

# Tuberculosis (TB)

## Skin Test – Mantoux

### A Guide for Health-Care Providers



## Administering the Tuberculin Skin Test (TST)

### 1) 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 site using an alcohol swab and allow to dry

### 2) Prepare the Tuberculin

- Check the tuberculin expiration date (use within one month after opening)
- Use a 1 ml tuberculin syringe with a 1/2 inch, 26 or 27 gauge needle
- Do not inject air into vial
- Withdraw 0.1 ml (5 tuberculin units)
- Administer tuberculin immediately once drawn

### 3) Inject the Tuberculin

- Insert the needle just below the skin's surface at a 5 to 15 degree angle with the bevel up
- Inject the tuberculin – a wheal (small bubbled area) will form



### 4) Check the Injection Site

- Ensure a 6 to 10 mm wheal appears
- 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

### 5) 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 and instruct them to return in 48 to 72 hours to have the test read.

**Precautions:** Be aware and prepared for anaphylactic/acute allergic reaction.



## Reading the Tuberculin Skin Test (TST)

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

### 1) Inspect

- Inspect the skin test site under good lighting
- Note the induration (hard, dense, raised formation)

### 2) Palpate

- Use your fingertips to determine if any induration is present

### 3) Mark

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



### 4) Measure

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



### 5) 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

Tuberculin Reaction Size (mm of induration)	Setting in which reaction is considered positive
0 to 4 mm	<ul style="list-style-type: none"><li>• HIV infection AND expected risk of TB infection is high: patient is immigrant from TB endemic country, is a household contact, or has abnormal chest x-ray</li></ul>
5 to 9 mm	<ul style="list-style-type: none"><li>• HIV infection/other immune suppression</li><li>• Close contact of active case</li><li>• Abnormal chest x-ray with fibronodular disease</li><li>• Child suspected of having TB</li></ul>
≥10 mm	All others

## 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 must report the positive TST, even when referring the patient to another physician or specialist for treatment.

- Fax all **positive skin test results** with **recent chest x-ray** to: Region of Peel – Public Health, TB Program at 905-565-8428.

#### References

Canadian Lung Association. (2007) Canadian Tuberculosis Standards. (6<sup>th</sup> ed.). Ottawa: Canadian Lung Association.

Test Photos used with the permission of the Leeds, Grenville & Lanark District Health Unit.

## 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 new staff, students or volunteers in daycare centres
- 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
- If the initial reaction does not meet positive skin test criteria, perform a second test 1 to 4 weeks later
- Document both skin test results
- Report a positive skin test result along with recent chest x-ray to Region of Peel – Public Health by fax to 905-565-8428

**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.**

## Questions about TB and TB skin testing?

Call Region of Peel – Public Health at **905-799-7700** or visit **www.peel-stoptb.ca**

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