

Tuberculosis

What is tuberculosis?

Tuberculosis, or TB, is a disease caused by a bacteria called *Mycobacterium tuberculosis*. The bacteria can attack any part of your body, but they usually attack the lungs. TB disease was once the leading cause of death in the United States.

How do you get TB?

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

TB is not spread by dishes, drinking glasses, sheets, clothing or by touching a person with the disease.

What happens once you breathe in the TB bacteria?

In most people who breathe in TB bacteria and become infected, the body is able to fight the bacteria and stop them from growing. The bacteria become inactive, but they remain alive in the body and can become active later. This is called TB infection. People with TB infection have no symptoms, do not feel sick and cannot spread TB to others. Persons with TB infection usually develop a positive TB skin test reaction, and can develop TB disease later in life if they do not receive preventive therapy. Many people who have TB infection never develop TB disease. In these people, the bacteria remain inactive for a lifetime without causing disease. But in other people, especially those who have weak immune systems, the bacteria can become active and cause disease.

About 5% of people who get infected with TB will develop TB disease within the first two years following infection. The other 95% of infected people, have a 5% risk of developing TB disease at some point later in their life.

What is TB disease?

TB bacteria become active when the body's immune system cannot stop them from multiplying. People at greatest risk of developing TB disease following infection include:

- babies and young children;
- the elderly;
- persons infected with HIV virus;
- persons who are substance abusers;

- persons with diabetes, silicosis, cancer of the neck or head, leukemia or Hodgkin's disease, severe kidney disease, low body weight, and certain other medical conditions, such as corticosteroid therapy or organ transplants.

Symptoms of TB depend on where in the body the TB bacteria are growing. TB in the lungs may cause a bad cough that lasts longer than 2 weeks, pain in the chest, and coughing up blood or sputum (phlegm from deep inside the lungs). Other symptoms of TB disease include weakness or fatigue, weight loss, loss of appetite, chills, fever and sweating at night.

How is long is someone with TB contagious?

Only persons with active TB disease can spread the bacteria. Without treatment, people can remain contagious for years, during which time they can infect about 12 other people each year. After taking effective TB medicines for 2-3 weeks, persons with active disease generally are no longer contagious. However, these people are not cured until they complete their full course of medications and that usually takes 6 months.

How is TB diagnosed?

Diagnosis is based on a combination of symptoms, chest x-rays, skin tests, and examination of sputum samples for the presence of the bacteria. It may take 6-8 weeks before all test results are available. Physicians will not wait until all the test results are complete before placing patients on treatment.

How is TB treated?

Most people with TB are treated in their homes, only a very few require hospitalization.

If you have TB disease, you will need to take several different drugs. This is because there many bacteria to be killed and the combination of drugs is the most effective way to accomplish this.

Most people take 4 drugs (isoniazid, rifampin, pyrazinamide and ethambutol) for 2 months followed by 4 months of just isoniazid and rifampin. However, if the bacteria causing the TB are resistant to any of these drugs, then others drugs will be substituted as needed.

Although you may begin to feel better after a few weeks it is important that you continue to take the prescribed medications for the full 6 months. This is because the TB bacteria die very slowly. If you stop taking your medication or do not take it as prescribed, the TB bacteria can develop resistance to the drugs and begin to grow again making you ill. If this happens, new drugs will be added to the treatment and these must be taken for a longer time and usually have more serious side effects.

In Kansas City, most people who have active TB disease are treated by the Health Department. All tests, medications and other services are free to City residents. The Health Department conducts what is termed directly observed therapy. This means that a person from the Health Department will meet with you and watch you take your medications on those days you are supposed to take them. This ensures compliance with the treatment schedule as well as providing you the opportunity to talk with a health care worker frequently. In addition, there are other tests that must be performed periodically to assess how well you are doing and how well you are tolerating the medications.

Can I go to work or socialize while I am being treated?

Initially, your activities will be restricted by the Health Department. However, after a few weeks of treatment, when you are no longer infectious and are feeling better, there is nothing to stop you from leading a normal life. The medicine should not affect your strength, sexual function, or ability to work.