

# Brief Note on Tuberculosis: Symptoms, Diagnosis, Treatment and Prevention

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## DESCRIPTION

Tuberculosis also known as TB is a contagious bacterial disease that primarily affects the lungs. The disease is caused by *Mycobacterium tuberculosis*, a bacterium that spreads through the air when an infected person coughs, sneezes or talks. TB can also affect other parts of the body, such as the brain, kidneys, and spine. TB is a serious global health problem, with an estimated 10 million people developing the disease every year and 1.4 million dying from it. TB is particularly prevalent in low-income and developing countries, where overcrowding, poor living conditions, and limited access to healthcare contribute to the spread of the disease. However, TB also affects people in developed countries, particularly those with weakened immune systems such as people living with HIV/AIDS.

## Symptoms

The symptoms of TB can vary depending on the part of the body affected, but the most common symptom is a persistent cough that lasts for three weeks or longer. Other symptoms may include:

- Chest pain
- Coughing up blood or phlegm
- Fatigue
- Fever
- Night sweats
- Loss of appetite
- Weight loss
- Shortness of breath
- Chills
- Swollen lymph nodes

TB can be difficult to diagnose, as the symptoms can be similar to those of other respiratory illnesses. In some cases, people with TB may not experience any symptoms at all. If you think you may have TB or have been exposed to someone with TB, it is important to seek medical attention.

## Diagnosis

TB is diagnosed through a combination of medical history, physical

examination, and laboratory tests. The most commonly used test for TB is a skin test called the Mantoux test or PPD test. This test involves injecting a small amount of a substance called tuberculin into the skin, usually on the forearm. After 48 to 72 hours, a healthcare professional will check the area for a reaction. If the skin has become raised and swollen, this indicates that the person has been infected with the TB bacteria.

Other tests that may be used to diagnose TB include:

**Chest X-ray:** This test can show whether there are any abnormalities in the lungs that could be caused by TB.

**Sputum test:** This test involves examining a sample of phlegm (sputum) under a microscope to look for the TB bacteria.

**Blood tests:** These tests can help identify whether a person has been infected with the TB bacteria.

## Treatment

TB is treatable with a course of antibiotics. The most commonly used antibiotics for TB treatment are isoniazid, rifampicin, ethambutol, and pyrazinamide. Depending on the severity of the infection, treatment can take anywhere from six months to a year or longer. It is important to complete the full course of antibiotics, even if symptoms improve before the treatment is finished. Failure to complete the course of antibiotics can lead to drug-resistant TB, which is much more difficult to treat.

## Prevention

Preventing the spread of TB requires a combination of measures, including:

**Vaccination:** The Bacilli Calmette-Guérin (BCG) vaccine is a widely used vaccine that can protect against severe forms of TB in children. However, the vaccine is not always effective and is not routinely given in countries with low rates of TB.

**Screening:** Screening programs can help identify people who have TB but have not yet developed symptoms. This can help prevent the spread of the disease.

**Treatment:** Prompt diagnosis and treatment of TB can help prevent the spread of the disease.

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**Infection control:** Measures such as good ventilation, wearing masks, and isolating people with active TB can help prevent the spread of the disease in healthcare settings.

## CONCLUSION

Tuberculosis is a serious global health problem that affects millions of people every year. The disease can be difficult to diagnose and treat, particularly in low-income and developing

countries with limited access to healthcare. However, with prompt diagnosis, appropriate treatment, and effective prevention measures, the spread of TB can be controlled. It is important to raise awareness about the disease and encourage people to seek medical attention if they experience any symptoms or have been exposed to someone with TB. By working together, we can reduce the burden of tuberculosis and improve the health and well-being of communities around the world.