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ADVANTAGE
Tuberculosis

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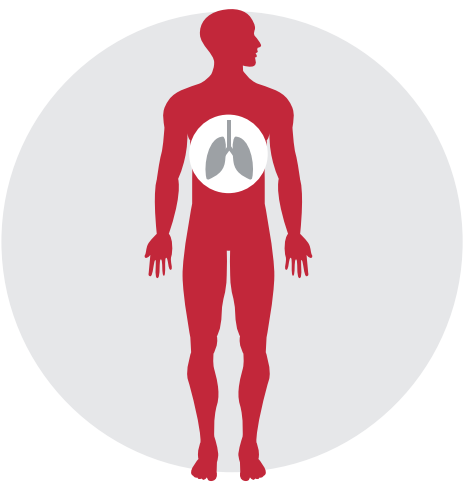
What is tuberculosis (TB)?



TB is an infection that usually attacks the lungs. It can spread to the digestive tract, brain, bones, joints, kidneys and skin

How is it spread?

Through the air when an infectious person coughs, sneezes or spits

What are the symptoms of TB?

Loss of weight & appetite | Tiredness | Night sweats and shortness of breath

How is it diagnosed?

Collecting early morning sputum in a bottle and then sending it to the laboratory for examination

Questions
for Dr Thapelo Motshudi

1 What is tuberculosis (TB)?

TB is an infection that usually attacks the lungs (pulmonary TB). From the lungs it can spread to any other part of the body (extra-pulmonary TB), which includes the digestive tract, brain, bones, joints, kidneys and skin. The organism involved is called mycobacterium tuberculosis. It is a bacillus, and these are disease causing entities that are different from viruses or bacteria. TB is completely curable, but can kill if left untreated.

Drug-resistant TB occurs when the infection become resistant to one or more anti-TB drugs, and it is most common in patients with a history of being diagnosed with TB, but stopping their treatment midway. The various types of drug resistant TB (DR-TB) are Multi-Drug Resistant TB (MDR-TB), Extreme Drug Resistant TB (XDR-TB), and Totally Drug Resistant TB.

2 How is it spread?

It is spread through the air, particularly in overcrowded areas where infectious droplets can stay in the air for a long time due to poor ventilation. When an infectious person coughs, sneezes or spits, they spray the TB bacillus into the air. Exposure to these organisms can lead to infection that is asymptomatic and not spread to others. This is called latent TB infection. This latent infection can progress to active disease, depending on a number of conditions. All of us have TB in our lungs, which we inhaled from the time we were born and continue to inhale, but it does not normally progress to active disease.

3 Who is at risk of contracting TB?

Since TB is always present in the air we breathe, anyone can get it at any time, but there are known high risk groups. These include people suffering from malnutrition, HIV infection, mine workers, people with cancer, alcoholics, and prisoners. TB and HIV form a lethal combination, each speeding the other's progress.

4 What are the symptoms of TB?

The most common symptom of pulmonary TB is a persistent and productive cough for two or more weeks, which may or may not be blood-stained. The cough may be accompanied by chest pain, loss of weight & appetite, tiredness, night sweats and shortness of breath. Symptoms of extra-pulmonary TB depend on the organ involved. For example someone with TB of the spine may present with increasing deformity of the spine, pain, unexplained fever and sudden inability to walk or to control the bladder.

5 How is it diagnosed?

In the case of TB of the lungs, diagnosis is made by collecting early morning sputum in a bottle, and then sending it to the laboratory for examination. The sputum will be tested for the presence of TB and if present, further tests will be conducted to check if it is not resistant to commonly used drugs. In addition to analysing the sputum, a chest x-ray is also taken and in some specific cases a Tuberculin skin test may be performed. If the TB is extra-pulmonary, a biopsy or piece of tissue can be taken from the suspected organ, or fluid obtained from a joint, and then sent to the laboratory for analysis.

6 How is TB treated?

Treatment is usually taken over a 6–9 month period, but could be as long as 24 months for XDR-TB. Treatment is in two phases; an intensive phase (2 or 3 months) and a continuation phase (4 or 6 months). The three underlying principles of TB control are: FIND, TREAT and CURE, and PREVENT. In South Africa we use the DOTS program of the World Health Organization (WHO) to monitor treatment. This involves health workers, trusted family members or community workers directly observing and ensuring that the infected person takes treatment appropriately.

While on treatment people are also advised to stop spreading the infection by taking basics steps like covering their mouths when sneezing or coughing, and opening windows and doors in crowded rooms. It is also important to urgently visit your local healthcare practitioner if you display symptoms suggestive of TB as given above. In addition, parents must ensure their newborn babies receive routine immunisation against TB, which is given as an injection under the skin after birth.