

**A Guide for Health Care Providers**

# Tuberculosis (TB) Skin Test (Mantoux Test)

**Administering the Tuberculin Skin-Test (TST)****Locate the injection site**

- Place the forearm palm side up.
- Select an area 2 to 4 inches (5 to 10 cm) below the elbow free of tattoos, scars or broken skin.
- Clean the site using an alcohol swab and allow it to dry. Do not wave your hand to attempt to dry it faster.

**Prepare the Tuberculin (PPD)**

- Check the tuberculin expiration date. Use within one month of opening.
- Using an alcohol swab clean the top of the tuberculin vial, if already opened.
- Use a 1 ml tuberculin syringe with a ½ inch, 26 or 27 gauge needle.
- Do not inject air into vial.
- Withdraw 0.1 ml (5 tuberculin units).
- Administer tuberculin immediately once drawn.

**Inject the Tuberculin**

- Insert the needle just below the skin's surface (intradermal) at a 5 to 15 degree angle with the bevel up.
- Inject the tuberculin - a wheal (small, bubbled area) will form.
- Ensure a 6 to 10 mm wheal appears.
- Check for leaking. If the wheal is not 6 mm or more, repeat test 2 to 4 inches (5 to 10 cm) from the original site.
- Do not cover with a band-aid. Dab with cotton ball if the site is bleeding.

**Document the following:**

- Location (left arm or right arm).
- Tuberculin lot number and expiry date.
- Date and time test administered.
- Signature of health-care professional.

**Monitor client for 15 minutes** post injection in case of allergic reaction. Instruct them to return in 48 to 72 hours to have the test read.

**Reading the Tuberculin Skin-Test (TST)**

**The skin test must be read 48 to 72 hours after administration by a trained staff.** If this 'window' is missed, you may need to re-administer the TST.

**Inspect:**

- Inspect the skin test site under good lighting.
- Note the induration (hard, dense, raised formation), not the redness of the area.

**Palpate:**

- Use your fingers to determine if any induration is present.

**Mark:**

- Mark the edges of induration across the forearm with a pen held at 45 degree angle.

**Measure:**

- Using a calliper ruler, measure the distance between pen marks.
- Measure induration - NOT erythema
- (redness).

**Record induration in millimetres (mm):**

- DO NOT record as simply positive or negative.
- If there is no induration, record as 0 mm.

**Interpretation of the TB Skin Test**

<b>TST Result</b>	<b>Situation in which reaction is considered positive</b>
0-4 mm	In general this is considered negative, and no treatment is indicated. Children under 5 years of age who are contacts of an infectious case should be treated pending results of repeat TST 8 weeks after exposure.
Less than or equal to 5 mm	<ul style="list-style-type: none"><li>• HIV infection/other immune suppression</li><li>• Close contact of active contagious case within past 2 years</li><li>• Abnormal chest x-ray with fibronodular disease</li><li>• Treatment with immunosuppressive medications (e.g., TNF inhibitors)</li><li>• End-stage Renal Disease/Dialysis</li></ul>
Less than or equal to 10 mm	All others, including diabetes, malnutrition (less than 90% ideal body weight), cigarette smoking, daily alcohol consumption (greater than 3 drinks/day), silicosis, hematologic malignancies (leukemia, lymphoma) and certain carcinomas (e.g., head and neck)

**Two-Step Tuberculosis Skin Testing should be done on persons who:**

- Require subsequent (serial) testing (e.g. health-care workers, correctional workers and volunteers).
- Are residents or staff of long-term care facility/retirement homes.
- Are travelling to a TB endemic country for a prolonged period of time.

**Procedure:**

- Administer and read the initial test to establish a baseline.
- If first step is positive, do not repeat. No future TST is needed.
- If the initial reaction does not meet positive skin test criteria, perform a second test 1 to 4 weeks later on the opposite arm.
- Document both skin test results.

\*Note: If a two-step test is documented, any subsequent testing requires only a single test. A two-step TST is not recommended for contact investigation.

**Report all Positive TST**

Under the 1990 Health Protection and Promotion Act, sec. 26 (reporting of carrier of disease), all positive TSTs are reportable to Public Health. The physician reading the test results is responsible for reporting the positive TST, even when referring the patient to another physician or specialist for treatment.

**Reporting Options - Lambton Public Health**

- Fax: 519-383-7092
- Email: [resf.lambton@county-lambton.on.ca](mailto:resf.lambton@county-lambton.on.ca)
- Call: Infectious Disease Prevention and Control Team, 519-383-8331 ext. 3590/3504.

**Questions about TB and TB skin testing?**

- Call Lambton Public Health 519-383-8331 or 1-800-667-1839