

# FAQs

## Frequently Asked Questions about Tuberculosis





# FREQUENTLY ASKED QUESTIONS ABOUT TUBERCULOSIS



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## FAQs

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FAQs

**Q 1: What is tuberculosis (TB)?**

Tuberculosis (TB) is an infectious disease caused by a type of bacteria called *Mycobacterium tuberculosis*. TB most commonly affects the lungs, when it is called pulmonary tuberculosis, but also can involve any other organ of the body in which case it is called extra-pulmonary tuberculosis. These FAQs are about pulmonary TB.

**Q 2: What are the symptoms of pulmonary TB?**

The most common symptoms of TB are:

- chronic cough
- fever, especially rising in the evening
- night sweats
- chest pain
- weight loss
- loss of appetite
- coughing up blood.

**Q 3: How does a person get TB?**

TB is spread primarily from person to person through infected air during close contact. The bacteria get into the air when someone infected with TB of the lung coughs, sneezes, shouts, or spits. A person can become infected when they inhale minute particles of the infected sputum from the air. It is not possible to get TB by just touching the clothes or shaking the hand of someone who is infected.

TB germs spread more easily in crowded conditions as the bacteria sometimes stay alive in the air for a few hours, especially in small closed places with no fresh air. Fresh air scatters the germs and sunlight acts as a bactericide, killing the TB



© WHO/Gary Hampton  
Multidrugresistant TB (MDR-TB) patients in the inpatient ward at the National Institute of Diseases of Chest & Hospitals (NIDCH), in Dhaka, Bangladesh.

organisms. Exposure to moderately hot temperatures for extended periods of time is sufficient to kill these bacteria. Extra-pulmonary TB does not spread from person to person.

**Q 4: If I have TB, what can I do to prevent spreading it to other people?**

If you are infectious while you are taking rest at home, you can do the following things to protect others near you.

- Take your medicines as directed. This is very important!
- Always cover your mouth with a tissue when you cough, sneeze, or laugh. Put the tissue in a closed bag and throw it away safely.
- Isolate yourself from others and avoid close contact with anyone. Sleep in a bedroom away from other family members for the first few weeks.

- Air out your room often to the outside of the building (if it is not too cold outside). TB spreads in small closed spaces where air doesn't move. Put a fan in your window to blow out air that may be filled with TB bacteria. If you open other windows in the room, the fan also will pull in fresh air. This will reduce the chances that TB bacteria will stay in the room and infect someone who breathes the air.

After you take the medicines for about 2 or 3 weeks, you might no longer be able to spread TB bacteria to others. If your doctor or nurse agrees, you will be able to go back to your daily routine, including returning to work or school. But remember, you will only get well if you take your medicines exactly as directed by your doctor or nurse.

Think about people who may have spent time with you, such as family members, close friends, and co-workers. The local health department may need to test them for TB infection. TB is especially dangerous for children and HIV-infected persons. If these people are infected with TB bacteria, they need medicines right away to keep them from developing active TB disease.

**Q 5: What is TB infection?**

When a person breathes in the TB bacteria, in most cases, the body is able to fight them to stop them from growing. The bacteria become inactive, but do not die. They lie latent, and can become active later. This state is called TB infection. People who are infected with TB do not feel sick, do not have any symptoms, and cannot spread the disease. But they could develop TB disease at some time in the future.

**Q 6: What is TB disease?**

Not all people with TB infection get active TB disease. Only when people infected with the TB bacteria start showing signs and symptoms associated with TB are they considered to have active TB disease. Some people develop TB disease soon after becoming infected, before their immune system can fight back. Other people may get sick later, when their immune system becomes weak for some reason.

People with weak immune systems are more vulnerable to TB. This includes babies and young children, people infected with HIV and those who have the following conditions:

- diabetes mellitus
- silicosis
- cancer of the head or neck



© WHO/Nigor Muzafaroza  
A TB patient receiving drugs for treatment in Thimphu, Bhutan.

- leukaemia or Hodgkin's disease
- severe kidney disease
- low body weight
- certain medical treatments (such as corticosteroid treatment or organ transplants).

**Q 7: If a person is exposed to someone with active TB disease, can he/she transmit TB to others?**

Only persons with active TB disease (i.e. those who also show signs and symptoms of the disease) can spread TB to others. People with latent TB infection (i.e. people who have the TB bacteria but do not show any symptoms) cannot spread TB bacteria to others. A person exposed to someone with active TB disease, may become infected with the TB bacteria, but would not be able to spread the infection unless he or she starts showing symptoms of the disease. People who have latent TB infection can, however, be treated to prevent them from developing active TB.

**Q 8: Am I protected from TB if I have been vaccinated with BCG?**

BCG is a vaccine for TB, routinely given to infants and small children. BCG vaccine protects against the severe, life-threatening forms of extra-pulmonary TB such as TB meningitis and miliary TB in childhood. However, it is unreliable protection against pulmonary TB, the main form of tuberculosis.

