

# Tuberculosis Facts

Below are frequently asked questions about TB, and their answers. Beginning on page 5 is specific information about TB at Longmont High School. If you have additional questions you may call COHELP at 877.462.2911

## What is tuberculosis (TB)?

Tuberculosis (TB) is a disease caused by germs that are spread from person to person through the air. TB usually affects the lungs, but it can also affect other parts of the body, such as the brain, the kidneys, or the spine. A person with TB can die if they do not get treatment.

## How does TB spread?

TB germs are put into the air when a person with TB disease of the lungs or throat coughs, sneezes, speaks, or sings. These germs can stay in the air for several hours, depending on the environment. Persons who breathe in the air containing these TB germs can become infected; this is called latent TB infection. People with TB disease are most likely to spread it to people they spend time with every day. This includes family members, friends, and coworkers.

### TB is not spread by:

- Sharing food and drink
- Shaking someone's hand
- Touching bed lines or toilet seats

## How does a person get TB?

Getting TB occurs in two steps.

### 1. Latent TB infection

TB infection occurs when a person is infected with the TB germ, with no signs or symptoms of the disease because the body's immune system is keeping the germs under control. This is also known as "latent TB infection." In other words, the germs are sleeping or inactive. For most people, this step does not move on to active disease. A person cannot spread the disease to anyone else at this stage. About one in 10 people who have latent TB infection develop active disease.

People with latent TB infection:

- Have no symptoms
- Don't feel sick
- Can't spread TB to others
- Usually have a positive skin test (TST) reaction
- Can develop TB disease later in life

### 2. Active TB disease

Active TB disease develops when the immune system cannot keep the germs under control and the germs begin to damage the body. Most persons may start to get sick or have an abnormal chest x-ray. Sometimes people do not feel sick even when they have active TB. A person with active lung or throat TB disease can spread the disease to others at this stage. Active TB disease is treatable and curable. A person with active TB is separated from others until no longer contagious. The time that a person is contagious varies. Ongoing treatment and monitoring by health care providers is important.

## **What are the symptoms of active TB?**

The most common symptoms of active TB disease are:

- a cough lasting more than 3 weeks
- fever
- heavy sweating at night
- loss of appetite
- weight loss
- coughing up blood
- pain in the chest
- chills
- weakness or fatigue

## **Why is Latent TB Infection Treated?**

If you have latent TB infection but not TB disease, your doctor may want you to take a drug to kill the TB germs and prevent you from developing TB disease. The decision about taking treatment for latent infection will be based on your chances of developing TB disease. Some people are more likely than others to develop TB disease once they have TB infection. This includes people with HIV infection, people who were recently exposed to someone with TB disease, and people with certain medical conditions.

## **How is TB Disease Treated?**

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. TB that is resistant to drugs is harder and more expensive to treat.

## **How is active TB disease treated?**

There is good news for people with active TB disease. It can almost always be treated and cured with medicine. But the medicine must be taken as directed by your doctor or nurse. If you have active TB disease, you will need to take several different medicines. This is because there are many bacteria to be killed. Taking several medicines will do a better job of killing all of the bacteria and preventing them from becoming resistant to the medicines. The most common medicines used to treat TB are:

- isoniazid (INH)
- rifampin (RIF)
- ethambutol
- pyrazinamide

If you have active TB disease of the lungs or throat, you are probably infectious. You need to stay home from work or school so that you don't spread TB bacteria to other people. After taking your medicine for a few weeks, you will feel better and you may no longer be infectious to others. Your doctor or nurse will tell you when you can return to work or school or visit with friends.

Having active TB disease should not stop you from leading a normal life. When you are no longer infectious or feeling sick, you can do the same things you did before you had active TB disease. The medicines that you are taking should not affect your strength, sexual function, or ability to work. If you take your medicines as directed by your doctor or nurse, they should kill all the TB bacteria. This will keep you from becoming sick again.

