

Patient information from BMJ

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Tuberculosis

Tuberculosis is a serious infection caused by bacteria. It can be spread when a person with the illness coughs, releasing the bacteria into the air. If you become ill with tuberculosis you'll need antibiotic treatment for at least six months. Without treatment, tuberculosis can be life threatening.

We've brought together the best research about tuberculosis and weighed up the evidence about how to treat it.

What is tuberculosis?

Tuberculosis (TB) is an infection caused by bacteria called *Mycobacterium tuberculosis*. It usually affects the lungs, although it can also affect other organs in the body. For example, it's possible for TB to affect the membranes covering the brain, causing a type of meningitis. Here, we focus on TB that affects the lungs.

The bacteria that cause TB can lie dormant in your body without making you ill. This is called **latent TB infection**. A person with latent TB infection is not contagious. But the bacteria might become active at some point, making the person ill and allowing the bacteria to spread to other people.

Anyone can get TB. But the infection is more common in certain parts of the world. For example, you are more likely to become infected if you live in Africa, Latin America, Eastern Europe, or Asia.

However, you might not develop an active infection until years later, when you could be living somewhere else.

You are also more likely to become ill with TB if you have HIV.

What are the symptoms?

The main symptoms of TB in the lungs are:

- a cough lasting more than a couple of weeks
- a high temperature (fever)

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- loss of appetite
- losing weight without trying
- feeling generally ill
- sweating at night.

Some people get chest pain, feel short of breath, or even cough up blood. But these symptoms are less common.

To confirm if you have TB your doctor will ask you to cough up phlegm to be tested for the TB bacteria. You will also probably have a chest x-ray to look for signs of TB in your lungs.

What treatments work?

The main goals of treatment are to cure the infection and to prevent it being spread to other people.

To cure TB you'll need at least six months of treatment with **antibiotics**. It's very important to take your treatment exactly as your doctor advises. Stopping treatment too soon or not taking the full dose can allow the bacteria to survive and become resistant to antibiotics.

You'll start off with two months of intensive treatment, probably with four antibiotics. You'll then have treatment with just two of the antibiotics for at least four more months, meaning you'll have at least six months of treatment in total.

Your doctor might also recommend that people you've had close contact with over the previous two years be tested for TB and possibly treated.

Even after you've started treatment you might still infect other people with TB. Your doctor will explain the steps you need to take to prevent spreading the infection.

This will probably involve staying at home or in an isolated room in hospital for a while. After about two weeks of treatment you'll be less likely to infect other people.

The antibiotics used to treat TB can sometimes cause side effects. Your doctor will discuss these with you. Although serious side effects aren't common, there's a chance you could get liver or kidney damage.

An antibiotic called isoniazid can also sometimes cause nervous system problems, such as weakness or numbness in your hands or feet. To help prevent this your doctor will probably recommend taking **pyridoxine** (a type of vitamin B) along with isoniazid.

You'll have regular tests during treatment to make sure the antibiotics are working and to check for side effects. You'll need to cough up phlegm to be tested to make sure you are responding to treatment.

You'll also need blood tests to make sure TB medicines are not affecting your liver and kidneys.

If treatment doesn't get rid of the infection, the type of TB you have might be resistant to certain antibiotics you're taking. You will probably need to take extra antibiotics.

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If you have TB and are pregnant or have HIV you will probably see a specialist doctor as you might need a different approach to treatment.

What will happen to me?

TB is a life-threatening illness if you don't get treatment. But with treatment most people make a full recovery.

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