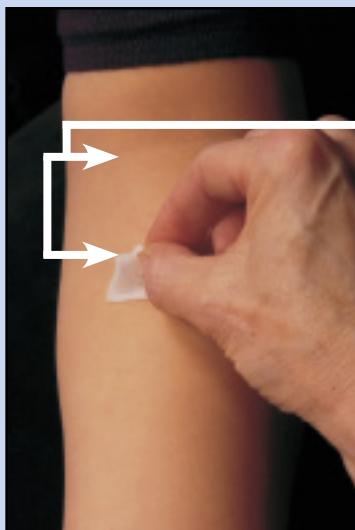


# Mantoux Tuberculin Skin Test

## 1 ADMINISTRATION

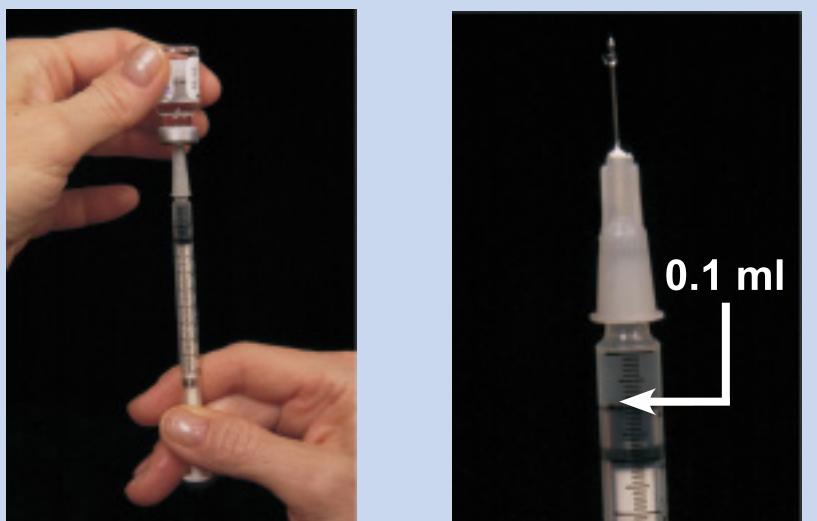
To determine if a skin test should be administered, conduct a risk assessment for each patient that takes into consideration recent exposure to TB disease, clinical conditions that increase the risk for TB disease if infected, and the program's capacity to deliver treatment for latent TB infection.

### 1 Locate and clean injection site



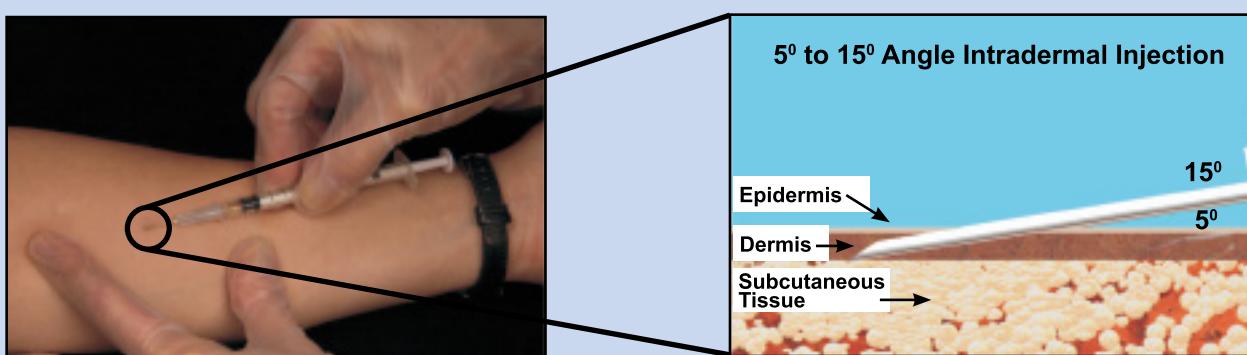
- 2 to 4 inches below elbow joint
- Place forearm palm side up on a firm, well lit surface
- Select an area free of barriers to placing and reading (e.g., scars, sores)
- Clean the area with an alcohol swab

