

# TB and HIV/AIDS

CDC HIV/AIDS FACTS

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Tuberculosis (TB) is a disease that is spread from person to person through the air. This disease is particularly dangerous for persons infected with HIV. Worldwide, TB is a leading cause of death among persons infected with HIV [1].

This high level of risk underscores the need for TB screening and preventive treatment programs for HIV-infected persons and those at greatest risk for HIV infection. **Everyone infected with HIV should be tested for TB. Everyone infected with TB should complete preventive therapy as soon as possible to prevent progression to TB disease.**

## THE NUMBERS

### Worldwide

- At the end of 2007, approximately 33.2 million persons were living with HIV infection [2].
- In 2007, approximately 2 billion persons (one third of the world's population) were infected with *Mycobacterium tuberculosis*, the organism that is the most common cause of TB in the United States [1].
- An estimated one third of the persons living with HIV infection are coinfecting with TB [3].
- TB is the cause of death for as many as half of all persons with AIDS [3].
- Since 1990, TB infection rates have increased 4-fold in countries that are heavily affected by HIV [3].

### United States

- Approximately 1 million persons were living with HIV infection at the end of 2003. As many as 25% of infected persons are unaware of their infection [4].
- An estimated 9–14 million Americans are infected with TB bacteria. If they are not treated, TB will develop at some point in about 5% to 10% of these persons [5].
- As of 2005, CDC estimated that 9% of all TB cases and nearly 16% of TB cases among persons aged 25 to 44 were occurring in HIV-infected persons. Because HIV infection so severely weakens the immune system, persons dually infected with HIV and TB, compared with persons not infected with HIV, are at very high risk for active TB disease, which may be contagious [6].
- Of the TB patients reported (in 2005) to be infected with HIV, 63% were non-Hispanic blacks [6].

## PREVENTION CHALLENGES

### Multidrug Resistance to TB

Multidrug-resistant TB (MDR TB) is TB that is resistant to at least 2 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 living with HIV infection or with AIDS are at greater risk of dying of MDR TB. Although the number of cases in the United States decreased during the past few years, MDR TB has now been reported in nearly all states and the District of Columbia [7, 8].



1-800-CDC-INFO (232-4636)  
In English, en Español  
24 Hours/Day  
cdcinfo@cdc.gov  
<http://www.cdc.gov/hiv>



## REFERENCES

1. World Health Organization. 2007 Tuberculosis facts. Available at [http://www.who.int/tb/publications/2007/factsheet\\_2007.pdf](http://www.who.int/tb/publications/2007/factsheet_2007.pdf). Accessed January 14, 2008.
2. Global summary of the AIDS epidemic, December 2006. Available at [http://data.unaids.org/pub/EpiReport/2006/02-Global\\_Summary\\_2006\\_EpiUpdate\\_eng.pdf](http://data.unaids.org/pub/EpiReport/2006/02-Global_Summary_2006_EpiUpdate_eng.pdf). Accessed January 7, 2008.
3. UNAIDS. Frequently asked questions about tuberculosis and HIV. Available at [http://data.unaids.org/pub/factsheet/2006/tb\\_hiv\\_qa.pdf](http://data.unaids.org/pub/factsheet/2006/tb_hiv_qa.pdf). Accessed January 10, 2008.
4. Glynn M, Rhodes P. Estimated HIV prevalence in the United States at the end of 2003. National HIV Prevention Conference; June 2005; Atlanta. Abstract T1-B1101. Available at <http://www.aegis.com/conferences/NHIVPC/2005/T1-B1101.html>. Accessed January 19, 2008.
5. CDC. Controlling tuberculosis in the United States: recommendations from the American Thoracic Society, CDC, and the Infectious Diseases Society of America. *MMWR* 2005;54(RR-12):1-83.
6. CDC. Reported HIV status of tuberculosis patients—United States, 1993–2005. *MMWR* 2007;56:1103-1106.
7. CDC. Extensively drug-resistant tuberculosis—United States, 1993–2006. *MMWR* 2007;56:250-253.
8. CDC. *Reported Tuberculosis in the United States, 2006*. Atlanta: US Department of Health and Human Services, CDC; September 2007. Available at <http://www.cdc.gov/tb/surv/surv2006/>. Accessed January 15, 2007.



## HIV/AIDS RESOURCES:

### CDC HIV/AIDS

<http://www.cdc.gov/hiv>  
*CDC HIV/AIDS resources*

### CDC-INFO

1-800-232-4636  
*Information about personal risk and where to get an HIV test*

### CDC National HIV Testing Resources

<http://www.hivtest.org>  
*Location of HIV testing sites*

### CDC National Prevention Information Network (NPIN)

1-800-458-5231  
<http://www.cdcpin.org>  
*CDC resources, technical assistance, and publications*

### AIDSinfo

1-800-448-0440  
<http://www.aidsinfo.nih.gov>  
*Resources on HIV/AIDS treatment and clinical trials*

To prevent the continued emergence of drug-resistant strains of TB, treatment for TB must be improved, not only in the United States but worldwide. Inconsistent or partial treatment is the 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.

## Treatment Interactions

Coinfection with HIV and TB presents another challenge: possible complications from interactions between the drugs used to treat HIV and the drugs used to treat TB. When prescribing these drugs, physicians must carefully consider all potential interactions.

## WHAT CDC IS DOING

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 are infected with HIV. Efforts to eliminate TB are therefore essential to reducing the global toll of HIV infection.

Additional resources are as follows:

- CDC. Recommendations for human immunodeficiency virus (HIV) screening in tuberculosis (TB) clinics.  
<http://www.cdc.gov/tb/pubs/tbfactsheets/HIVscreening.htm>
- CDC. Treatment of drug-susceptible tuberculosis disease in HIV-infected persons.  
<http://www.cdc.gov/tb/pubs/tbfactsheets/treatmentHIVpositive.htm>

For more information on TB, visit the CDC TB Web site at <http://www.cdc.gov/tb>. For more information on HIV/AIDS, visit the CDC HIV/AIDS Web site at <http://www.cdc.gov/hiv>.