Sonoma County Department of Health Services  
Latent Tuberculosis Infection (LTBI) Guidelines  
July 2012

Persons who should be screened for TB with a Symptom Review & Skin Test (PPD)

- **Foreign-born persons** from endemic TB countries (Mexico/Latin America, Asia, E. Europe, Africa, etc.).
- **Individuals with medical risk factors for TB reactivation** (diabetes, renal dialysis, renal failure, cancer, silicosis, malnutrition, HIV, or who are on immunosuppressive drugs).
- **Patients found to have abnormal chest radiograph** (CXR) consistent with old or active TB without prior evaluation or treatment (e.g. CXR = fibrotic upper lobe infiltrates. Include those with parenchymal infiltrates even if stable over time).
- **Patients with unexplained chronic cough or weight loss.**
- **Residents and employees of high-risk congregate settings** (nursing homes, prisons, jails, health care facilities, homeless shelters, substance abuse treatment facilities).
- **Homeless individuals, injection drug users, organ transplant patients** (planned or post-transplant).
- **Contacts** to active TB cases.
- **Children who have the above risk factors** or live with adults with the TB risk factors or travel to TB endemic countries for more than two weeks.

Frequency of TB testing

- Individuals should be re-tested on a regular basis if there is an ongoing risk of exposure or TB infection.
- The frequency of testing should depend on the risk of TB exposure (e.g. Mycobacteriology laboratory workers are tested every six months. Primary care clinic workers are tested annually).
- Despite CDC recommendations to the contrary, many schools and workplaces have their own administrative or legal requirements for testing groups not otherwise considered at increased risk for TB infection.

Diagnosis of Latent TB infection (LTBI)

- **Record the size of PPD induration in millimeters at 48-72 hours.** Do not just write "Positive" or "Negative" as different populations have different PPD cut-offs.

  "**Reactor**": Any individuals listed above with PPD of 10 mm or above
  OR
  Any individual listed above with PPD of 5 mm or above who is HIV+, immunocompromised, or abnormal chest X-Ray (described above).

  "**Converter**": individual with increase by 10mm (5 mm, if immunocompromised) in PPD reaction over two years (24 mos), regardless of age.

- BCG history is important when evaluating a PPD reaction since BCG has been found to cause false positive reactions due to sensitization. BCG does not prevent TB infection and BCG is given in areas where TB is common.
- Consider IGRA (blood tests for TB) when considering INH recommendations. IGRA is especially useful when patient has a history of BCG immunization since it is much more specific for TB infection. For more details about IGRA go to: [http://www.cdc.gov/tb/publications/factsheets/testing/IGRA.pdf](http://www.cdc.gov/tb/publications/factsheets/testing/IGRA.pdf)

Candidates for treatment of LTBI

- **Rule out active TB before diagnosing/treating LTBI.** Single view PA CXR is adequate for most patients to rule out pulmonary TB. Consider PA and lateral film for children <5y for pulmonary TB.
TREAT REGARDLESS OF PPD all recent close contacts to active TB cases if they are also:
1) Child<5y 2) HIV+ or 3)Immunosuppressed

Treat those with PPD = 5mm or greater:
• All other recent contacts
• Changes on Chest X-Ray consistent with old TB if not fully treated previously.
• HIV+ or other immunosuppression (s/p transplant, chronic prednisone or other immunosuppressive therapy, leukemia/lymphoma)

Treat those with PPD = 10mm or greater for all other risk groups:
• All PPD Converters (described above)
• Reactors who are newcomers to the US (< 5 years in US) from areas with high incidence of TB
• Reactors who are injection drug users with unknown HIV status
• Reactors who are homeless
• Reactors with medical situations of increased risk (described above)
• Reactors who are six weeks post-partum women
• Treat regardless of age

**LTBI treatment regimens**

See patients monthly to check 1) adherence 2) side effects

<table>
<thead>
<tr>
<th>DRUGS</th>
<th>LENGTH of TX</th>
<th>TYPICAL ADULT DOSE</th>
<th>POPULATION</th>
<th>COMPLETION CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isoniazid (INH)</td>
<td>6 mo</td>
<td>300mg (5mg/kg) QD or 900mg (15mg/kg) BIW (DOT*)</td>
<td>Standard regimen</td>
<td>180 doses w/i 9mo</td>
</tr>
</tbody>
</table>
| Isoniazid (INH) | 9 mo         | 300mg (5mg/kg) QD or 900mg (15mg/kg) BIW (DOT*) | 1. Fibrosis on CXR  
2. All children <18y  
3. HIV+ adults | 270 doses w/i 12mo |
| Rifampin (RIF) | 4-6mo        | 600mg (10mg/kg) QD BIW (DOT*)        | If INH-intolerant                | 120 doses w/i 8mo   |
| INH/RIF | 4mo          | 300mg/600mg                          | Old untreated disease            | 120 doses w/i 6mo   |
| INH/rifapentine (see CDPH Fact Sheet**): | 12wks | 900mg/900mg Qwk (DOT) | 1. Healthy >12y  
2. Fibrosis on CXR  
3. HIV+, NOT taking ARV medication | 11 weekly doses within 16 wks |

* DOT = Directly Observed Therapy

- **Pediatric dosing**: INH QD: 10-20mg/kg (maximum dose 300mg); INH BIW: 20-40mg/kg (max 900mg); BIW (twice weekly) dosing requires Directly Observed Therapy (DOT)
- **At-risk peripheral neuropathy**: Use vitamin B6 (Pyridoxine) 10-50mg daily with INH only if at-risk peripheral neuropathy: (alcoholism, post-partum/breastfeeding women, HIV, diabetes, uremia, age>65)

**Clinical monthly monitoring during LTBI treatment**

- **Not everyone needs Liver Function Tests** ("LFTs" or Alanine Aminotransferase (ALT) & Total Bilirubin).
- **Initial LFTs if** known liver disease, HIV+, post-partum, alcoholism or hepatotoxic medications.
- **Follow-up LFTs monthly** if abnormal baseline or symptoms of hepatitis (anorexia/fatigue, etc.)
- **Consult TB Control if hepatotoxicity** or other side effects develop with LTBI treatment.

**Pregnancy and TB infection**

- **Rule out active TB disease** in pregnancy with shielded CXR at 20-22 weeks or sooner if symptomatic.
- **LTBI treatment is not contraindicated** in pregnancy but in general should be delayed 2-3 mos. after delivery unless additional risk factors exist (such as HIV infection, being a close contact or PPD converter).

**Who MUST be reported to the TB Control Program**

- **All Active TB cases or suspects** (required within one working day by California law per H&S Code, Title 17, CCR, Section 2500)
- PPD Reactors <5 years old

For more information, contact TB Control at 565-4567(Nurse's line), or "Ask a Disease Control Nurse” online at: http://www.sonoma-county.org/health/services/diseasecontrol_ask.asp
See also the California TB Controllers Association (CTCA) Guidelines: http://www.ctca.org/