### 2 Prepare syringe

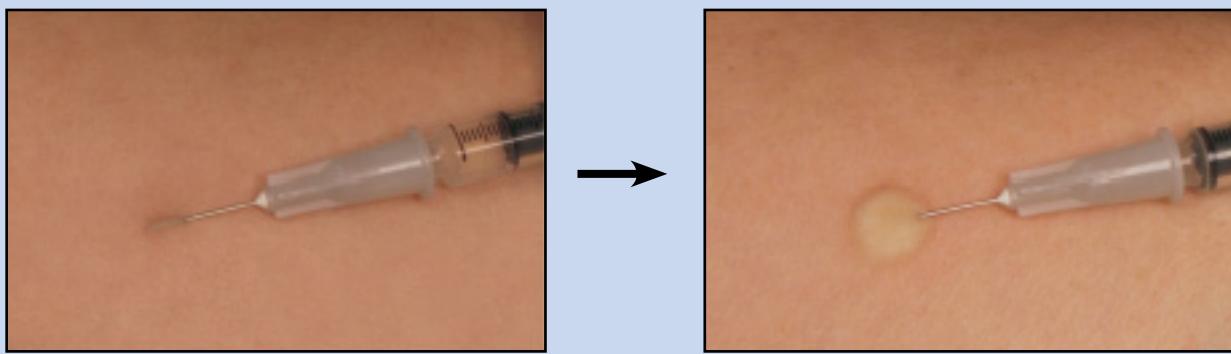


- Check expiration date on vial and ensure vial contains tuberculin (5 TU per 0.1 ml)
- Use a single-dose tuberculin syringe with a 1/4 - to 1/2-inch, 27-gauge needle with a short bevel
- Fill the syringe with 0.1 ml of tuberculin

### 3 Inject tuberculin

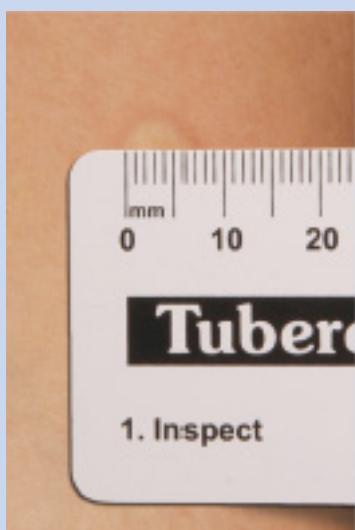


- Insert slowly, bevel up, at a 5- to 15-degree angle



- Needle bevel can be seen just below skin surface
- After injection, a tense, pale wheal should appear over the needle

### 4 Check skin test



- Wheal should be 6 to 10 mm in diameter. If not, repeat test at a site at least 2 inches away from original site

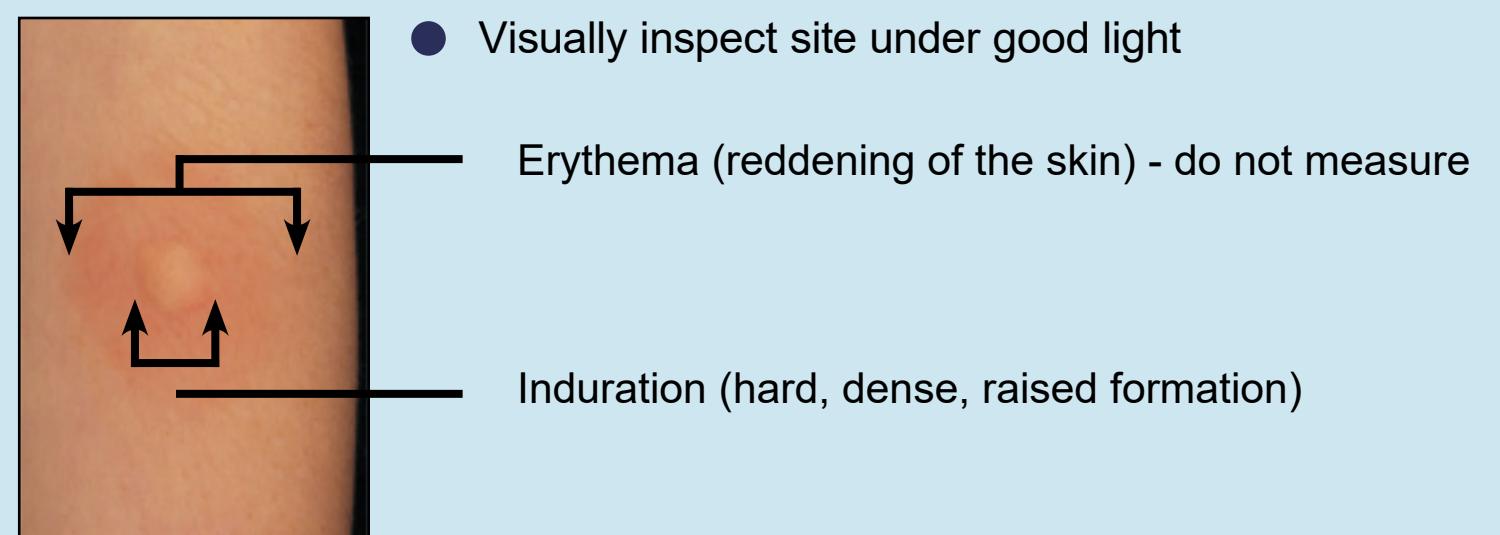
### 5 Record information

- Record all information required for documentation by your institution (e.g., date and time of test administration, injection site location, lot number of tuberculin)

