



Photo Credit: The Global Fund / John Rae



Understanding Tuberculosis

TB by the numbers¹

- In 2012, **8.6 million** people fell ill with TB and more than **1.3 million** people died as a result, making it the most deadly curable disease in the world.
- Since 1995 TB treatment has saved nearly **22 million** lives.
- Every year **3 million** people with TB are missing out on quality care and treatment.
- TB is the leading killer of people living with HIV/AIDS and is responsible for **1 in 5** HIV-related deaths. It is also among the **top three** causes of death for women of reproductive age.
- **5%** of global TB cases are drug-resistant.
- **95%** of TB cases occur in low- and middle-income countries.
- **75%** of international TB financing is through the Global Fund to Fight AIDS, Tuberculosis and Malaria

WHAT IS TB?

Tuberculosis (TB) is an infectious disease caused by bacteria that enters our bodies through the lungs. Over 2 billion people are currently infected with TB bacteria, equaling one-third of the world's population. TB is spread from person to person through the air when an infected person coughs, sneezes, or talks.

WHAT HAPPENS WHEN YOU GET INFECTED?

Not everyone who is exposed to TB will get sick, as most healthy people are able to fight off the bacteria. This **latent TB** cannot be spread from person to person. When infected individuals are unable to fight the bacteria, they multiply in the body and cause the person to become sick with **active TB**.

People with latent TB have a 10% chance of developing active TB in their lifetime. However, people with compromised immune systems – such as people who are undernourished, have diabetes, or are living with HIV – have a much higher risk of developing active TB.¹

TB usually attacks the lungs, which is called **pulmonary TB**, but the bacteria can also affect other parts of the body including the brain, kidneys, or spine, which is called **extra pulmonary TB**. People with active pulmonary TB can infect up to 10 – 15 people they are in close contact with throughout the course of a year, if not treated.

What are the signs & symptoms?

The most common signs and symptoms of active TB are:

- Coughing for 3 weeks or longer (pulmonary TB only)
- Unexplained weight loss
- Night sweats
- Fever
- Fatigue

How is TB prevented?

- **BCG vaccine** is typically given at birth to children in high-burden countries to prevent against the most severe forms of TB, including TB meningitis. However, this vaccine can wear off over time and fails to protect against the most common form of the disease, TB of the lungs.⁵
- **Intensified case finding** is the process of screening for TB among all people living with HIV/AIDS, their household contacts, and those at high risk of HIV.
- **Isoniazid preventive therapy** is an antibiotic that should be given to people living with HIV/AIDS to prevent active TB from developing.
- **Infection control** includes measures to prevent TB from spreading and can be as simple as providing masks and opening windows and doors to improve ventilation.
- **Early initiation of ART for people living with HIV/AIDS** is recommended for all HIV-positive individuals to control HIV progression. It is recommended that all HIV-infected TB patients should be started on ART regardless of their CD4 count.

HOW DO YOU GET DIAGNOSED?

Currently there is no point-of-care test to diagnose TB. Below are just a few common ways TB is diagnosed:

Microscopy is the most common way to test for active TB of the lungs. A person coughs up mucus which is then examined under a microscope to identify the presence of TB bacteria. Microscopy is more than 130 years old, is time consuming, and fails to detect the disease in many women, children, and people living with HIV/AIDS. Additional tests including a chest x-ray may be required for accurate diagnosis.

A more reliable way to test for active TB of the lungs is through **GeneXpert**, a new test that uses DNA technology to detect TB in a person's mucus sample. This test delivers results in less than two hours and is more successful in detecting TB among women, children, and people living with HIV/AIDS. Additionally, GeneXpert can identify possible cases of drug-resistant TB, enabling treatment to be tailored to fight infection properly.²

A variety of tests are used to diagnose TB in other areas of the body including biopsies, x-rays, and CT scans. Latent TB can be detected using a **Mantoux skin test**, but this method is only useful in children and in areas with low rates of TB.

WHAT HAPPENS WHEN YOU GET INFECTED?

TB is treatable and curable. People with latent TB are typically given an antibiotic called **isoniazid** for 9 months to prevent them from developing active disease. People with active TB are treated using a combination of antibiotics, usually for 6 months. Though the treatment can be harsh on the body, most people tend to feel better a few weeks after beginning treatment.

In some cases, people do not respond to treatment because they have a type of TB that is resistant to the antibiotics they were given. When TB is resistant to two or more of the most powerful anti-TB drugs, it is considered **multi drug-resistant** (MDR) TB. When TB is resistant to four or more of the most powerful anti-TB drugs, it is considered **extensively drug-resistant** (XDR) TB.³ Drug resistance develops when people fail to complete treatment. Once a drug-resistant strain has developed, it can be transmitted directly to others just like active TB.⁴

1. World Health Organization (2014). Fact Sheet No. 104: Tuberculosis. Retrieved from <http://www.who.int/mediacentre/factsheets/fs104/en/>
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5. US Centers for Disease Control and Prevention (2011). BCG Vaccine Factsheet. Retrieved from <http://www.cdc.gov/tb/publications/factsheets/prevention/bcg.htm>

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