**Q 9: Is there a better TB vaccine being developed?**

Not yet. A safe, effective and affordable TB vaccine would represent a major advance in the control of the disease. Several possible vaccines are currently at different stages of preclinical or clinical development.



The new national TB Reference Laboratory in Democratic People's Republic of Korea is the product of a unique public-private partnership, including the Ministry of Public Health, Democratic People's Republic of Korea, World Health Organization and a consortium of United States nongovernmental organizations. It will help improve detection of tuberculosis.

#### **Q 10: What tests are advised to diagnose TB?**

The best way to get tested for pulmonary TB is by getting the sputum examined. The TB-causing germs can be seen through a microscope. At least two samples of sputum should be examined for accurate diagnosis.

The examination is available at public health facilities, often within easy reach of the patients. In the facility, the health-care provider may ask the person suspected of TB to collect two sputum samples and explain how to produce and collect them. It is important to carefully follow what the health-care provider advises to make sure the diagnosis is correct.

The health-care provider may also advise a chest X-ray if the patient is suspected of having symptoms of TB and if TB germs are not seen through the sputum examination.

**Q 11: Can TB be cured?**

Yes. TB can be cured if the full course of the prescribed drugs is taken regularly, and without interruption. The WHO-approved standardized and effective cure for TB, called DOTS (directly-observed treatment, short-course) is available in all countries of the South-East Asia Region.

It takes at least 6–8 months of medication to completely treat the disease. It is very important that the patient takes all the prescribed drugs for the recommended duration.

It is dangerous, both for the patient, family members and the community, if he/she stops taking medication before the prescribed course is completed and without medical advice. The TB germs that are still alive become even stronger, or “resistant” to the drugs. Stronger drugs are then needed to kill these “super” TB germs if the treatment is not completed the first time.

**Q 12: What is DOTS?**

DOTS (directly-observed therapy, short-course) means that the patient taking the medicine should be observed by a nominated person, and the taking of the medicine should be recorded. This ensures that the patient takes the medication regularly, which is essential for the medicines to be effective – and to prevent the bacteria from becoming resistant and the drug from becoming ineffective.

The best way to remember to take medicines is to get directly-observed therapy. If following the DOTS regimen, the patient will meet with a health care worker every day or several times a week. This can be at the TB clinic, your home or work, or any other convenient location. You will take your medicines at this place while the health care worker observes.

DOTS helps in several ways. The health care worker can help the TB patient remember to take the medicines and complete the treatment. This means he/she will get well as soon as possible. The health care worker will make sure that the medicines are working as they should. This person will also watch for side-effects and answer questions about TB.

The TB patient must be checked at different times to make sure everything is going well. He/she should see their doctor or nurse regularly while taking the medicines. This will continue until the patient is cured.



© WHO/Gary Hampton  
A cured TB patient, who has now become a TB treatment supporter and work with the staff at the district TB centre in Chennai in India.

**Q 13: How is TB disease treated?**

Tuberculosis is usually treated through the use of a combination of several drugs called antibiotics to kill all the bacteria and preventing them from becoming resistant to one or more drugs. The most common drugs used to fight TB are:

- isoniazid
- rifampin
- pyrazinamide
- ethambutol
- streptomycin

The medication is administered to the patient for at least 6 months as per the advice of the doctor.

People with TB of the lungs should initially stay home from work or school so that they do not spread TB bacteria to other people. After taking TB drugs for 2 weeks, they will feel better and may not be infectious to others. However, to be completely cured they would need to take the drugs as prescribed for at least 6–8 months.

**Q 14: Why is it important to take TB medicines regularly for the entire duration of the prescribed course?**

Sometimes patients stop taking TB medicines on their own before the entire course is completed. However, if the patient does not complete the course of the treatment of TB,

- it can become harder or impossible to cure
- the person can stay sick for a longer time
- the medicines can stop working, and the person may have to take different medicines that have more side effects



© WHO/Gary Hampton

A TB patient in a hospital in Jakarta, Indonesia. The TB programme in Indonesia is an example of good coordination at all levels of government to achieve success.

- even the new medicines may not cure the TB
- TB germs can be passed on to others.

TB bacteria die very slowly. It takes at least 6 months to kill all the TB bacteria. People start feeling well after only a few weeks of treatment. But TB bacteria are still alive in the body. That is why it is important to continue to take the medicine until all the TB bacteria are dead, even though the person

may feel better and no longer have symptoms of TB disease.

If a person with TB disease stops taking his/her prescribed medicines when they feel better, or are not regular in taking the medicines, TB bacteria will grow again. The person will become sick again because the bacteria may become resistant to the drugs he or she was taking. When this happens he/she may need different drugs to kill the TB bacteria if the old drugs no longer work. These new drugs need to be taken for a longer time and usually have more serious side-effects.