## 2 READING

The skin test should be read between 48 and 72 hours after administration. A patient who does not return within 72 hours will probably need to be rescheduled for another skin test.

### 1 Inspect site



- Visually inspect site under good light

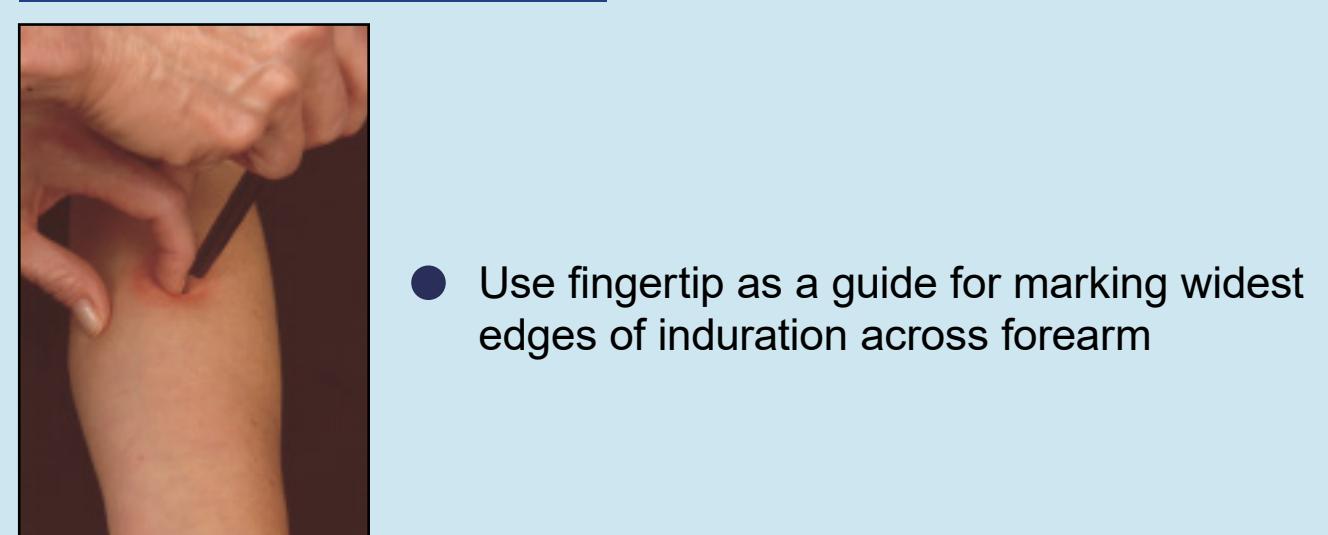
- Erythema (reddening of the skin) - do not measure
- Induration (hard, dense, raised formation)

