

# Tuberculosis

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## What is tuberculosis (TB)?

**Tuberculosis** [too-bur-kyuh-LOH-sis] is a very contagious, chronic infection, caused by a bacteria that usually affects the lungs. It can also damage the brain, kidneys, or bones and can cause death if not treated.

The disease can be **active** (you are sick and contagious) or **latent** (inactive or “sleeping”). Only those with active TB can spread the disease to others when they cough, speak, laugh, sing, or sneeze. Those near the person at the time then inhale the germs.

TB primarily affects people in developing countries. In the U.S., about 3 people out of 100,000 get TB, and most Americans who get it were born in another country. **Of those with latent TB**, 5 to 10 people out of 100 will develop the active disease at some time in their lives.

## What are the symptoms?

Early on, there are no signs of a TB infection other than a positive reaction to a skin test or blood test. Once the disease progresses, symptoms include:

- A cough that lasts for 3 weeks or longer
- Pain when coughing or breathing
- Coughing up blood
- Night sweats
- Fever or chills
- Loss of appetite
- Weight loss
- Unexplained weakness or tiredness

## Who is at risk for TB?

Although most TB cases occur in developing countries, people who are at risk are those who:

- Use tobacco or have other long-term substance use problems (alcohol or drugs)
- Are diagnosed with HIV or AIDS
- Have diabetes, kidney failure, or certain cancers
- Are malnourished
- Take medicines that lower the immune system’s ability to fight disease (such as those for preventing organ rejection or for treating cancer, rheumatoid arthritis, Crohn’s disease, or psoriasis)
- Travel to places where TB rates are high, such as Indonesia, China, Nigeria, Pakistan, and sub-Saharan Africa
- Are or have been homeless or in prison

## How is it diagnosed?

Diagnosing TB requires a simple skin test to help determine if you have the TB germs in your body. For this test, a small amount of harmless tuberculin [too-BUR-kyuh-lin] serum (a protein) is injected under the top layer of skin on your forearm. After 2 to 3 days, a healthcare provider will need to check the area where you had the test to see if you had any significant reaction. If the skin test is positive, your doctor may order a chest x-ray or a test of the mucus in your lungs to see if you are contagious.

To test for latent TB, your doctor may order a blood test which can tell you if you have been exposed to the bacteria that causes the disease.

## How is it treated?

Treating TB requires taking 1 or more strong antibiotic medicines for many months, even if you are not currently having any symptoms. **It is very important to take the full dose of medicine at all times.** If not, TB could come back, and the medicines might not work a second time. Multiple medicines are often necessary as some types of TB are hard to cure. The most common ones prescribed for TB are:

- Isoniazid [ahy-suh-NAHY-uh-zid], which is commonly given to prevent latent TB from becoming active
- Ethambutol [e-THAM-byuh-tawl ], which is also called Myambutol
- Pyrazinamide [pir-uh-ZIN-uh-mahyd]
- Rifampin [ri-FAM-pin], which is also called Rifadin or Rimactane

High-dose antibiotics like these can harm your liver, so you will need to have frequent blood tests to monitor your liver health while you take these medicines.

For those who are otherwise healthy and have access to proper medical care, treatment for TB is typically successful. However, having other infections (especially HIV and AIDS) or diseases can make it harder for the body to fight off the TB infection. **Early diagnosis and treatment, including taking all prescribed antibiotics as directed, is the best way to cure TB.**

## Is there a vaccine?

There is a vaccine for TB (the BCG vaccine) that is used in countries where there are many cases of TB, but not typically given in the U.S. The vaccine can make it difficult to get an accurate skin test. It can also cause complications for those who are pregnant or who may have immune system problems (especially those with HIV/AIDS or who may be candidates for organ transplant).



### *When should I call my doctor?*

**If you have been exposed to TB**, contact your doctor or county health department right away to get tested for the disease.

**If you are taking high-dose antibiotics to treat TB**, contact your doctor immediately if you experience:

- Loss of appetite
- Dark urine (pee)
- A fever lasting longer than 3 days
- Unexplained nausea or vomiting
- Jaundice (yellowing of the skin)

## How can you keep TB from spreading?

If you have been diagnosed with TB, you should **avoid contact with others for the first 3 to 4 weeks of treatment.** Avoid crowds until your doctor says you are no longer contagious. Wearing a surgical mask will also keep TB particles from spreading through the air.

**Some people may need to be in the hospital to help them get better and keep from spreading the disease.**

In this case, you would need to be in a private room with special ventilation. This is referred to as “isolation.” Isolation requires that:

- The door to your room is kept shut.
- A sign on the door will alert others that they need a special TB mask to come in.
- You will need to wear a surgical mask if you leave the room for any reason.
- All hospital staff and visitors will wear a TB mask while in your room.

These precautions will be followed until you have a negative follow-up TB test.

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