
<td>Daily (if authorized for self-administration must only give 1 month supply (at a time)</td>
<td>270</td>
</tr>
<tr>
<td>RMP</td>
<td>4 months</td>
<td>Daily (DOPT)</td>
<td></td>
</tr>
</tbody>
</table>

* Vitamin B6 is given to prevent peripheral neuropathy
† Dosing for RMP can be discussed with the pediatrician, IM specialist, CPHO or designate

Table 8.2: INH Protocol for Treatment of LTBI

<table>
<thead>
<tr>
<th>DOSAGE FORMS</th>
<th>DAILY DOSE</th>
<th>TWICE WEEKLY DOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>INH Tablets: • 100mg</td>
<td>Child** 10–15mg/kg</td>
<td>Adult 5mg/kg</td>
</tr>
<tr>
<td>• 300mg</td>
<td>Max: 300mg</td>
<td>Max: 300mg</td>
</tr>
<tr>
<td>INH Syrup: • 10mg/ml</td>
<td>Max: 300mg</td>
<td>Max: 900mg</td>
</tr>
<tr>
<td>Vitamin B6* • 25 or 50mg</td>
<td>12.5mg</td>
<td>25mg</td>
</tr>
</tbody>
</table>

Duration: 9 months– 270 doses Duration: 9 months– 78 doses DOPT

*Vitamin B6 is given to prevent peripheral neuropathy
**Dose is for children who are younger than 12 years or who weigh less than 35kg. In the older child or adolescent who weigh between 35–60 kg, recommendations differ between use of adult versus child dosage. All pediatric dosing is done by the referring Pediatrician.

Reasons for Vitamin B6 Supplementation

INH binds with existing Vitamin B6 in the blood, which can deplete the body stores of Vitamin B6, causing nausea, vomiting, dizziness, slurred speech, blurred vision, dilated pupils, tachycardia, and sometimes urine retention, stupor, coma and seizures, which if not controlled, may lead to death from brain damage, aspiration or hypoxia.
Vitamin B6 (pyridoxine), 25mg daily dose or 50mg twice or thrice weekly dose, is recommended for all patients. It is given to prevent the development of neuropathy. Patients that can benefit from taking vitamin B6 include those who are pregnant, are HIV co-infected, diabetic, uremic, and those who suffer from renal insufficiency, poor nutrition or substance addiction such as alcoholism.

Resistance to Isoniazid (INH) or Rifampin (RMP) or Both

If a person has been infected with INH resistant bacteria or has been in contact with someone with known INH resistance, a daily RMP regimen for 4 months is an acceptable alternative (DOPT weekdays). Strict adherence is required to avoid multidrug-resistance. When there is resistance against both INH and RMP, then a TB Specialist must be consulted to direct clinical management.

Special Considerations in the Treatment of LTBI

Treatment of LTBI is managed differently in these patient populations:

Table 8.3: Special Considerations in the Treatment of LTBI

<table>
<thead>
<tr>
<th>Specific patient population</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with renal failure or dialysis</td>
<td>• Standard regimen is recommended since both INH and RMP are metabolized in the liver and do not rise in the presence of renal failure</td>
</tr>
</tbody>
</table>
| Pregnancy | • INH and RMP are considered safe in pregnancy, although the mother should be given vitamin B6 supplements. However, an increased risk of hepatotoxicity from INH has been reported in women treated during the first 3 months postpartum.  
• 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).  
• Breastfeeding is considered safe for mothers taking INH or RMP, and they should also take vitamin B6 supplements. |