

TB QUICK FACTS

What Is Tuberculosis (TB)?

Mycobacterium tuberculosis (MTB) is a type of bacterium (sometimes called a **bug**) that, for thousands of years, has caused TB disease (called **consumption** in the past). TB remains a major, if often unnoticed, problem today. TB is transmitted through the air when an infected person sneezes, coughs, talks, laughs, or sings. Some people can be exposed to TB germs without becoming infected. Some can also become infected and not develop active disease—this is called **latent TB infection**, and means that the immune system is able to contain the TB infection and prevent active disease. **Active TB disease** happens when TB infection overwhelms the immune system, and the bacteria begin multiplying and causing disease. Some symptoms of TB disease are cough, fever, weight loss, and night sweats. TB disease normally affects the lungs (called **pulmonary TB**), but it can also affect almost any organ in the body (called **extrapulmonary TB**). TB disease is preventable and curable, but can be fatal if not treated properly.

TB around the World

- 1/3 of the world (2 billion people) is infected with TB bacteria
- 8.7 million new cases of TB were reported in 2012
 - 13% of those infected were also living with HIV
 - 884,019 of those infected were children
- 1.4 million TB deaths were reported in 2012
 - 430,000 TB deaths were in people with HIV
 - 500,000 TB deaths were in women

TB in the United States

- 9–14 million people are latently infected with TB bacteria
- 10,528 new cases of active TB were reported in 2011
 - 50% of these cases were reported in California, Florida, New York, and Texas
 - 62% of these cases occurred in foreign-born persons

TB and HIV

Globally, TB is the leading cause of death in people with HIV, accounting for nearly one in four HIV-related deaths. In the United States, six percent of people with TB also have HIV (compared with less than one percent of the general population). Because of their weakened immune systems, people with HIV are much more likely to develop active TB disease. For example, people with HIV who have latent TB infection have a 1 in 10 chance of developing active TB disease each year; people without HIV who have latent TB have a 1 in 10 chance over their lifetime. TB is also more difficult to diagnose in people with HIV.

People with HIV are more likely to have TB outside of the lungs. Some TB drugs cannot be used alongside certain HIV medications. People at high risk of HIV and their close contacts should be regularly monitored for symptoms and signs of TB. People with HIV and latent TB infection are urged to take medicine to prevent progression to active TB disease. Early initiation of anti-retroviral therapy can also prevent progression to active TB disease in people with HIV.

TB and Children

Childhood TB is estimated to make up about 8 percent of the global incidence of TB (884,019 cases in children). Children most commonly present with TB between one and four years of age. TB infection in children is considered representative of recent and ongoing transmission within their larger communities; children are said to serve as a “sentinel” for incident cases. TB often occurs in children in the form of extrapulmonary TB. In addition, results from children’s testing samples often show no infection (known as being **smear-negative**) even when children are infected, which makes them difficult to diagnose. Children usually respond well to treatment if started promptly, however the response is poorer for children coinfecting with HIV, a common coinfection in regions endemic for TB.

TB and Women

TB is one of the top three causes of death among women ages 15–45, killing half a million women worldwide each year. TB causes between 6% and 15% of all maternal deaths. As TB can affect the genitals, it causes between 1% and 16% of overall infertility. Recent pregnancy is a demonstrated risk factor in developing active TB in women with HIV. TB during pregnancy jeopardizes the mother, the fetus, and the newborn. Pregnant women with TB have increased complications during and after pregnancy. TB increases the likelihood of miscarriage, insufficient weight gain, premature labor, and the transmission of TB to the fetus during the pregnancy or birth. Newborns of mothers with TB are at an increased risk of death, low birth weight, and contracting TB after birth. Additionally, because people with compromised immune systems are at greater risk for contracting TB—women (and men) with other chronic conditions such as HIV and diabetes should be regularly screened for TB.

Drug-Resistant TB

When TB-causing bacteria replicate, some may naturally change (**mutate**) and become resistant to anti-TB drugs. Treatment can then kill off the nonmutated bacteria, leading to the survival of only the mutated, drug-resistant bugs. People with drug-resistant TB must resort to **second-line drugs**, which are more toxic, less effective, take longer to treat the disease, and are more expensive. Drug-resistant TB often develops when treatment is interrupted or when appropriate drugs required for treatment are unavailable. Drug-resistant TB can then be transmitted from person to person. It is difficult to treat, and new drugs are necessary to fight it.

Political Will and Advocacy

We must call for zero TB deaths, new infections, and suffering if we want to work to eliminate TB. We can achieve “zero” in TB, but we need strong global commitment and increased political will to do so. Better drugs to fight all forms of TB, rapid diagnostic tests that work in all people, and a vaccine with lasting immunity are urgently needed, but global TB research and development (R&D) is gravely underfunded. The *2012 Report on Tuberculosis Research Funding Trends, 2005–2011* determined that the 2011 TB R&D

investment totals represented only 32 percent of the annual US\$2 billion target set by the *Global Plan to Stop TB 2011–2015*, leaving an annual funding gap of US\$1.35 billion. The TB community and political leaders need to renew their commitment to the fight against TB—only then will we achieve zero TB deaths, infections, and suffering.

What Can I Do to Help Fight TB?

- Spread the word—teach your community about TB and the importance of supporting TB research and development.
- Ask your local congressman to join the TB Elimination Caucus.
- Sign the Zero Declaration (www.treatmentactiongroup.org/tb/advocacy/zero-declaration) and demand zero TB deaths, new infections, and suffering!
- If you're a TB patient or survivor, share your story and strategize on advocacy with other TB survivors and patients by joining the listserv take-that-tb@googlegroups.com.

TB Resources and References

- To learn more about TB and TB advocacy:
 - TB/HIV Activist Toolkit (www.treatmentactiongroup.org/tb/resources/activist-toolkits)
 - TB Online (www.tbonline.info/)
 - Take That TB (<http://www.takethattb.com>)
- To learn more about TB in the United States:
 - Centers for Disease Control and Prevention's *Reported Tuberculosis in the United States, 2011* (<http://www.cdc.gov/tb/statistics/reports/2011/default.htm>)
- To learn more about TB globally:
 - World Health Organization's *Global Tuberculosis Report 2012* (http://www.who.int/tb/publications/global_report/en/)
 - Stop TB Partnership (www.stoptb.org/)
 - Global Plan to Stop TB (www.stoptb.org/global/plan/)