The side effects listed below are **minor** problems. If you have any of these side effects, you can continue taking your medicine.

- Rifampin can turn urine, saliva, or tears orange. The doctor or nurse may advise you not to wear soft contact lenses because they may get stained.
- Rifampin can make you more sensitive to the sun. This means you should use a good sunscreen and cover exposed areas so you don't burn.
- Rifampin makes birth control pills and implants less effective. Women who take rifampin should use another form of birth control.
- If you are taking rifampin as well as methadone (used to treat drug addiction), you may have withdrawal symptoms. Your doctor or nurse may need to adjust your methadone dosage.

#### **What are the side effects of TB medicines?**

If you are taking medicines for TB, you should take it as directed by your doctor or nurse. The medicines may cause side effects. Some side effects are minor problems. Others are more serious. If you have a serious side effect, **call your doctor or nurse immediately**. You may be told to stop taking your medicine or to return to the clinic for tests.

The side effects listed below are **serious**. If you have any of these symptoms, call your doctor or nurse immediately:

- no appetite
- nausea
- vomiting
- yellowish skin or eyes
- fever for 3 or more days
- abdominal pain
- tingling fingers or toes
- skin rash
- easy bleeding
- aching joints
- dizziness
- tingling or numbness around the mouth
- easy bruising
- blurred or changed vision
- ringing in the ears
- hearing loss

#### **Why isn't everyone vaccinated for TB?**

The TB vaccine is not generally recommended for use in the United States because of the low risk of infection, the variable effectiveness of the vaccine, and the vaccine's potential interference with TB skin test reactivity. The Centers for Disease Control recommends that the vaccine should be considered only for very select persons who meet specific criteria and in consultation with a TB expert.

#### **What does a positive TB skin test mean?**

A positive reaction usually means you have been infected with the TB germ or have latent TB infection. If you have a positive skin test, your doctor or nurse may do other tests (chest x-ray and a test of the phlegm you cough up) to see if you have active TB disease. The results of these tests will determine what type of medicine you will take. These medicines treat the infection, and help prevent you from getting active TB disease.

#### **If I have a positive TB skin test, does that mean I have infected my family?**

If you have a positive test but do not have active TB disease, you cannot spread the germs to your family. If you have active TB disease, your family will be contacted to find out if they need to be tested.

**What does a negative TB skin test mean?**

A negative skin test usually means you do not have TB germs in your body. However, if you have been around a person with contagious TB disease, your test may not be positive yet. You may need a second test 10 to 12 weeks after your first test. It can take several weeks after being infected with the germs for your immune system to be able to react to the TB skin test. If your reaction to the second test is negative, you probably do not have latent TB infection or active TB disease.

**What does a positive test mean?**

A positive test for TB infection only tells that a person has been infected with TB germs. It does not tell whether or not the person has progressed to TB disease. Other tests, such as a chest x-ray and a sample of sputum, are needed to see whether the person has TB disease.

**Can people die from TB?**

Yes. If not treated, people can die from TB. TB is curable with proper treatment.

**What is Bacille Calmette–Guèrin (BCG)?**

BCG is a vaccine for TB disease. BCG is used in many countries, but it is not generally recommended in the United States. BCG vaccination does not completely prevent people from getting TB. It may also cause a false positive tuberculin skin test. However, persons who have been vaccinated with BCG can be given a tuberculin skin test or TB blood test.

**Where can I learn more about TB?**

Additional information about TB can be found at the Centers for Disease Control and Prevention (CDC) website at [www.cdc.gov/tb/education/patient\\_edmaterials.htm](http://www.cdc.gov/tb/education/patient_edmaterials.htm), or you may call COHELP at 877.462.2911

## Specific to Longmont High School

### **Is the general public at risk?**

Persons who did not have contact with a person with contagious TB disease are not considered at risk.

