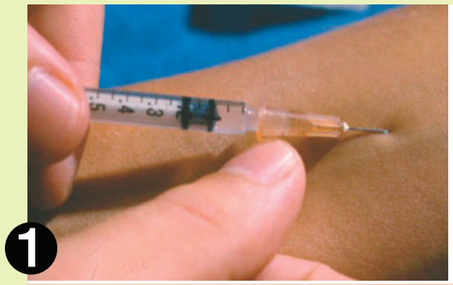
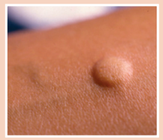
Implantation of Mantoux SKIN TEST



1

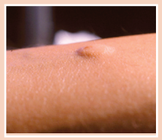
Approach the skin at a 5 to15° angle

Cleanse the skin in the area to be tested with alcohol and allow to air dry. Prepare the syringe with 0.1 mL of PPD 5TU solution and clear the syringe of any air. With the bevel up, approach the skin at a 5–15° angle. The injection should be placed on the palm-side up surface of the forearm, about 10 cm below the elbow.



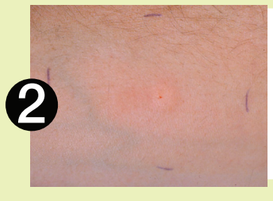
The wheal (front view)

A wheal, which is elevated about 1 mm above the surrounding skin, is formed with an orange-peel like surface.



The wheal (side view)

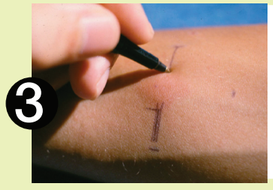
The wheal — 6-10 mm in diameter — will usually disappear within 10-15 minutes.



2

Mark the site

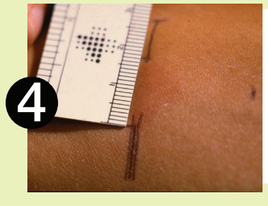
Using a pen, mark the test site so that in 48-72 hours the site can be readily located for reading.



3

Reading the TB test

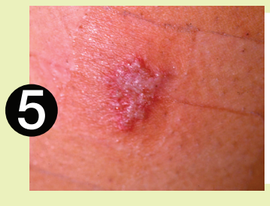
Mark the border of the induration by moving the tip of a pen at a 45 degree angle laterally toward the site of the injection. The tip will stop at the edge of the induration, if present. Repeat the process on the opposite side of the induration. **Read bump not redness.**



4

Taking the measurement

Measure the induration in millimetres, using the transverse diameter to the long axis of the forearm. Record measurement in the individual's chart or record sheet. **Redness with no induration is read as '0'.** Recordings of positive, negative, doubtful, significant and non-significant are not recommended.



5

Necrotic pustular reaction

A necrotic pustular reaction resulted when the area tested was covered (note the marks left from the bandage) because of itching. As a result, the reaction was exacerbated.

Interpretation of Positive TST

The size of the reaction is only one element of interpreting a positive TST. Consideration should be given to the size, positive predictive value and risk of disease if the person is truly infected.

Size:

Interpretation of tuberculin test

Tuberculin reaction size (mm induration)	Situation in Which Reaction is Considered Positive
0-4	HIV infection with immune suppression AND the expected likelihood of TB infection is high (e.g., patient is from a population with a high prevalence of TB infection, is a close contact of an active contagious case, or has an abnormal x-ray).
5-9	HIV infection Close contact of active contagious case Children suspected of having tuberculosis disease Abnormal chest x-ray with fibronodular disease Other immune suppression: TNF-alpha inhibitors, chemotherapy
≧10	All others

Public Health Agency of Canada

Positive Predictive Value:

the probability that the positive test result represents the true presence of TB infection.
Factors to consider:

- **risk factors for TB (endemic country, close contact of an active case of TB)**
- **BCG vaccination**

BCG Key Information

BCG vaccination can be ignored as a cause of a positive TST if:

- BCG vaccination was given in infancy, and the person tested is now aged 10 years or older
- There is a high probability of TB infection: close contacts of an infectious TB case, Aboriginal Canadians from a high-risk community or immigrant/visitors from a country with high TB incidence
- There is a high risk of progression from TB infection to disease

BCG should be considered the likely cause of a positive TST if:

- BCG vaccine was given after 12 months of age AND the person is either Canadian-born non-Aboriginal OR an immigrant/visitor from a low TB incidence country

Public Health Agency of Canada

Risk of Developing Active TB Disease:

after primary infection the lifetime cumulative risk for the development of active TB is generally estimated to be 10%, half will occur in the first 2 years after infection. Certain factors increase the risk of TB reactivation including AIDS, HIV infection, transplantation, silicosis, chronic renal failure requiring hemodialysis, carcinoma of the head and neck, recent infection, abnormal chest x-ray.

Management of Positive TST Result

Medical evaluation after a positive reaction should include assessment for symptoms, risk factors, chest radiography. In the presence of symptoms or abnormal x-ray, sputum for acid-fast bacteria smear and culture should be taken. In subjects without evident of active TB, a recommendation should be made regarding therapy for LTBI, based on the interpretation of the TST.

Please contact the SMDHU TB Control Program at ext 8809 with any questions or concerns.