

# Tuberculosis

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## ABOUT THE DISEASE

Tuberculosis (TB) is a serious and potentially fatal infectious disease caused by the bacterium *Mycobacterium tuberculosis*. It is one of the oldest human diseases, with documented cases dating back to ancient Egypt, Greece, and Rome.

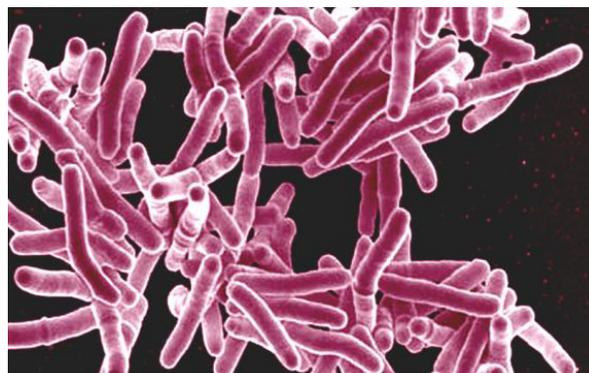
TB is spread through the air from person to person and typically affects the lungs, although the bacteria can infect other parts of the body as well. It is currently the second deadliest infectious disease behind HIV/AIDS, with over a million deaths attributed to the infection each year – most of them in developing countries.

The disease can be subdivided into two conditions: latent TB infection (in which an individual hosts the bacteria without becoming ill) and active TB disease (during which the infection becomes symptomatic). It is estimated that a third of the world's population has latent TB. Both conditions are curable with proper treatment, although the emergence of drug-resistant strains is making treatment increasingly challenging.

## SYMPTOMS AND TRANSMISSION

The most common symptoms of active TB are a dry, persistent cough, bloody sputum, fevers, night sweats, and weight loss. The weight loss can lead to emaciation, a symptom that gave rise to an ancient name for the disease – “consumption.”

TB is spread when individuals inhale *M. tuberculosis*, the bacterium that causes the disease. *M. tuberculosis* is an airborne pathogen that is transmitted when someone infected with active TB coughs, sneezes, talks, laughs, or otherwise expels vapor containing the bacterium. Only



*Mycobacterium tuberculosis* Credit: NIAID

a few bacteria need to be inhaled for an individual to become infected.

TB most frequently affects young adults, although people of all ages are at risk; very young children are especially susceptible to severe forms of TB disease. Over 95% of TB cases and related deaths occur in developing countries. Those who have HIV or other health problems that weaken the immune system are at greater risk, as well as those who abuse alcohol or drugs.

## TREATMENT

Skin and blood tests can diagnose TB, and the disease can be treated and cured in most cases with a combination of four antibiotics. Treatment regimens for drug-sensitive TB run 6 – 9 months, and require strict adherence and vigilance. Failure to maintain this drug course can lead to relapse and microbial resistance to the drugs. Currently, the emergence of multidrug-resistant tuberculosis (MDR-TB) is challenging global TB control efforts. MDR-TB cannot be treated by the standard, most effective treatments, and therefore requires longer, more expensive therapies that are harder to obtain and may cause adverse reactions in patients.

*The material above is collected from the following sources:*

- [Centers for Disease Control](#)
- [World Health Organization](#)
- [NIH – National Institute of Allergy and Infectious Disease](#)

*Last updated April 2015*



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