

# TUBERCULOSIS

**Tuberculosis (TB) is an infectious disease caused by bacteria named, *Mycobacterium tuberculosis*. TB mainly affects the lungs, but it can also affect other parts of the body such as glands, the abdomen, bones, brain and spine.**

## HOW IS TUBERCULOSIS SPREAD?

When a person with TB disease of the lungs coughs, speaks or sneezes, the bacteria are spread in the air to nearby people who may inhale droplets containing the bacteria. These people may become infected and may, in turn, infect close contacts such as family members, friends, co-workers or schoolmates. A person with TB in other areas of the body, is not normally infectious to others.

## WHAT HAPPENS IF YOU GET INFECTED WITH TB?

You are unlikely to get sick right away and one of two things may happen:

- Your body's immune system might kill the bacteria that cause TB and you will not get sick.
- Your body's immune system might be able to control the bacteria, but not completely kill them off. You then have what is known as latent TB. People with latent TB do not get sick right away, but they can get sick later on, particularly if their immune system weakens for any reason. People who are sick with TB have what is called active TB (TB disease).



## THE DIFFERENCE BETWEEN LATENT AND ACTIVE TB

It is important to distinguish between latent TB infection and active TB. Not everybody that is infected with the TB bacteria will become sick.

With latent TB, the bacteria live in your body without causing any illness and your body prevents them from growing and causing disease. Many people with latent TB will never develop active TB. However, when your immune system is weak, the bacteria can multiply and cause active TB.

With active TB, your body cannot stop the bacteria from growing. The bacteria multiply, make you sick and you can then spread TB to others.

## SYMPTOMS OF ACTIVE TUBERCULOSIS

People with active TB may present with one or more of the following symptoms:

- coughing for longer than two weeks that does not seem to get better
- coughing up blood
- fever
- chills
- night sweats
- weight loss
- loss of appetite
- weakness or fatigue

You should see a doctor or nurse if you have one or more of the above symptoms. While these are often signs of TB, they may also result from other medical problems. When active TB occurs outside your lungs, signs and symptoms vary depending on the organ involved. For example, TB of the kidneys might cause blood in your urine; TB of the brain might cause neurological symptoms such as confusion, headache, neck stiffness and paralysis.

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## WHO IS AT RISK OF DEVELOPING ACTIVE TB?

Anyone can get TB, but certain factors increase your risk of getting active TB. These include:

- Close contact with people who have infectious TB disease.
- Children younger than five years old who have come into contact with an infectious person.
- People working in hospitals, correctional facilities, nursing homes and shelters for the homeless.
- People with medical conditions that weaken the immune system such as diabetes mellitus, severe kidney disease, HIV infection, substance abuse, chronic lung disease and cancer.
- People on medication that weakens the immune system such as suppressive therapy for immune system disorders, corticosteroids, certain drugs used to treat rheumatoid arthritis, organ transplants and Crohn's disease.
- Substance abuse.

## HOW IS TUBERCULOSIS DIAGNOSED?

Your doctor will examine you and look for swollen glands and other signs of TB, as well as using a stethoscope to listen to your lungs when you breathe. Your doctor may also ask for a chest X-ray. The most commonly used test for TB is a sputum test. You may be asked to cough and provide a sputum sample to be sent to the laboratory.

Sputum samples are tested for the presence of bacteria that cause TB. These tests include:

- Examination of the sputum using a microscope; this is a quick test, but has limited accuracy.
- PCR/GeneXpert tests that look for the presence of the DNA of TB bacteria; this is a rapid test with high accuracy.
- Culture test during which bacteria from the sputum are grown in the laboratory, it has a higher accuracy, although it can take several weeks for the bacteria to grow. If TB bacteria are present, further testing is done to determine if they will respond to drugs used to treat TB (sensitivity tests). For TB outside the lungs, a sample from that site may be submitted to the laboratory for testing.

A skin test can be done to measure the body's immune reaction to TB bacteria. A small amount of a substance called PPD tuberculin is injected just below the skin of your forearm. Within 2-3 days, a doctor or nurse will examine your arm for swelling at the injection site. A hard, raised red bump means you most likely have TB infection. The size of the bump determines whether the test results are significant. This test, however, cannot differentiate between latent TB and active TB. The result has to be interpreted by the doctor or nurse together with your symptoms, the doctor's findings and your X-ray results. A blood test may also be used to measure the body's immune reaction to TB bacteria. It uses sophisticated technology. The test requires only one visit to the laboratory. Like the skin test, a positive blood test does not differentiate between latent TB and active TB. It has to be interpreted as per the skin test and cannot be used alone to diagnose TB.

## HOW IS TUBERCULOSIS PREVENTED?

A patient with active TB should cover their mouth with a tissue when coughing, sneezing or laughing. Rooms should be kept ventilated by opening windows as bacteria spread more easily in small closed spaces where the air is not circulating. People with active TB should stay at home and should not share a bedroom during the first two weeks of treatment.

All prescribed medication should be taken in order to minimise the risk of spreading TB infection to others.

Individuals with latent TB and who are at high risk of developing active TB, may be given preventative treatment known as TB prophylaxis. Your doctor will advise you if this is needed.

## HOW IS TUBERCULOSIS TREATED?

Treatment of TB disease involves taking several types of medication for six to nine months, or longer, depending on the organ infected. The choice of medication is based on the results of the laboratory sensitivity tests. It is important to take all the medications as prescribed for the full course of the treatment.

You may become sick again if you stop the medication too early. It is important to communicate with your doctor should you experience any side effects from the medication.

## TUBERCULOSIS IS TREATABLE