If a patient on TB treatment becomes infectious again, he/she could spread TB bacteria to their family, friends, or anyone else who spends time with them. It is thus very important to finish the course of medication as per the doctor's advice.

TB patients should talk to their health-care provider if their TB medicine is making them feel sick. Any medicine can cause side-effects, including TB pills. But most people can take their TB medicine without any problems.

**Q 15: What are the side-effects of TB drugs?**

Very few people develop side-effects to TB drugs. Minor side-effects include vomiting, nausea, loss of appetite, joint pain, orange/red urine, or skin rash, which can be managed using simple medicines or adjusting the dosages of the drugs.

Major side-effects include deafness and dizziness (with the use of streptomycin); jaundice, vomiting (mainly with rifampicin and isoniazid); visual impairment (ethambutol), shock, purpura, or acute renal failure (rifampicin).

These side-effects need to be managed by a trained physician and may require hospitalization.

It is important to talk to the health-care provider if the medicine is making you feel sick. However, most people can take their TB medicine without any problems.

**Q 16: Once a person completes treatment for TB disease and is cured, can he/she get TB again?**

This is unlikely but can, rarely, occur. If the patient has taken the medicine in the right way for as long as the doctor advises, the chances of getting TB again are low. However, if he/she notices any of the signs and symptoms, consult the doctor immediately.



© WHO Maldives  
A tuberculosis patient consulting a doctor, Maldives.

**Q 17: Are there any dietary tips for TB patients?**

It is important to eat a balanced diet to provide your body with the nutrients that you need to fight TB. The diet should be simple, easily digestible, and to the liking of the patient to encourage consumption. Meals should be small, but at frequent intervals. Larger meals can be given if the condition of the patient improves. Fluid intake should be sufficient. It is particularly important to avoid drinking any alcohol during the entire course of your treatment as this could result in treatment complications and side-effects.

Weight gain generally improves during TB treatment and appropriate nutritional supplementation. It is very important that children with TB get enough energy and nutrients, since children have increased requirements as a result of both growth and TB.

TB disease often adversely affects nutritional intake, due to poor appetite, putting patients at risk for malnutrition. Six smaller meals per day are advised instead of three meals. The meals should provide enough energy and protein, and be appetizing in appearance and taste so as to encourage the patient to eat.

People with HIV and/or (active) TB need more calories and nutrients in their diet, but they may also have lower appetites and be less able to absorb the nutrients in their food. Force-feeding of the patient to gain extra weight is known to do more harm than good. Too much food – especially fat – frequently causes gastric upsets and diarrhoea.

During treatment for TB, eat healthy foods and get enough sleep and some exercise to help your body fight the infection.



© WHO Myanmar

A cured MDR-TB patient in Myanmar goes through her medical records with a health worker.

**Q 18: Is a person with HIV infection more at risk of developing TB?**

Yes. Because HIV infection weakens the immune system, people with TB infection and HIV infection are at very high risk of developing TB disease. All HIV-infected people should be tested for TB. If they have TB disease, they must take TB medicines.

**Q 19: What is drug-resistant TB?**

Sometimes the anti-TB drug being taken by the patient can no longer kill the TB bacteria. This is referred to as drug-resistant TB.

Drug-resistant TB can occur when the drugs used to treat TB are misused or mismanaged. Examples include:

- when people do not complete the full course of treatment
- when health-care providers prescribe the wrong treatment, the wrong dose, or wrong length of time for taking the drugs
- when the supply of drugs is not always available
- when the drugs are of poor quality.

**Q 20: Who is at risk of drug-resistant TB?**

Drug-resistant TB is more common in people who:

- do not take their TB drugs regularly
- do not take all of their TB drugs
- develop TB disease again, after being treated for TB disease in the past
- come from areas of the world where drug-resistant TB is common
- have spent time with someone known to have drug-resistant TB disease.

**Q 21: How is drug-resistant TB spread?**

Drug-resistant TB spreads the same way that drug-sensitive (i.e. normal) TB is spread. TB is spread through the air from one person to another, when a person with TB disease of the lungs coughs, sneezes, speaks, spits or sings.

These bacteria can remain airborne for several hours, depending on the environment. Persons who breathe in the air containing these TB bacteria can become infected.

However, it is NOT spread by:

- shaking someone's hand
- sharing food or drink
- touching bed linen or toilet seats
- sharing toothbrushes
- kissing.

**Q 22: What is multidrug-resistant tuberculosis (MDR-TB)?**

Multidrug-resistant TB (MDR-TB) is caused by a TB germ that is resistant to at least isoniazid and rifampin, the two most potent TB drugs. These drugs are used to treat all persons with TB disease.