### 2 Palpate induration



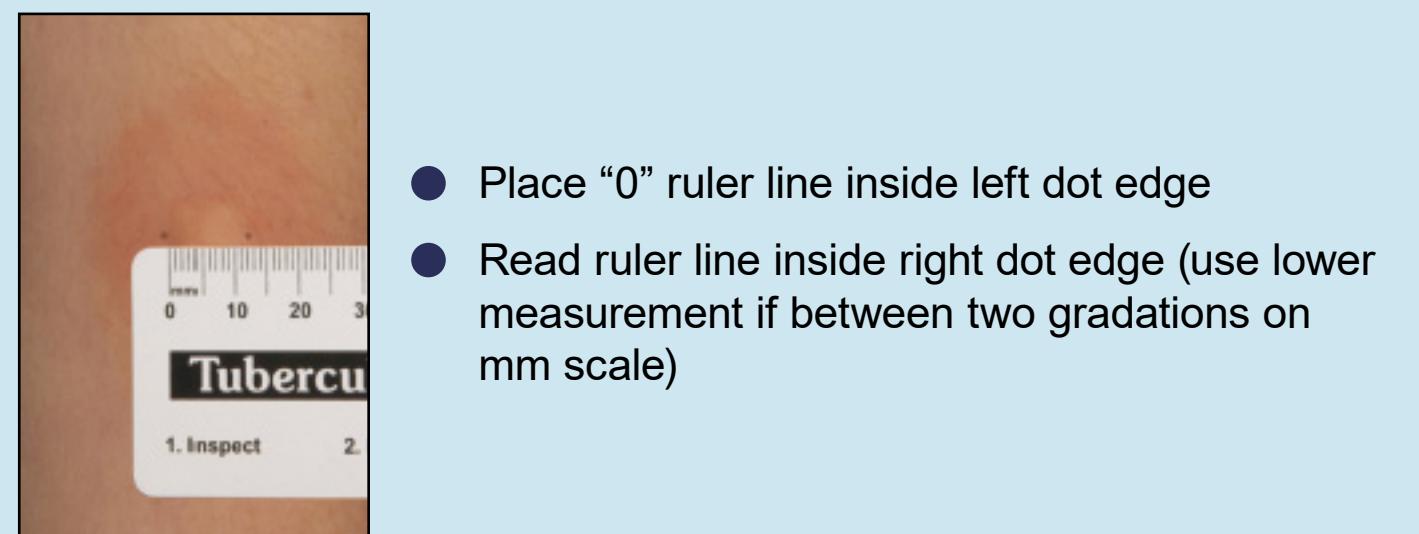
- Use fingertips to find margins of induration

### 3 Mark induration



- Use fingertip as a guide for marking widest edges of induration across forearm

### 4 Measure induration (not erythema)



- Place "0" ruler line inside left dot edge
- Read ruler line inside right dot edge (use lower measurement if between two gradations on mm scale)

### 5 Record measurement of induration in mm

- If no induration, record as 0 mm
- Do not record as "positive" or "negative"
- Only record measurement in millimeters (mm)

## 3 INTERPRETATION

Skin test interpretation depends on two factors:

- Measurement in millimeters (mm) of the induration
- Person's risk of being infected with TB and progression to disease if infected

The three cut points below should be used to determine whether the skin test reaction is positive. A person with a positive reaction should be referred for a medical evaluation for latent TB infection and appropriate follow-up and treatment if necessary. A measurement of 0 mm or a measurement below the defined cut point for each category is considered negative.

### Induration of ≥25 mm is considered positive in

- People living with HIV
- Recent contacts of people with infectious TB disease
- People who have fibrotic changes on a chest radiograph
- Patients with organ transplants
- Other immunosuppressed patients (e.g., patients on prolonged therapy with corticosteroids ≥15 mg per day of prednisone or those taking TNF-α antagonists)

### Induration of ≥10 mm is considered positive in

- People born in countries where TB disease is common, including Mexico, the Philippines, Vietnam, India, China, Haiti, and Guatemala
- People who misuse drugs and alcohol
- People who live or work in high-risk congregate settings (e.g., nursing homes, homeless shelters, or correctional facilities)\*
- Mycobacteriology laboratory workers
- People with certain medical conditions that place them at high risk for TB (e.g., silicosis, diabetes mellitus, severe kidney disease, certain types of cancer, or certain intestinal conditions)
- People with a low body weight (<90% of ideal body weight)
- Children younger than 5 years of age
- Infants, children, and adolescents exposed to adults in high-risk categories

### Induration of ≥15 mm is considered positive in

- People with no known risk factors for TB

\* For employees who are otherwise at low risk for TB and who are tested as part of an infection control screening program at the start of employment, a reaction of ≥ 15 mm is considered positive. Some health care workers participating in an infection control screening program may have had an induration > 0 mm that was considered negative at baseline. If these health care workers have an increase in induration size upon subsequent testing, they should be referred for further evaluation.

All U.S. health care employees should have baseline TB screening, including an individual risk assessment which is necessary for interpreting any test result. For the risk assessment form see: <https://www.cdc.gov/tb/topic/infectioncontrol/pdf/healthCareSettings-assessment.pdf>.

For additional information see: Tuberculosis Screening, Testing, and Treatment of U.S. Health Care Personnel: Recommendations from the National Tuberculosis Controllers Association and CDC, 2019 at <https://www.cdc.gov/mmwr/volumes/68/wr/mm6819a3.htm>.

Note: Reliable administration and reading of the tuberculin skin test involves standardization of procedures, training, supervision, and practice. Always follow your institution's policies and procedures regarding infection control, evaluation, and referral. Also remember to provide culturally appropriate patient education before and after administration, reading, and interpretation of the skin test.

For more information on tuberculosis, visit [www.cdc.gov/tb](http://www.cdc.gov/tb).