



Frequently Asked Questions About **TUBERCULOSIS**

What is Tuberculosis (TB)?

Tuberculosis is an infectious disease that is caused by the *Mycobacterium tuberculosis* bacteria. Although TB infection can occur anywhere in the body, it usually is found in the lungs.

I didn't think TB was a problem anymore?

Actually, after many years of decline, the incidence of TB began increasing in the United States in 1985. The World Health Organization (WHO) estimates that worldwide, 8 million people become infected annually. Somewhere in the world, someone is infected with TB *every second*. Each year, 2 million people die of TB worldwide. The Centers for Disease Control and Prevention (CDC) report that 16,000 people had active TB in the United States in 2000.

How is TB spread?

The TB bacteria is spread the same way that cold and flu viruses are spread: *through the air*. A person with active TB has the bacteria in their nose, throat, and lung secretions and they are propelled into the air whenever they cough, sneeze or spit. If you come in contact with the bacteria, you may become infected. You only have to inhale a few TB bacteria to become infected.

You mention active TB, what is active TB?

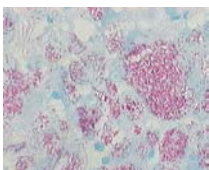
When you breathe in the TB bacteria, the bacteria settle into the lungs. Your immune system will immediately begin to try and contain the bacteria by "walling off" the bacteria. If your immune system cannot effectively control the bacteria, you will develop active disease, sometimes called a TB infection. With active TB, the TB bacteria grow faster than your body can contain them. During this time your immune system will be working as hard as it can, and that in fact is what causes many of the symptoms associated with TB.

What are the symptoms of active TB?

The inflammatory response generated by your immune system not only destroys the bacteria, but also breaks down some of the lung tissue as well. This heightened immune response causes the symptoms of **fever and a cough productive of sputum or phlegm**. Sometimes enough lung tissue is broken down to actually cause the person with active TB to **cough up blood**. Because your body uses more calories to fight off the infection and because the bacteria use the sugars in your blood to grow, **weight loss** is often a symptom of TB. Another important symptom of TB is the presence of **night sweats**.

How will the doctor know if I have active TB?

If you have a cough that has been present for two weeks or more and you have any or all of the above symptoms, your doctor will probably ask you if you have been exposed to someone with TB. Your doctor will immediately place a TB skin test on your arm, check your sputum or phlegm for TB bacteria, and order a chest x-ray.



TB bacteria in the sputum and phlegm have a special appearance under microscopic examination using a special staining technique call acid fast.

<http://www.nottingham.ac.uk/pathology/protocols/afb.html>



Active TB usually involves the lungs and will cause a characteristic x-ray appearance. While active TB can cause a typical pneumonia-like picture on chest x-ray, often cavities will be apparent in the upper lobe(s) of the lung.

What is latent TB?

Latent TB occurs when your immune system has effectively stopped the growth of TB bacteria that settle into your lungs after inhalation. However, the tuberculosis bacteria are covered with a waxy coating that allows them to lay dormant or hibernate in your body for many years. During this time you will not have symptoms nor can you spread the disease. Should your immune system become depressed, for any reason, the TB bacteria can grow and cause active TB and subsequently the same problems and symptoms associated with active TB. The WHO estimates that 5% to 10% of those with latent TB (but not HIV) will go on to develop active TB over the course of their life.

How will the doctor know if I have latent TB?

If you have been potentially exposed to someone with active TB, your doctor will order a TB skin test to be applied. If you have a positive reaction to the skin test, as measured by the nurse 48 to 72 hours after it was applied, your doctor will order a chest x-ray. If the x-ray is normal and you have no symptoms, your doctor will discuss a course of drug treatment to prevent the development of active TB in the future.

What is the difference between latent and active TB?

Latent TB indicates that you have been exposed to TB, but do not have active TB, and therefore do not have symptoms and are not able to spread the disease to others.

Can I die from TB?

Unfortunately, yes. The WHO estimates that 2 million people die from TB worldwide each year. The American Public Health Association estimates the mortality of TB to be approximately 5%. Tuberculosis does not just kill people in underdeveloped countries.

Can TB be treated?

YES. TB does not have to be fatal. If you have symptoms, the characteristic chest x-ray findings and sputum (or phlegm) results your doctor will very likely start anti-TB medicines while waiting for the final sputum culture results. Most patients are started on a five-drug regimen including:

- Isoniazid (INH)
- Rifampin
- Pyrazinamide
- Ethambutol
- Streptomycin

One or more drugs may be discontinued based on the final culture results, however it may take 4 or more weeks for the final culture results to be available to you and your doctor.

What should I do if I think I have been exposed to TB?

The first thing is not to panic. Then make an appointment with your doctor and discuss your concerns. You and your healthcare provider will then be able to develop an appropriate plan of action to assess your risk of TB.