

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.

Ventilate rooms by opening windows. Bacteria spread more easily in small closed spaces where the air does not move. Stay at home and do not share a bedroom during the first two weeks of treatment for active TB with someone else. Take all your medication as prescribed in order to minimise the risk of spreading the infection to others.

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

HOW IS TUBERCULOSIS TREATED?

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

You may become sick again if you stop the drugs too early. It is important to communicate with your doctor if you experience any side-effects due to these drugs



ITEM CODE: 022441 - October 2018 (SI 19039)

Your consulting pathologists

TUBERCULOSIS



Your consulting pathologists

TUBERCULOSIS

WHAT IS TUBERCULOSIS?

Tuberculosis (TB) is an infectious disease caused by a bacteria named, *Mycobacterium tuberculosis*. It mainly affects the lungs, however, any part of the body such as glands, the abdomen, bones, brain and spine can be involved.

HOW IS TUBERCULOSIS SPREAD?

TB is spread from person-to-person 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. As such, these persons too become infected. Close contacts such as family members, friends, co-workers or schoolmates may be most at risk of getting infected.

Persons with a TB infection that occurs outside the lungs, for example, in the brain or bones, are not normally infectious to others.

WHAT HAPPENS IF YOU GET INFECTED WITH TB?

You are unlikely to get sick right away. One of two things may happen:

1. Your body's immune system might kill the bacteria that cause TB and you will not get sick.
2. Your body's immune system might be able to control the bacteria but not completely kill them off. Then you have what is know as latent TB. People with latent TB do not get sick right away, but they can get sick later on. People who are sick with TB have what is called active TB (the TB disease).

WHAT IS THE DIFFERENCE BETWEEN LATENT TB INFECTION 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. 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 spread TB to others.

SYMPTOMS OF ACTIVE TUBERCULOSIS?

Persons with active TB may present with one or more of the following symptoms: a cough for more than two weeks that does not seem to get better, coughing up blood, having a fever, chills, sweating at night, losing weight without trying to, having loss of appetite, weakness or fatigue.

You should see your doctor or nurse if you have one or more of the above symptoms. While these are often signs of TB, they can also result from other medical problems. When active TB occurs outside your lungs, signs and symptoms vary according to 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.



WHO IS AT RISK OF DEVELOPING ACTIVE TB

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

- Close contact with persons with infectious TB disease.
- Children younger than five years old who have come into contact with an infectious person.
- Persons who work with people who are at high risk for TB disease such as in hospitals, correctional facilities, nursing homes and shelters for the homeless.
- Persons 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 sounds in 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: (i) examination of the sputum using a microscope; this is a quick test, but has limited accuracy; (ii) PCR/GeneXpert tests that look for the presence of the DNA of TB bacteria; this is a rapid test with high accuracy; (iii) 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.