© Ministry of Health, Sri Lanka

A public health inspector in Sri Lanka visits the family of a TB treatment defaulter. Such initiatives have helped reduce the rate of defaulters.

**Q 23: What is extensively drug-resistant tuberculosis (XDR-TB)?**

Extensively drug-resistant TB (XDR-TB) is a rare type of MDR-TB that is resistant to isoniazid and rifampin, plus any fluoroquinolone and at least one of three injectable second-line drugs (i.e. amikacin, kanamycin, or capreomycin).

Because XDR-TB is resistant to the most potent TB drugs, patients are left with treatment options that are much less effective.

XDR-TB is of special concern for persons with HIV infection or other conditions that can weaken the immune system. These persons are more likely to develop TB disease once they are infected, and also have a higher risk of death once they develop TB.

**Q 24: How can a patient know whether he/she has TB or MDR/XDR-TB?**

Both MDR and XDR-TB can only be diagnosed in a well-equipped laboratory. Symptoms of XDR-TB are no different from ordinary TB: a cough with thick, cloudy mucus (or sputum), sometimes with blood, for more than 2 weeks; fever, chills, and night sweats; fatigue and muscle weakness; weight loss; and in some cases shortness of breath and chest pain.

If you have these symptoms, it does not mean you have MDR/XDR-TB. But it does mean you must go and see a doctor for a check-up. If you are already on treatment for TB, and at least some of these symptoms are not improving after a few weeks of medication, you should inform your clinician or nurse.



© WHO/Gary Hampton

A pharmacy owner opposite Patan Square in Kathmandu. Sushil has become part of the PPM scheme which, implemented by the National TB Programme, encourages private practitioners and pharmacists to enrol their TB patients in the National TB Programme.

### Q 25: How can MDR-TB be prevented?

The most important thing a person can do to prevent the spread of MDR-TB is to take all their medications exactly as prescribed by their health-care provider. No doses should be missed and treatment should never be stopped early. Patients should tell their health-care provider if they are having trouble taking the medications. If patients plan to travel, they should talk to their health-care providers and make sure they have enough medicine to last while away.

Health-care providers can help prevent MDR-TB by quickly diagnosing cases, following recommended treatment guidelines, monitoring patients' response to treatment, and making sure therapy is completed.

Another way to prevent getting MDR-TB is to avoid exposure to known MDR-TB patients in closed or crowded places such as hospitals, prisons, or homeless shelters. If you work in hospitals or health-care settings where TB patients are likely to be seen, you should consult infection control or occupational health experts. Ask about administrative and environmental procedures for preventing exposure to TB. Once those procedures are implemented, additional measures could include using personal respiratory protective equipment.

**Q 26: What should I do if I am pregnant and have TB?**

If you are pregnant and have active TB, you should start treatment as soon as TB is suspected. Although the TB drugs used during treatment cross the placenta, they do not appear to have any harmful effects on the fetus. TB medications such as isoniazid, rifampin, and ethambutol are often used for treatment during pregnancy. While dealing with TB during pregnancy is not easy, proper treatment is crucial for the health of the mother and the baby.

Untreated TB disease represents a greater hazard to a pregnant woman and her fetus than does its treatment. Treatment of pregnant women should be initiated whenever the probability of TB is moderate to high. Infants born to women with untreated TB may be of lower birth weight than those born to women without TB and, in rare circumstances the infant may be born with TB.

The drug Streptomycin should not be used because it has been shown to have harmful effects on the fetus. In most cases, pyrazinamide is also not recommended because its effect on the fetus is unknown.

**Q 27: Can a lactating mother receiving anti-TB treatment breastfeed her baby?**

Breastfeeding should not be discouraged for women being treated with the first-line anti-TB drugs because the concentrations of these drugs in breast milk are too small to produce toxicity in the nursing newborn. For the same reason, drugs in breast milk are not an effective treatment for TB disease or latent TB infection in a nursing infant. Breastfeeding women taking isoniazid should also take pyridoxine (vitamin B6) supplements.

**Q 28: Are there some rapid tests to diagnose TB and drug resistance?**

In 2010, WHO endorsed Xpert MTB/RIF, a rapid molecular test that can diagnose TB and rifampicin resistance within 90 minutes.



© WHO Timor-Leste  
Health officials visit a family in Timor-Leste.

**Q 29: What is the value of serodiagnosis tests for diagnosis of TB?**

Serodiagnostic tests i.e. tests based on reaction to the blood serum of a patient, have not been found to be useful in diagnosis of any form of TB. Therefore, WHO has recommended banning their use.



Tuberculosis (TB) is a major public health threat in the WHO South-East Asia Region. This booklet answers some common questions that the general public as well as health providers may have.

To download this booklet and other FAQs about infectious diseases, please visit:

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