

How is two-step tuberculin skin testing done?

The two-step tuberculin skin test (TST) is used to detect individuals with past tuberculosis (TB) infection who now have diminished skin test reactivity. This procedure will reduce the likelihood that a boosted reaction is later interpreted as a new infection.

Who should receive a two-step TST?

New employees, at the time of hire, who will be tested periodically for TB infection and who:

- have never been tested; or
- have no documentation of prior testing; or
- do not remember being tested; or
- tested negative *over 12 months ago*.

Four appointment schedule for two-step testing

Visit 1, day 1

- Place the first TST and have the employee return in 48 to 72 hours for the test to be read.

Visit 2, day 2 - 3

- Evaluate, measure, and interpret the TST. Document the millimeters (e.g. 0 mm, 4 mm, 12 mm).
- If the first TST is negative, give the patient an appointment to return for placement of the second test in 7 – 21 days.
- If the first TST is positive, it indicates that the employee is infected with TB. No further testing is indicated. Refer the employee for a chest x-ray and physician evaluation. An asymptomatic employee, whose chest x-ray indicates no active disease, may begin work.

Visit 3, day 7 - 21

- Place the second TST on all employees whose first test was negative using the alternate arm.

Visit 4, 48 - 72 hours after second test placed

- Evaluate, measure, and interpret the TST. Document the millimeters (e.g. 0 mm, 4 mm, 12 mm).
- If the second TST is negative, the patient is not infected.
- If the second test is positive, it indicates that the employee is infected with TB. No further testing is indicated. Refer the employee for a chest x-ray and physician evaluation. An asymptomatic employee, whose chest x-ray indicates no active disease, may begin work.



Three appointment schedule for two-step testing

An alternative two-step testing method reduces the number of clinic visits from 4 to 3. The first TST is not read 48-72 hours after placement and is read at day 7. Most positive TSTs will remain positive for 7 days. Those that disappear or decrease in size by day 7 will be boosted to positive with the second TST.

Visit 1, day 1

- Place the first TST and have the employee return in 7 days for the test to be read.

Visit 2, day 7

- Evaluate, measure, and interpret the TST. If the first TST is not positive on day 7, place a second TST.
- If the first TST is positive at day 7, it indicates that the employee is infected with TB. No further tuberculin skin testing is indicated. Document the TST result in millimeters (e.g. 12 mm). Refer the employee for a chest x-ray and physician evaluation. An asymptomatic employee, whose chest x-ray indicates no active disease, may begin work.

Visit 3, 48 - 72 hours after second TST placed

- Evaluate, measure, and interpret the TST. Document the millimeters (e.g. 0 mm, 4 mm, 12 mm).
- If the second TST is negative, the patient is not infected.
- If the TST is positive, it indicates that the employee is infected with TB. No further tuberculin skin testing is indicated. Refer the employee for a chest x-ray and physician evaluation. An asymptomatic employee, whose chest x-ray indicates no active disease, may begin work.

*Refer to your state or local guidelines for induration cut points that indicate a positive or negative result.

References

Slutkin, G., Perez-Stable, E., & Hopewell, P. (1986). Time course and boosting of tuberculin reactions in nursing home residents. *American Review of Respiratory Disease*, 134. 1048-1051.

Thompson, N., Glassroth, J., Snider, Jr, D., & Farer, L. (1979). The booster phenomenon in serial tuberculin testing. *American Review of Respiratory Disease*, 119. 587-597

