

# Tuberculin Skin Test (TST)–Mantoux

## A Guide for Health Care Providers

**TST should always be performed based on a careful case by case risk assessment**

### 1) Locate the injection site

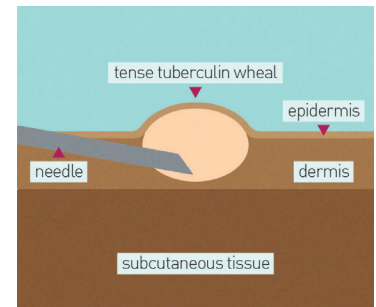
- place the forearm palm side up
- select an area 2 to 4 inches (5 to 10 cm) below the elbow free of tattoos, scars or broken skin
- clean site using an alcohol swab and allow to dry

### 2) Prepare the tuberculin

- check the tuberculin expiration date. Use within one month of 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 below the epidermis into the dermis at a 5-15 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
- 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 bandage

### 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 in case of allergic reaction. 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)

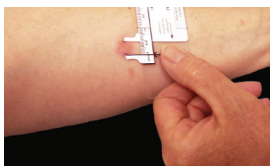
## 2) Palpate:

- 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) without induration

## 5) Record induration in millimetres (mm):

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

TST Result	Situation in which reaction is considered positive
<5 mm	In general, this is considered negative
≥5 mm	People living with HIV
	Know recent (<2 years) contact with a patient with infectious TB disease
	Fibronodular disease on chest x-ray (evidence of healed, untreated TB)
	Prior to organ transplantation and receipt of immunosuppressive therapy
	Prior to receipt of biologic, drugs, such as tumor necrosis factor alpha inhibitors, or disease-modifying antirheumatic drugs
	Prior to receipt of other immunosuppressive drugs, such as corticosteroids (equivalent of ≥15 mg per day of prednisone for at least one month)
≥10 mm	Stage 4 or 5 chronic kidney disease (with or without dialysis)
	Recent (<2 years) conversion of TST from negative to positive
	Diabetes (controlled or uncontrolled)
	Malnutrition (<90% of ideal body weight)
	Current tobacco smoker (any amount)
	Daily consumption of >3 alcoholic drinks
	Silicosis
Hematologic malignancies (lymphomas and leukemia) and certain carcinomas (such as cancers of head, neck, lung and/or gastrointestinal tract)	

# Who should receive publicly funded TSTs

- Contacts of cases of active tuberculosis.
- New immigrants in accordance with directives from Citizenship and Immigration Canada.
- Persons for whom it is deemed medically necessary, including those who are immunocompromised or are undergoing treatment that would make them more susceptible to TB disease.
- Persons requiring admission to treatment rehabilitation centres.
- Persons less than 65 years of age prior to admission to a long-term care home (NOTE: screening via TST is NOT recommended for persons over the age of 65).
- When required by an educational institution for admission or continuation in a daycare or preschool program, or a program of study in a school, community college, university or other educational institution. This includes high school students who require a TST to obtain their high school volunteer hours.

## 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 health care provider reading the test results is responsible for reporting 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 705.677.9618.

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