### **Is it safe to enter the school/attend events at the school?**

The TB infections resulted from exposure in school *last semester*, and there is no reason to be concerned about attending school or school events

### **Is it safe to be around an LHS student who tested positive?**

TB infection with no symptoms of TB and a normal X-ray is not an infectious condition. A person with latent TB infection cannot spread germs to other people. You do not need to be tested if you have spent time with someone with latent TB infection. However, if you have spent time with someone with TB disease or someone with symptoms of TB, you should be tested.

### **My child tested positive. Where do we go for a chest x-ray?**

The chest x-ray should be done at Longmont United Hospital between now and Wednesday February 15. Enter at the outpatient services door next to the ER. Go to registration and tell them you are from Longmont High School and are here for a Chest X-ray. The best time to go is before 6 p.m.

### **My child tested positive. Where do we go for our evaluation?**

Appointments will be at the Boulder County Public Health Longmont site, 529 Coffman. Enter the building through the west side door. Go upstairs and turn right. Check in with Dee at the registration desk. A parent or guardian must accompany the student.

### **Who should get tested?**

All students at Longmont High School and all full-time faculty and staff who worked regularly at Longmont High School during the fall semester are being tested.

### **What test is being used?**

The TB testing we provide is using either a blood or a tuberculin skin test. Mantoux tuberculin skin test (TST) and QuantiFERON (QFT) are used to diagnose both latent TB infection and active TB disease. Students will receive a TST test unless medical history indicates otherwise. Students with past medical history of possible prior positive TST, receipt of BCG vaccination, or birth or residence outside the US for at least 3 months, will not be able to receive TST, but will be tested with the QuantiFERON blood test.

The Mantoux tuberculin skin test is performed by injecting a small amount of fluid (called tuberculin) into the skin in the lower part of the arm. A person given the tuberculin skin test must return within 48 to 72 hours to have a trained health care worker look for a reaction on the arm. The TB blood tests measure how the patient's immune system reacts to the germs that cause TB.

### **Do I have to pay for the test/treatment?**

All testing, including the chest X-ray for students with a positive test, is part of the public health evaluation and is provided at no cost. Parents can choose to have their child tested for TB at their own cost by their private physician. We will notify parents if their child's results are positive, and will help them to schedule a chest X-ray to confirm that it is not active TB.

**What is the next step for students that come back positive from the skin test?**

All students and staff who have a positive test will have a chest X-ray to exclude active TB and will be provided treatment to prevent active TB in the future.

**Am I at risk if I was working in the building when the student with active TB was still in school?**

Individuals who are not students or faculty that spent the majority of their time working directly with students are at very low risk for TB exposure and infection related to this case and we are not recommending any of them get tested at this time. If there are individual examples of people who can be identified as spending a large portion of time in contact with the source case (eg a substitute teacher who was in the classroom with him for  $\geq 3$  days during the infectious period) we would offer testing to those people on a case by case basis. Please contact the TB clinic at 303-413-7500. Others with very minimal risk who spent time at the school should be encouraged to follow-up with their primary care provider if they have concerns and would like to get tested.

**What about students or staff that were at the school before the holidays but have since left?**

Health officials have a list of all students and staff who worked at LHS during this time period and will be contacting each person directly. Other students or faculty who did not share at least 1 class with the source case are still considered low risk until we complete the larger school wide testing and we would not recommend that they need to be contacted at this time.

**When will we know about the second group's chest X-rays and their results?**

We are evaluating x-rays daily and recommending the appropriate testing and/or treatment as needed. We will not be publicizing any of the x-ray results as this could compromise an individual's personal health information. Our goals are to provide care to patients with TB, to protect the public by removing patients who may be contagious until we determine they are safe to be around others, and to evaluate people at risk for TB infection so that they can receive preventive treatment. Our staff is hard at work on all 3 of these tasks.

**When will we get our x-ray results?**

X-ray results will be provided at the appointment with the nurse. Longmont United Hospital does not have those results.

**When will I get my blood test results?**

All blood test results will be mailed to the family of the student.