

Active TB vs Latent TB

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TB is caused by the bacterium called mycobacterium tuberculosis. Tuberculosis is still considered a worldwide pandemic. In 2022, 10.6 million people became ill with tuberculosis worldwide. (WHO, 2023) That includes 1.3 million children. About 30% of the people who become sick with TB go undiagnosed and untreated. Untreated individuals can infect 10 to 15 additional people per year. (CDC, 2024) In Oklahoma, TB is a reportable disease. In 2023, 66 cases were reported in Oklahoma. That's about 1.6 cases per 100,000 people. (OSDH, 2023) People who have become infected with TB are considered to either have active TB or latent TB. As healthcare professionals and public health officials, your role in TB surveillance and treatment is crucial and greatly valued.

A person with active TB usually has either a positive skin test or a positive blood test. They may also have an abnormal chest x-ray or positive sputum smear culture. They will have a large amount of TB in their system, will feel sick, and will have symptoms. They are also contagious and may spread the infection to others. People with active TB can spread it by coughing, sneezing, or speaking. The disease usually spreads with prolonged exposure to the patient's everyday contacts. The symptoms of active TB are a cough that lasts three weeks or longer, chest pain, coughing up blood, fatigue, weight loss, loss of appetite, chills, fever, and night sweats. TB infection is commonly found

in the lungs. However, it can be found in other body parts such as the larynx, kidneys, spine, brain, and lymph nodes. When TB is present in the larynx, the patient may have hoarseness. There can be blood in the urine when it is in the kidneys. In the lymph nodes, the patient will have hard, red, or purple swelling under the skin. TB of the spine can cause back pain, and TB of the brain can cause headache and or confusion. People with conditions such as HIV or diabetes can develop symptoms quickly. People with active TB will ultimately need treatment (CDC, 2023).

The treatment for active TB primarily involves antibiotics. The most commonly used antibiotics are isoniazid, rifampin, pyrazinamide, ethambutol, and streptomycin. The choice of antibiotics is based on the patient's susceptibility, coexisting conditions such as HIV or diabetes, and potential for drug interactions. The treatment duration can vary, with regimens lasting 4, 6, or 9 months. It's important to adhere to the prescribed treatment plan to ensure successful recovery and prevent the spread of the disease.

Infected individuals who do not have symptoms are not infectious and are ok for public contact. They are considered to have latent TB, which means that they have a small number of inactive bacteria in their system. People with latent TB do not feel sick, but they will have a positive TB blood test or skin test.

They will usually have a normal chest x-ray and negative sputum cultures. (CDC, 2024a) However, if left untreated, the disease can eventually convert, and the individual can become sick with TB. Therefore, it is still important to treat those individuals with latent TB. This will significantly reduce the risk of latent TB infection converting to active TB disease.

Not everyone with latent TB will become sick. However, it is still important to treat latent TB by irradiating TB from the U.S. It is estimated that there are about 13 million people in the U.S. who have latent TB. Without treatment, about 5 to 10 percent of those people will develop active TB disease (CDC, 2024a). With diligent surveillance and appropriate treatment protocols, TB can be cured and, hopefully, one day may be eliminated. This hopeful prospect should inspire us to continue our TB prevention and treatment efforts. ■

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