

UNIVERSITY STUDENT HEALTH SERVICES • Fact Sheet

TUBERCULOSIS TESTING & FOLLOW-UP**WHAT IS TUBERCULOSIS?**

Tuberculosis (TB) is a disease caused by the bacteria *Mycobacterium tuberculosis*. Tuberculosis can affect any part of the body but most commonly attacks the lungs.

Tuberculosis bacteria can live in the body without causing illness. In many cases, the infected person's immune system is able to control and "wall off" TB bacteria inside the body, preventing illness. The person remains well and cannot spread the infection to others. This form of TB is called **latent TB infection (LTBI)**.

If the immune system is not able to control the TB bacteria, the infected person can become sick and spread the infection to others. Symptoms include a persistent cough, bloody sputum, night sweats, fever, unexplained weight loss, and fatigue. A person with this form of TB is said to have **active TB disease**. Active TB can be fatal if it is not treated.

HOW IS TB SPREAD?

Tuberculosis bacteria are spread through the air when a person with active TB disease of the lungs coughs, sneezes, laughs, or speaks. Anyone who breathes in these infected respiratory droplets can develop TB infection. People who spend lots of time with the person who has infectious TB, such as household members, friends, classmates, and coworkers, are most likely to be infected.

You cannot get TB from shaking hands, sharing food/drink, kissing, or touching toilet seats.

HOW DO I KNOW IF I HAVE A TB INFECTION?

Since latent TB infection is asymptomatic, lab tests are used to determine if you have been infected. TB infection can be detected by a positive skin test on your arm or by a special blood test.

❖ TB Skin Test

- This test is also known as the tuberculin skin test (TST) or a purified protein derivative test (PPD).
- A small amount of PPD solution containing an inactivated portion of the TB bacteria is injected just under the skin of the forearm. The skin is examined 48-72 hours after the test is placed. Most people who have been infected with TB will develop a swollen bump at this site.
- Skin testing usually becomes positive within 4-10 weeks after exposure to someone with active TB disease. The amount of swelling at the injection site (not redness) and a person's risk factors for TB are used to determine if the skin test is positive.

❖ TB Blood Test

- Blood tests known as interferon-gamma release assays (IGRAs) can also be used to test for TB infection. These tests may be used in place of TB skin tests.

WHAT IF I HAVE HAD THE BCG VACCINE?

In several parts of the world where tuberculosis is common, infants are given a TB vaccine that is made of live, weakened mycobacteria from cows (bacillus Calmette-Guérin or BCG vaccine). The BCG vaccine protects against TB in young children but typically does not offer continued protection into adulthood. This vaccine is not routinely used in the United States.

- Recent vaccination with the BCG vaccine may result in a false positive skin test. In the US, a TB skin test is still recommended if you have received the BCG vaccine. A positive result would be treated in the same manner regardless of vaccine history.
- BCG vaccines do not affect the results of TB blood tests (IGRAs).

WHAT DOES A POSITIVE TB TEST MEAN?

A positive TB skin test or blood test means that TB bacteria are somewhere in your body. A positive TB test does not mean you are contagious. A chest x-ray and physical exam are needed for further evaluation:

- You are considered contagious if your chest x-ray shows changes concerning for active TB; people with active TB usually have symptoms, such as cough, fever, night sweats, etc.
- If your chest x-ray is negative and you do not have symptoms, then you have latent TB and are not contagious.

DOES LATENT TB STILL NEED TREATMENT?

Treatment is recommended for people with latent TB because they are still at risk for developing active TB sometime later in their lives. This is called **reactivation TB** and is mostly likely to occur during the first 2 years after infection.

- Reactivation can result from a weakened immune system, but sometimes no clear cause is found. People at higher risk for reactivation include those with HIV, diabetes, malnutrition, or those taking medications that suppress the immune system.
- It is estimated that up to 13 million people in the United States have latent TB (about 4% of the total population). Left untreated, about 5-10% of people with latent TB will develop active TB.

WHAT ARE TREATMENT OPTIONS FOR LATENT TB?

Treatment of latent TB greatly reduces the risk of developing active TB in the future and is an important way to prevent the spread of TB in the community. Though very few people experience side effects, the medications used can increase the risk of liver injury. Therefore, it is important to avoid drinking alcohol and taking acetaminophen (Tylenol) during treatment.

Treatment regimens for latent TB include the following:

- **Rifampin** taken once daily for 4 months.
- **Isoniazid plus rifampin** taken once daily for 3 months.
- **Isoniazid plus rifapentine** taken once weekly for 3 months (usually under the direct observation of a trained health care provider). This is a free option offered through the Richmond City Health Department.
- **Isoniazid** taken once daily for 6 or 9 months. This is an alternative for people who cannot take rifampin or rifapentine.

Talk to your medical provider, and read our fact sheet “TB Treatment Options” for more information.

ONCE I HAVE A POSITIVE TB TEST, DO I EVER GET TESTED AGAIN?

No. Once a TB skin test or blood test is positive, it will remain positive even after treatment.

WILL I NEED FOLLOW-UP AFTER COMPLETING TREATMENT?

No regular follow-up testing or chest x-rays are recommended unless symptoms of active TB develop. However, Health Sciences students with latent TB will be required to complete a TB symptom survey annually.

WHAT IS THE LINK BETWEEN TB AND HIV?

HIV is the leading cause of progression from latent TB infection to active TB disease. It is important to know your risks for HIV infection, which include multiple sexual partners, intravenous drug use, and other activities that increase your exposure to blood and body fluids. HIV testing is available at Student Health for a fee and at other clinics in the Richmond area. Free HIV testing options can be found on the Student Health website at health.students.vcu.edu/patient-resources/sexual-health/free-sexual-health-services/#testing.

RECOMMENDED WEBSITES:

www.cdc.gov, ethnomed.org, www.healthfinder.gov, heartlandntbc.org