

TUBERCULOSIS (TB)

What is TB?

TB is a disease caused by bacteria called *Mycobacterium tuberculosis*. The bacteria usually attack the lungs but can involve any part of the body such as the kidney, spine and brain. If not treated properly, TB disease can be fatal and was once the leading cause of death in the U.S. It remains one of the leading causes worldwide of deaths due to infectious disease.

How is it spread?

TB is spread through the air from one person to another. The bacteria get into the air when a person with active TB disease of the lungs or throat coughs or sneezes. People nearby may breathe in these bacteria and become infected.

Latent Tuberculosis

Not everyone infected with TB bacteria becomes sick. People who are not sick have latent TB infection. People who have latent TB infection do not feel sick, do not have any symptoms and **cannot** spread TB to others. Some people with latent TB may develop TB disease. This can be prevented by taking preventative medications treatment.

What is active TB disease?

TB bacteria become active if the immune system can't stop them from growing. The bacteria begin to multiply in the body and cause active TB disease. The bacteria destroy tissue in the lungs. Some people develop active TB disease soon after being infected, before their immune system can fight the TB bacteria. Other people may get sick later, when their immune system becomes weak for another reason. People with HIV are at high risk for developing active TB.

Symptoms of active TB disease may include fatigue, weight loss, cough, spitting up blood, chest pain or night sweats.

What is the test for TB?

TB skin tests are the most widely used TB test. They are performed by injecting a Tuberculin Purified Protein Derivative (PPD) solution into the skin on the forearm. Two or three days later the site is examined by a nurse or physician for induration (swelling). Induration can indicate TB infection.

Who should be tested for TB?

Persons who should be tested for TB are those who are, or have been, at risk of TB exposure. Categories of high risk students include:

- Persons with signs or symptoms of TB.
- Persons with cancer, leukemia, kidney disease, diabetes, AIDS/HIV or who take immunosuppressive medications.
- Persons who have been in close contact with a person with active TB disease.
- Persons who inject drugs.
- Persons who have resided, worked or volunteered in a prison, homeless shelter, hospital, nursing home or other long term treatment facility.
- Persons who have lived in a country other than those listed below.* (This includes international students as well as U.S. citizens who have lived in these countries for more than two months.)

*American Samoa, Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Jamaica, Liechtenstein, Luxembourg, Malta, Monaco, Netherlands, New Zealand, Norway, Saint Kitts and Nevis, Saint Lucia, San Marino, Sweden, Switzerland, United Kingdom, United States, and the Virgin Islands.

What do I do if I have a positive TB test?

People with a large area of induration are considered “TB test positive”. This does not mean that they are sick. It means they may have been exposed to TB in their past and have antibodies to TB. This could happen from exposure to a person sick with TB or if they have been vaccinated with a vaccine called BCG that many countries in the world give to children (the U.S. does not use this vaccine).

If a person has a positive skin test he will have follow-up screening that includes a detailed medical history, chest x-ray (CXR) and examination. It can also include sputum cultures. A diagnosis of active TB disease is based on history, CXR, sputum results and medical examination.

What happens if someone has active disease?

Active TB disease is contagious. A person with it will need to stay at home (or if they are seriously ill, in a hospital) during the initial phase of treatment until they are evaluated and found to be no longer contagious.

Medical treatment consists of several different medications. A nurse will closely follow a person through this treatment to ensure that the medication is taken properly and working.

Questions or more information?

If you have any questions about TB or the TB skin test, please contact Lisa Duggan RN, the TB nurse at (970) 491-1727.

Important Resources and Web sites:

- National Jewish Hospital <http://njc.org>
- The Centers for Disease Control and Prevention factsheet on Tuberculosis: <http://www.cdc.gov/tb/faqs>
- The Colorado Department of Public Health and the Environment Tuberculosis Program: <http://www.cdphe.state.co.us/dc/tbman>