



Whatcom County Health Department Tuberculosis Program

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Repeat TB Testing How to Provide Updated TB Screening

Repeat testing of those required to show evidence of updated TB screening is often a dilemma. Prior screening records can show a mix of lab and skin tests including discrepant results. It may be unclear if retesting is necessary and which type of test to use.

The following chart can help clarify if retesting is indicated, and if so, the correct method to use based on prior TB screening results. For health care workers, see additional chart on next page to clarify if 1 step or 2 step testing is necessary.

TST = Tuberculin Skin Test **IGRA** = Lab test for TB Quantiferon Gold (QFT) or T-Spot

This chart covers the most common situations; please consult TB program for other questions

Previous TB Test Results	Retest?	How to Rescreen
<u>Skin test (TST)</u>		
Positive (no hx BCG vaccine)	No	Rescreen by <u>SYMPTOM REVIEW ONLY*</u> <i>Requires verification of prior or current normal CXR CXR is usually done at time of first positive TB test</i>
Positive (BCG vaccine hx)	Recommended	Use IGRA lab test to R/O false positive TST due to BCG If lab test is not possible, rescreen as Positive above
Negative	Yes	Can use either TST or IGRA lab test for retesting.
<u>IGRA Lab Test (QFT or T-Spot)</u>		
Positive	No	Rescreen by <u>SYMPTOM REVIEW ONLY*</u>
Low Positive QFT ¹ (health care workers)	Yes	Repeat QFT <i>one time</i> to confirm positive ¹ TB Antigen – Nil result between 0.35-0.7
Negative	Yes	Can use either IGRA or TST (TST ok if no history of BCG vaccine or false-positive skin test)
<u>Both Skin test & Lab Test</u>		
TST: Positive followed by IGRA: Negative	Yes	Lab test only for retesting! Negative lab test identifies and rules out a FALSE POSITIVE skin test. The individual is <i>NOT infected</i> . Using lab test avoids repeated false-positive TST
TST: Negative followed by QFT: Positive	No	Rescreen by <u>SYMPTOM REVIEW ONLY*</u> Positive QFT following negative TST usually indicates recent infection. Possibly due to the higher sensitivity of the QFT to detect prior infection

***Symptom Review** Requires evidence of normal CXR at time of positive test (prior CXR if past positive)

Assess for changes or symptoms of Active TB Disease. Provide documentation verifying no TB symptoms

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|--|---|
| <ul style="list-style-type: none"> ✓ Productive cough lasting ≥ 3 weeks ✓ Hemoptysis (coughing up blood) ✓ Lymphadenopathy (enlarged lymph node) ✓ Fever/malaise (without other known cause) | <ul style="list-style-type: none"> ✓ Persistent fatigue/weakness (without known cause) ✓ Drenching night sweats ✓ Recent significant weight loss (unintentional) |
|--|---|

Repeat Chest X-ray only if changes or new symptoms

Key Facts For TB Screening:

- ✦ A positive TB test will remain positive for life, though skin test results can wane over time. Two-step testing detects distant infections potentially missed by a waned response to a single test.
- ✦ A prior (documented) normal chest X-ray does not "expire" or need to be repeated when rescreening for TB unless *new symptoms develop*
- ✦ Those who received BCG vaccine as an infant or child may have a false positive TB skin test
- ✦ A single IGRA (QFT or T-Spot) lab test can be used in place of a *two-step* skin test

CDC Guidelines for Baseline TB Screening for Health Care Workers

Blood assay for mycobacterium tuberculosis (QFT or T-Spot) does not require two-step testing and is more specific than skin testing. IGRA lab tests that uses *M. tuberculosis*-specific antigens (e.g., QFT-G) are not expected to result in false-positive results in persons vaccinated with BCG. Baseline test results should be documented, preferably within 10 days of HCWs starting employment.

Baseline Testing for *M. tuberculosis* Infection After TST Within the Previous 12 Months

A second TST is not needed if the Health Care Worker (HCW) has a documented TST result from any time during the previous 12 months. If a newly employed HCW has had a documented negative TST result within the previous 12 months, a single TST can be administered in the new setting (Box 1). This additional TST represents the second stage of two-step testing. The second test decreases the possibility that boosting on later testing will lead to incorrect suspicion of transmission of *M. tuberculosis* in the setting.

BOX 1 Indications for two-step tuberculin skin tests (TSTs) <http://www.cdc.gov/mmwr/pdf/rr/rr5417.pdf>.

Situation Recommended testing	
No previous TST result	Two-step baseline TSTs
Previous negative TST result (documented or not) >12 months before new employment	Two-step baseline TSTs
Previous documented negative TST result ≤12 months before new employment	Single TST needed for baseline testing; this test will be the second-step
≥ 2 previous documented negative TSTs but most recent TST >12 months before new employment	Single TST; two-step testing is not necessary (result would have already boosted)
Previous documented positive TST result	No TST
Previous undocumented positive TST result*	Two-step baseline TST(s) OR lab test
Previous BCG† vaccination	<u>Lab test preferred CDC UPDATE 2010</u> (Previously) Two-step baseline TST

* For newly hired health-care workers and other persons who will be tested on a routine basis (e.g., residents or staff of correctional or long-term-care facilities), a previous positive TST is not a contraindication to a subsequent TST, unless the test was associated with severe ulceration or anaphylactic shock, which are substantially rare adverse events. If the previous positive TST result is not documented, administer two-step TSTs or offer IGRA lab test.

† Bacille Calmette-Guérin