

TUBERCULOSIS (TB) FACT SHEET

Tuberculosis Remains A Public Health Threat in the U.S. Screening and Treatment are the Key to Control

What is Tuberculosis (TB)?

TB is a contagious disease caused by *Mycobacterium tuberculosis*. TB bacteria usually attack the lungs, but often affect other parts of the body such as the kidney, spine, and brain. If not treated properly, TB can be fatal.¹

Tuberculosis is one of the world's deadliest diseases²

- **At least one billion people are thought to be infected with TB bacteria.**
 - **At least one person becomes infected every second.**
- **Each year, approximately nine million people around the world become sick with TB disease.**
- **The World Health Organization estimates that TB takes one life every 17 seconds.**
 - **Almost two million TB-related deaths occur worldwide each year.²**
- **TB is the leading killer of people who are HIV-infected.**
- **There were an estimated 390,000 - 510,000 cases of multi-drug resistant (MDR) TB in 2008.**

Who is at risk for TB?³

- TB remains a significant public health threat in the United States (U.S.) due to global migration.
- In the U.S., the CDC estimates that between 9 and 14 million people are TB-infected and asymptomatic – with three-quarters remaining undiagnosed – and at risk of progressing to a highly contagious form of TB disease.⁴
- In 2009, the TB rate in foreign-born persons in the U.S. was nearly 11 times greater than that of U.S.-born persons.⁵
 - In 2009, 60 percent of all TB cases in the U.S. occurred in foreign-born persons.⁶
- Approximately 50 percent of all TB cases in the U.S. in 2009 were located in California, Florida, New York, and Texas.⁶
- Although each infected person represents a potential outbreak, certain communities remain at higher risk. These groups include the elderly, immigrants, homeless, inmates, and people with a weakened immune system, and of course healthcare workers and public health officials who come into contact with these individuals.
- People living with HIV are 20-30 times more likely to develop TB than people without HIV.⁷

How is TB spread?

TB bacteria are spread through the air when a person with TB disease of the lungs or throat coughs, sneezes, speaks, or sings, which may cause people in close proximity to become infected.^{8,9}

¹ CDC. TB Basic Facts <http://www.cdc.gov/tb/topic/basics/default.htm>. Accessed 2/24/10.

² CDC. Tuberculosis Data and Statistics <http://www.cdc.gov/tb/statistics/default.htm>. Accessed 2/25/10.

³ CDC. Questions and Answers about TB. http://www.cdc.gov/tb/publications/faqs/qa_introduction.htm#Intro2. Accessed 2/25/10.

⁴ Bennett DE, Courval JM, Onorato IM, et al. Prevalence of Tuberculosis Infection in the United States Population: The National Health and Nutrition Examination Survey, 1999--2000 *Am J Respir Crit Care Med*, vol 177, pp. 348-355. 2008.

⁵ CDC. Tuberculosis Fact Sheet: Trends in Tuberculosis, 2008. <http://www.cdc.gov/tb/publications/factsheets/statistics/TBTrends.htm>. Accessed 3/1/10.

⁶ CDC. Reported Tuberculosis in the United States, 2008.

⁷ World Health Organization. TB/HIV Facts 2009.

⁸ CDC TB Basic Facts <http://www.cdc.gov/tb/topic/basics/default.htm>. Accessed 2/24/10.

⁹ World Health Organization. Tuberculosis Infection and Transmission <http://www.who.int/mediacentre/factsheets/fs104/en/index.html>. Accessed 3/1/10.

What is the difference between TB infection (latent TB) and active TB?

Not everyone who becomes infected with TB bacteria develops TB disease. A person who is infected with the bacterium that causes TB, but who shows no symptoms and is not sick with the disease, is regarded as having latent TB infection (LTBI).

- Approximately 1 in every 10 persons infected with TB bacteria will go on to develop active TB disease.
- Individuals with LTBI and a compromised immune system are more likely to progress to active TB.
- Active TB occurs when the TB bacteria overcome a person's immune system and symptoms (e.g., cough, night sweats and weight loss) appear. A person who has active pulmonary TB is contagious.¹⁰

How is TB Treated?

TB therapy is a well-studied but still imperfect discipline. The course of treatment depends on whether the TB bacteria respond to medication. For patients in whom the bacteria do respond, the initial phase of treatment lasts two months, and requires as many as four different antibiotics. Continuation treatment then runs another 4 to 7 months, with up to three different drugs.¹¹

How can TB be Prevented?

Treatment of LTBI prevents cases of active TB. Treatment of an individual with LTBI is significantly cheaper and easier than treating an individual with contagious, active TB. This strategy breaks the cycle of TB transmission.

TB May Be Resistant to Treatment Options

- Of particular concern to TB control are people who develop TB in a form that resists treatment with two or more of the best-known, first-line, anti-TB drugs. This is known as multidrug-resistant TB (MDR-TB).
 - 3.6 percent of all TB cases are MDR-TB cases.¹²
- In addition, though rarer, extensively drug-resistant TB (XDR-TB) has become an increasingly challenging and important issue. The strains of bacteria at work in this form of the disease are resistant to both first-line and second-line treatments. In such cases, doctors are left with treatment options that are much less effective, putting the lives of their patients in danger.¹³
 - More than 380,000 new cases of MDR/XDR-TB emerge annually.¹⁴
- Cases from India and China accounted for more than 50 percent of the world's MDR/XDR in 2008.¹⁴

It is particularly important that public health officials, immigration authorities, health-care providers, and laboratory workers with responsibility for TB control, understand the benefits that can be achieved by using new diagnostics to prevent the spread of tuberculosis infection in the U.S.

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¹⁰ CDC Fact Sheets: The Difference Between Latent TB Infection and Active TB Disease

¹¹ CDC. MMWR. Treatment of Tuberculosis. June 20, 2003/52(RR11);1-77.

¹² World Health Organization. TUBERCULOSIS MDR-TB & XDR-TB: THE 2008 REPORT

¹³ CDC Tuberculosis Fact Sheet: Multidrug-Resistant TB <http://www.cdc.gov/tb/publications/factsheets/drtb/mdrtb.htm>. Accessed 3/1/10.

¹⁴ Multidrug and extensively drug-resistant TB (M/XDR-TB): 2010 global report on surveillance and response. WHO/HTM/TB/2010.3