



Tuberculosis (TB)



What is Tuberculosis (TB) disease?

Tuberculosis (TB) is caused by a bacterium called *Mycobacterium tuberculosis*. The bacteria usually attack the lungs, but TB bacteria can attack any part of the body such as the kidney, spine, and brain. TB in the lungs may cause a persistent cough that lasts longer than 2 weeks, pain in the chest, coughing up blood or sputum (phlegm), weakness or feeling very tired, weight loss, decreased appetite, chills, fever, and night sweats. TB disease can be treated by taking several drugs for 6 to 12 months. It is very important that people who have TB disease finish the medicine, and take the drugs exactly as prescribed. If they stop taking the drugs too soon, they can become sick again; if they do not take the drugs correctly, the germs that are still alive may become resistant to those drugs. If not treated properly, TB disease can be fatal.

What is latent TB infection (LTBI)?

A person with LTBI has inhaled TB bacteria into his/her lungs. The immune system captures the TB bacteria preventing illness or disease. This person has LTBI. A person with LTBI does not feel sick and cannot spread TB bacteria to others. However, the LTBI may progress to TB disease in the future, especially if the person's immune system weakens.

Why does latent TB infection progress to TB disease?

Certain groups of people with weakened immune systems (e.g. a serious illness, diabetes, poor eating habits, heavy drinking) are at very high risk of developing TB disease once infected with TB bacteria. The highest risk of developing TB disease is within the first 2 years of becoming infected with TB bacteria. After the first 2 years, there is about a 10% chance of developing TB disease in a person's lifetime. People with both LTBI and HIV infection have a much greater risk of developing TB disease.

How do I know if I have LTBI or TB disease?

There are two kinds of tests that are used to determine if a person has been infected with TB bacteria:

- The TB skin test (also called the Mantoux tuberculin skin test) is performed by injecting tuberculin fluid under the skin in

the lower part of the arm. A person given a tuberculin skin test must return within 48 to 72 hours to have a trained health care professional look for a reaction on the arm.

- TB blood tests (also called interferon-gamma release assays or IGRA) measure how the immune system reacts to the bacteria that cause TB. An IGRA measures how strong a person's immune system reacts to TB bacteria by testing the person's blood in a laboratory.

If a person has a positive TB skin test or TB blood test result, this means their body is infected with TB bacteria. Additional tests (i.e. chest x-ray and sputum/ phlegm exam) are needed to determine if the person has LTBI or TB disease.

What can I do to prevent progression of LTBI to TB disease?

Every effort should be made to begin appropriate treatment and to ensure completion of the entire course of treatment for latent TB infection. Treatment of LTBI with drug(s) will help your immune system fight the TB bacteria and reduce the risk of active TB disease by more than 90%. Because there are less bacteria in a person with LTBI, treatment is much easier and usually requires only one drug. It is important that the medicine is taken as prescribed.

Is TB treatment safe?

Most people complete treatment without problems, but sometimes these drugs may cause inflammation of the liver. People who drink heavily or have Hepatitis may already have sick livers. Your doctor can order blood tests to monitor and help prevent liver damage.

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