

## TUBERCULOSIS

Tuberculosis is a disease caused by an infection with the bacteria *Mycobacterium Tuberculosis*.

### What parts of the body are affected by Tuberculosis?

First and foremost, Tuberculosis is a disease of the lungs. However, the infection can spread via blood from the lungs to all organs in the body. This means that you can develop Tuberculosis in the pleura, in the bones, the urinary tract and sexual organs, the intestine and even in the skin. Lymph nodes in the lung root on the throat can also get infected.

Tuberculosis meningitis is sometimes seen in newly infected children.

This form of the disease is a life threatening condition.

### How do you catch Tuberculosis?

The bacteria that cause the disease are inhaled in the form of microscopic droplets that come from a person with Tuberculosis. When coughing, speaking or sneezing, the small droplets are expelled into the air. The droplets dry out quickly, but the bacteria itself can remain airborne for hours. However, the Tuberculosis bacteria are killed when exposed to ultraviolet light, including sunlight.

### How does the disease develop inside the body?

After the Tuberculosis bacteria have been inhaled they reach the lungs and, within approximately 6 weeks, a small infection appears that rarely gives any symptoms. This is called a Primary Infection.

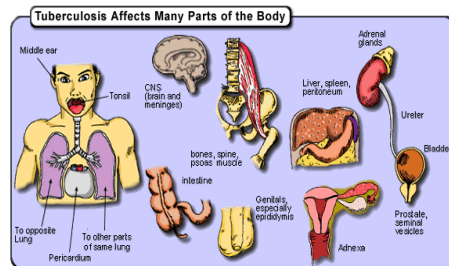
After this, the bacteria can then spread through the blood. If you have a healthy immune system, in most cases the infection will remain dormant without doing any obvious harm.

Months or even years later, however the disease can become reactivated in different organs if the immune system is weakened. The lungs are the favourite place for the illness to strike.

### What are the symptoms?

Typical signs of tuberculosis are:

- ✓ Chronic or persistent cough and sputum production. If the disease is at an advanced stage the sputum will contain blood.
- ✓ -Fatigue.
- ✓ -Lack of appetite.
- ✓ -Weight loss.
- ✓ -Fever.
- ✓ -Night sweats.



Tuberculosis can mimic many forms of disease and must always be considered if no firm diagnosis has been made. Other non-Tuberculous Mycobacteria is found in soil and water can cause disease in susceptible patients with a history of cystic fibrosis, chronic lung damage, alcoholism and immunosuppression. These atypical mycobacteria can be present as colonising organisms without necessarily causing disease.

### When should I see a doctor?

If you have a persistent cough with sputum for more than 3 weeks, you should contact your doctor.

### How does the doctor make the diagnosis?

The doctor cannot always hear enough to make a diagnosis by just using a stethoscope.

If your physician suspects there is something wrong and that it is not just a cold, you may be referred to an outpatient department for people with lung diseases or to an X-ray department. The chest X-ray examination is the most important test.

If there are changes in the lungs, a sample of sputum will be sent for microscopic examination and culture. Culture of Tuberculosis bacteria will take 4 to 12 weeks. For this reason, it takes some time before an accurate diagnosis is possible.



### Are there other diseases with similar symptoms?

Bronchitis, pneumonia, smoker's lung and lung cancer can all show practically the same symptoms as Tuberculosis. If Tuberculosis is suspected, tests will need to be done to rule out the presence of these other diseases. Examination of sputum will usually include a check for cancer if the chest X-ray raises any suspicion of this type of diagnosis.

### How is Tuberculosis treated?

Today, treatment involves 3 or 4 different kinds of antibiotics given in combination over 6 to 9 months. Multiple medicines are necessary to prevent the emergence of resistance, which would lead to treatment failure and the nightmare of multiple drug resistant organisms.



Attention to the details of treatment are vital. The main cause of treatment failure is non-compliance with what is perceived as a demanding and prolonged programme of therapy. Those patients who are microscopy or smear positive are infectious and, if possible, should avoid contact with other people for 2 weeks.

Pregnant women with TB must be treated urgently as the disease may progress rapidly with high risk to both mother and baby.

### Is it possible to become resistant to the medicine?

Yes, if medication is not taken every day or as prescribed by the doctor. In some parts of the world there are problems with resistance to medication and even multi-drug resistance. This is a very serious situation, treating these patients can be a long and expensive task.



### Is HIV/AIDS associated with TB?

Yes, in certain African countries and many parts of Southeast Asia, HIV is becoming more and more endemic. Where Tuberculosis is also endemic among the population, a weakened immune system will increase the risk of getting Tuberculosis. This is an extremely worrying situation and the WHO and the IUATLD are doing all they can to prevent the disease from spreading.

### Can TB be prevented?

Yes, the most important step is to find, isolate and treat all disease carriers until they are no longer an infective risk to others.

It is always advisable not to get too close to people who are coughing, equally, people with a cough should be aware of those around them and try not to cough near them.