



TB & TB Testing

Frequently Asked Questions

1. Why are there different measurements for the tuberculin skin test (TST)?

- a. The classification is based on the person's risk of being infected with TB and progression to disease. There can be false positives with TB skin tests, as with any TB test, so we want to ensure we are identifying those who we believe are at the highest risk for active TB. For example, those with a weakened immune system have a high risk of progressing to active disease, so even a small reaction (5 mm) is an indicator that they are probably infected and need treatment for Latent TB (LTBI).

Those who have few risk factors of being exposed to someone with active TB have higher measurement requirements to be considered positive to account for some false reactions to the tuberculin.

Classification to interpret a positive TST is as follows:

- i. 5mm or more:
 1. HIV-infected persons.
 2. Recent contacts to a person with infectious TB (highest risk of progression to active TB is within the first two years after being infected).
 3. Person with fibrotic changes consistent with previous TB on chest imaging (even 5mm is sufficient for diagnosis of LTBI with evidence on x-ray).
 4. Organ transplant patients or other immunosuppressed patients.
- ii. 10mm or more
 1. Recent arrivals to the US (<5 years) from a high-prevalence area of TB.

2. IV drug users.
3. Residents/Employees of high-risk, congregate settings.
4. Mycobacteriology lab personnel.
5. Persons with a medical condition that increase the chance of progression to active TB disease (such as DM; chronic renal failure; certain types of cancer; some abdominal surgeries; and those who are 10% below ideal body weight).
6. Children under 4 years old.

iii. 15mm or more

1. All persons with no known risk factors.

2. My patient has an abnormal Chest X-ray (cxr), but their TST has been negative twice. Does that mean I can rule out active TB?

- a. No! If disease is extensive and the immune system is suppressed severely enough, the body may be unable to boost a reaction to a TST. You must look at the entire clinical picture to determine if the patient has TB disease or infection. Evaluate for symptoms of TB disease and collect 3 consecutive sputum specimens for evaluation (at least 8 hours apart with at least one being an early morning specimen). If the sputums are negative (always order a PCR, even if negative, if you have a high suspicion of TB disease), that helps rule out pulmonary TB. If the patient has extrapulmonary TB, that is not usually contagious unless you are doing a procedure that would aerosolize the bacteria.

3. Why should the physician order a polymerase chain reaction (PCR) when ordering sputum specimen testing on patients?

A PCR is recommended to help identify *Mycobacterium tuberculosis* (MTB), which is the diagnosis of active TB, more quickly. Many times the sputum smears may be negative because it may be early in the disease process and there are just not enough bacteria to be seen, but when the smear is cultured it can grow MTB. If so, this means that the person has pulmonary TB disease and needs to be treated.

TB is very slow growing, so the culture can take anywhere from four to six weeks. If a PCR had been ordered, we would know within 48-72 hours that the person has active TB instead of six weeks.

(Example of order: “3 sputum for AFB smear and culture. Add PCR for first specimen, even if negative”).

4. We get frequent calls from physician’s offices that they have a patient who is also a patient of the Department of Health and is being treated for TB. They indicate to use that they’ve masked them and put them in a room by themselves, but then ask what else should they do?

- a. Please understand that the Department of Health will **not** send an infectious TB patient for an appointment without making prior arrangements with the site, and further, someone from the Fort Wayne-Allen County Department of Health (FWACDOH) will accompany the patient to the appointment. More than likely they are being treated for LTBI, which is not infectious and does not require a mask. Have the patient sign a Release of Information and call us at 260-449-7556. We will clarify their disease status for you, as well as send medical records if you would like.

5. The person being tested says they always test positive because they had Bacillus Calmette-Guerin (BCG) when they were a baby. So, how do I know if I should be worried about active TB?

- a. Always take the clinical picture into consideration. If the chest x-ray looks like TB, and they are having any of the symptoms of TB (unexplained weight loss; fevers; prolonged cough; hemoptysis; chest pain), then TB should be high on your list of diagnoses and you should notify the FWACDOH immediately at 260-449-7556.
- b. A reaction from BCG will wane within 5-10 years, so a reaction to a TST is more than likely because they have been infected with TB at some point. BCG as a child is not a contraindication for TB testing as an adult. If the person is adamant, an IGRA blood test can be done, which does not react with BCG.

6. What is the difference between TB disease and Latent TB (LTBI)?

- a. LTBI occurs after an exposure to a person with infectious TB disease. Typically, after an exposure, a person will have TB bacteria in their body, but is not symptomatic and cannot pass it to anyone else.
 - b. TB disease (or Active TB) is the progression from LTBI, when a person is symptomatic and, if pulmonary disease is present, is potentially contagious.
- 7. My child had a skin test that was read as ‘borderline positive’ and was advised to follow-up with the health department. What does this mean?**
- a. If the reading is done correctly and the classification system is used, there would be no borderline positive results. Refer the individual to the FWACDOH and we can verify a result within 7 days of placement on all positives. Any time after that, the TST will be replaced and read by our office.
 - b. All positive TB tests should be referred to the FWACDOH. You can fax results to 260-449-3813 and we will follow-up with them to discuss treatment for LTBI as appropriate. (Again, any positive reactor should be asked to come to the FWACDOH Medical Annex located at 4813 New Haven Avenue (corner of Meyer Road and New Haven Avenue) within 7 days of TST placement so that we can verify the positive reaction.
- 8. Should the erythema around a TST site be considered in the measurement?**
- a. No. The only measurement to consider for a reactive TST is the induration. You should not measure the erythema.
- 9. If I had the BCG vaccine as a child, does that protect me from TB as an adult?**
- a. No. The BCG vaccine is given to infants in many countries where TB disease is endemic to protect them from severe TB disease (such as meningitis and military TB). However, it is not given in the US.
- 10. I can’t have a skin test because I have an allergic reaction to the solution.**
- a. This is incorrect. All reactions from a TST are considered a positive reaction due to infection with TB bacteria. You can have a large area

of erythema but no induration, so it is important to always measure only the induration. The erythema is not a contraindication to having subsequent TB skin tests.

11. Is an IGRA as good as a TST?

- a. Each test is different and no test is perfect. There can be false positives and false negatives with each test. Results are based on the individual circumstances. A thorough medical evaluation by a physician is necessary, in addition to testing, especially if TB disease is highly suspected.

12. How long is treatment for TB or LTBI?

- a. Treatment length varies.
 - i. There are 3 treatment regimens for LTBI, currently.
 - 1. Isoniazid and rifapentine once weekly for 12 weeks;
 - 2. Rifampin daily; 4 months for patients 18 and over and 6 months for patients under 18; or
 - 3. Isoniazid daily for 9 months.
 - ii. Treatment for TB disease is based on site and severity of disease. There is an initial phase that lasts for 2 months (40 doses) and consists of Isoniazid, Rifampin, Ethambutol and Pyrazinamide. Once this phase is complete, the continuation phase begins and consists of only Isoniazid and Rifampin. The continuation phase can last anywhere from 4 months up to 10 months, depending on the individual's circumstances. Extrapulmonary TB treatment can take approximately 12-18 months while multi-drug resistant (MDR) TB treatment can last up to two years.
 - iii. Treatment is complete when the specific number of doses has been taken, not by "months", so a 9 month treatment could take 10 months, depending on number of doses that the patient must take on their own, without the dose being observed.