

# HIV and TB

June 2011

## Fast Facts

**Worldwide, TB is the leading cause of death among persons with HIV infection.**

**It is estimated that about 4.2% of Americans, with or without HIV infection, are infected with TB bacteria.**

**In 2005, of the TB patients reported to be co-infected with HIV, 63% were non-Hispanic blacks.**



**TB** is short for **tuberculosis**. TB disease is caused by a bacterium called *Mycobacterium tuberculosis*. The bacteria usually attack the lungs, but TB bacteria can attack any part of the body. If not treated properly, TB disease can be fatal. TB is spread through the air from one person to another when a person with active TB disease of the lungs or throat coughs, sneezes, speaks, or sings. People nearby may breathe in these bacteria and become infected.

TB bacteria can live in the body without making a person sick. This is called **latent TB infection (LTBI)**. In most people who breathe in TB bacteria and become infected, the body is able to fight the bacteria to stop it from growing. People with latent TB infection do not feel sick and do not have any symptoms. TB bacteria become active if the immune system can't stop it from growing. When TB bacteria are **active** (multiplying in the body), this is called **active TB disease**.

TB is particularly dangerous for people with HIV infection. People who have both HIV infection and LTBI are 20 to 30 times as likely to develop active TB disease as those who do not have HIV infection. Worldwide, TB is the leading cause of death among persons with HIV infection and almost one in four deaths among people with HIV infection is due to TB. In 2007, there were 554 deaths due to TB in the United States (US), continuing a long-standing decline in TB deaths since the early 1950s.

The only sign of TB infection is a positive reaction to the tuberculin skin test or special TB blood test. **All persons newly**

**diagnosed with HIV infection should be tested for TB as soon as possible and people living with HIV and at risk for TB exposure should be tested annually to find out if they have LTBI. Persons with LTBI need treatment (most commonly isoniazid) as soon as possible to prevent them from developing active TB disease. Persons with active TB disease must take prescribed medication to treat the infection.**

For more information visit [www.cdc.gov/tb/topic/TBHIVcoinfection](http://www.cdc.gov/tb/topic/TBHIVcoinfection).

## The Numbers

### United States

- Approximately 1.1 million persons were living with HIV infection at the end of 2006. As many as 21% of infected persons are unaware of their infection.
- It is estimated that about 4.2% of Americans with or without HIV infection are infected with the TB bacteria. That means in 2009 there were approximately 13 million Americans with LTBI.
- In 2009, among persons with TB who had a documented HIV test result, more than 10% (690 of 6,743) were co-infected with HIV.
- In 2005, of the TB patients reported to be co-infected with HIV, 63% were non-Hispanic blacks.
- In 2006, the HIV status of 1 in 5 patients with TB was not known, even though CDC recommends that all persons with TB be tested for HIV.
- In 2006, nearly 20% of patients with TB and HIV died. Persons with HIV and TB accounted for 32% of those who died

**Additional Resources:****CDC HIV and AIDS**

[www.cdc.gov/hiv](http://www.cdc.gov/hiv)  
Visit CDC's HIV and AIDS  
Web site.

**CDC-INFO**

**1-800-CDC-INFO or  
1-800 (232-4636)**

**[cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)**

Get information about  
personal risk, prevention,  
and testing.

**CDC National HIV  
Testing Resources**

[www.hivtest.org](http://www.hivtest.org)  
Text your ZIP code to KNOW  
IT or 566948.  
Locate an HIV testing site  
near you.

**CDC National Prevention  
Information Network  
(CDC NPIN)**

1-800-458-5231  
[www.cdncpin.org](http://www.cdncpin.org)  
Find CDC resources and  
technical assistance.

**AIDSinfo**

1-800-448-0440  
[www.aidsinfo.nih.gov](http://www.aidsinfo.nih.gov)  
Locate resources on HIV  
and AIDS treatment and  
clinical trials.

For more information, visit the  
CDC HIV Web site at [www.cdc.gov/hiv](http://www.cdc.gov/hiv)

during TB treatment and 51% of those who received a TB diagnosis after death.

**Prevention Challenges****Multidrug Resistance to TB**

Multidrug-resistant TB (MDR TB) is TB that is resistant to at least two of the best anti-TB drugs—isoniazid and rifampin. MDR TB is extremely difficult to treat and can be fatal. Every nation must face the challenge of combating MDR TB. People with HIV infection are at greater risk of dying of MDR TB. Although the percentage of MDR TB cases in the United States has remained steady since 1998, MDR TB has now been reported in nearly all states and the District of Columbia. In 2009, 1.2% of reported TB cases were multidrug resistant.

To prevent the continued emergence of drug-resistant strains of TB, treatment for TB must be improved, not only in the US but worldwide. Inconsistent or partial treatment is a main cause of MDR TB. The most effective strategy for ensuring the completion of treatment is directly observed therapy (DOT), and its use must be expanded. In DOT a health care worker meets with a person who has TB and watches them take each dose of TB medication.

**Treatment Interactions**

Recommendations for treating tuberculosis in adults with HIV infection are, with a few exceptions, the same as those for adult TB patients who are not HIV infected. However, managing HIV-related TB is complex and people with HIV and TB should seek care from a health care provider or providers with expertise in the management of both HIV disease and TB. Because persons with HIV infection are often taking numerous medications,

some of which interact with anti-TB medications, experts in the treatment of HIV-related TB should be consulted.

**What CDC Is Doing**

CDC and its domestic and international partners, including the National TB Controllers Association, Stop TB USA, and the global Stop TB Partnership, are taking many steps to prevent further spread of TB and to reduce the overall burden of the disease. Efforts include

- assessing new TB diagnostic techniques,
- developing new treatment regimens and increasing the capacity of health professionals to provide adequate treatment, and
- issuing new recommendations for improved testing and treatment for US immigrants.

A new rapid diagnostic test for TB disease, the Xpert MTB/RIF assay (which is not currently approved by the US Food and Drug Administration for use in the US, is expected to reduce patient and health service diagnostic delays, decentralize the diagnosis of MDR TB and HIV-associated TB, and accelerate patient access to appropriate care. Evidence suggests that use of the test might double the number of HIV-associated TB cases diagnosed in areas with high rates of TB and HIV.

TB control is an exercise in vigilance. The goal of controlling and eventually eliminating TB worldwide requires a focused, continual effort to address the prevention and treatment needs of persons most at risk, including those who have HIV infection. Preventing and treating TB in persons with HIV infection are therefore essential to achieving the goal of TB elimination both in the US and globally.