

Tuberculosis (TB)

What is TB?

Tuberculosis (TB) is a disease caused by bacteria called *Mycobacterium tuberculosis*. The bacteria usually attack the lungs. But, TB bacteria can attack any part of the body such as the kidney, spine, and brain. If not treated properly, TB disease can be fatal. TB disease was once the leading cause of death in the United States.

TB is spread through the air from one person to another. The bacteria are put 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.

However, not everyone infected with TB bacteria becomes sick. People who are not sick have what is called latent TB infection. People who have latent TB infection do not feel sick, do not have any symptoms, and cannot spread TB to others. But, some people with latent TB infection go on to get TB disease.

People with active TB disease can be treated and cured if they seek medical help. Even better, people with latent TB infection can take medicine so that they will not develop active TB disease.

Why is TB a problem today?

Starting in the 1940s, scientists discovered the first of several medicines now used to treat TB. As a result, TB slowly began to decrease in the United States. But in the 1970s and early 1980s, the country let its guard down and TB control efforts were neglected. As a result, between 1985 and 1992, the number of TB cases increased. However, with increased funding and attention to the TB problem, we have had a steady decline in the number of persons with TB since 1992. But TB is still a problem; more than 14,000 cases were reported in 2003 in the United States.

This booklet answers common questions about TB. Please ask your doctor or nurse if you have other questions about latent TB infection or TB disease.

How is TB spread?

TB is spread through the air from one person to another. The bacteria are put 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.

When a person breathes in TB bacteria, the bacteria can settle in the lungs and begin to grow. From there, they can move through the blood to other parts of the body, such as the kidney, spine, and brain.

TB in the lungs or throat can be infectious. This means that the bacteria can be spread to other people. TB in other parts of the body, such as the kidney or spine, is usually not infectious.

People with active TB disease are most likely to spread it to people they spend time with every day. This includes family members, friends, and coworkers.

What is latent TB infection?

In most people who breathe in TB bacteria and become infected, the body is able to fight the bacteria to stop them from growing. The bacteria become inactive, but they remain alive in the body and can become active later. This is called latent TB infection. People with latent TB infection

- have no symptoms
- don't feel sick
- can't spread TB to others
- usually have a positive skin test reaction
- can develop active TB disease if they do not receive treatment for latent TB infection

Many people who have latent TB infection never develop active TB disease. In these people, the TB bacteria remain inactive for a lifetime without causing disease. But in other people, especially people who have weak immune systems, the bacteria become active and cause TB disease.

What is active TB disease?

TB bacteria become active if the immune system can't stop them from growing. The active bacteria begin to multiply in the body and cause active TB disease. The bacteria attack the body and destroy tissue. If this occurs in the lungs, the bacteria can actually create a hole in the lung. Some people develop active TB disease soon after becoming 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.

Babies and young children often have weak immune systems. People infected with [HIV](#), the virus that causes AIDS, have very weak immune systems. Other people can have weak immune systems, too, especially people with any of these conditions:

- substance abuse
- diabetes mellitus
- silicosis
- cancer of the head or neck
- leukemia or Hodgkin's disease
- severe kidney disease
- low body weight
- certain medical treatments (such as corticosteroid treatment or organ transplants)

- specialized treatment for rheumatoid arthritis or Crohn's disease

Symptoms of TB depend on where in the body the TB bacteria are growing. TB bacteria usually grow in the lungs. TB in the lungs may cause symptoms such as

- a bad cough that lasts 3 weeks or longer
- pain in the chest
- coughing up blood or sputum (phlegm from deep inside the lungs)

Other symptoms of active TB disease are

- weakness or fatigue
- weight loss
- no appetite
- chills
- fever
- sweating at night

Active TB Disease

- Has symptoms that may include:
 - a bad cough that lasts 3 weeks or longer
 - pain in the chest
 - coughing up blood or sputum
 - weakness or fatigue
 - weight loss
 - no appetite
 - chills
 - fever
 - sweating at night
- May spread TB to others
- Usually has a positive skin test or QuantiFERON[®]-TB Gold test

May have an abnormal chest x-ray, or positive sputum smear or culture