

How can your organization help prevent HIV-related TB in your clients?

Collaborate with your state or local health department's TB control program to:

- Educate your staff and clients about TB
- Educate your staff and clients about testing for TB
- Educate your staff about the proper treatment of persons coinfecting with TB and HIV

Other ways your organization may be able to help:

- Provide TB testing for your high-risk clients
- Assist in the delivery of DOT for latent TB infection

CDC publications about TB for your health care providers:

CDC publications about TB can be viewed and ordered at no cost by visiting the CDC Division of Tuberculosis Elimination Website at www.cdc.gov/tb.

Interactive Core Curriculum on Tuberculosis Web-based Course. www.cdc.gov/tb/webcourses/corecurr/index.htm

Managing Drug Interactions in the Treatment of HIV-Related Tuberculosis. This document presents current data pertaining to interactions between the rifamycin antibiotics and antiretroviral drugs.
www.cdc.gov/tb/TB_HIV_Drugs/default.htm

CDC Publications about TB for your clients:

Take Steps to Control TB When You Have HIV
www.cdc.gov/tb/pubs/pamphlets/TB&HIV_EN.pdf

Get the Facts About TB Disease
www.cdc.gov/tb/pubs/pamphlets/TB_disease_EN_rev.pdf

Questions and Answers About TB
www.cdc.gov/tb/faqs/default.htm



For more information, the following resources are also available:

TB Education and Training Resources Website

Use this site to search for TB education and training materials, find out how to order TB materials, and locate funding opportunities.
www.findtbresources.org

TB-Related News and Journal Items Weekly Update

This weekly e-mail update is a compilation of TB-related articles published for the benefit and information of people interested in TB.
www.cdcnpi.org/scripts/listserv/tb_update.asp

The TB Education and Training Network (TB ETN)

TB ETN brings TB professionals together to network, share resources, and build education and training skills. www.cdc.gov/tb/TBETN/

The CDC Regional Training and Medical Consultation Centers (RTMCCs)

The RTMCCs provide training, educational resources, and medical consultation to TB programs and medical providers in the U.S.
www.cdc.gov/tb/rtmcc.htm

Or contact your state or local health department.

TB and HIV Coinfection



What Can HIV/AIDS Service Organizations Do to Help?

- Collaborate with your local health department's tuberculosis (TB) control program
- Educate your staff and clients about TB
- Educate your staff and clients about the importance of TB testing in the prevention of TB

HIV-Related TB Can Be Prevented and Treated – and You Can Help!

Many people think tuberculosis (TB) is a disease of the past.

However, in spite of fewer people in this country suffering with TB, it remains a serious threat, especially for HIV-infected persons. In fact, worldwide TB is one of the leading causes of death among people infected with HIV. As someone working in an AIDS service organization (ASO), you can play a critical role in ensuring that HIV-related TB can be prevented and treated in your clients.

What is Tuberculosis (TB)?

TB is a disease caused by the bacterium called *Mycobacterium tuberculosis*. This disease primarily affects the lungs, but can attack any organ in the body. TB is spread through the air from one person to another. The bacteria are put into the air when a person with TB disease of the lungs or throat coughs or sneezes. People nearby may breathe in these bacteria and become infected. However, not everyone infected with TB bacteria becomes sick. As a result, two TB-related conditions exist: **latent TB infection** and **active TB disease**. Both of these conditions are treatable.

What is the difference between latent TB infection and active TB disease?

In most people who breathe in TB bacteria and become infected, the body is able to fight the bacteria and stop them from growing. The bacteria become inactive, but they remain alive in the body and can become active later. This is called **latent TB infection**. There are an estimated 9 to 14 million persons in the United States infected with TB bacteria. Most people who have latent

TB infection never develop active TB disease. In these people, the TB bacteria remain inactive for a lifetime without causing disease. A person with latent TB infection does not feel sick and cannot spread TB bacteria to others.

However, TB bacteria can become active if the immune system can't stop them from growing. These bacteria begin to multiply in the body and cause **active TB disease**. Because HIV weakens the immune system, people with latent TB infection and HIV infection are at **very high risk** of developing active TB disease.

How do you get tested for TB?

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There are two tests that can be used to help detect TB infection - the TB skin test and the QuantiFERON®-TB Gold (QFT-G) test. The TB skin test is performed by injecting a small amount of testing material into the upper layers of the skin on the inside of the forearm. The person getting the test must return two to three days later to have the test site examined by a trained health care worker. If there is a reaction (a raised, swollen area) on the arm, the size of

Why should I be concerned about TB and HIV coinfection?

- Without treatment, as with any other opportunistic infection, HIV and TB can work together to shorten the life of the person infected.
- Someone with untreated latent TB infection and HIV infection is **much more** likely to develop active TB disease during his or her lifetime than someone without HIV infection.
- Among people with latent TB infection, HIV infection is the strongest known risk factor for progressing to active TB disease.
- A person who has both HIV infection and active TB disease has an AIDS-defining condition.

the reaction is measured. A positive reaction means that the person probably has TB infection. Some people who are infected with both HIV and TB will not react to the TB skin test. This is because the immune system is not working properly. Another test for TB infection, the QFT-G test, is a blood test that measures how the patient's immune system reacts to the germs that cause TB.

A positive TB skin test or QFT-G test only tells that a person has been infected with TB germs. It does not tell whether or not the person has progressed to active TB disease. Other tests, such as a chest x-ray and a sample of sputum, are needed to see whether the person has TB disease.

All HIV-infected people should get a TB test to find out if they have TB infection. To find out where TB skin tests are offered in your community or to determine if your organization should provide TB testing services, contact your state or local health department's TB control program.

Good News

The good news is that HIV-infected persons with

either latent TB infection or active TB disease can be effectively treated. The first step is to ensure HIV-infected persons get a test for TB infection and any other needed tests. The second step is to help the people found to have either latent TB infection or active TB disease get proper treatment. Rapid progression from latent TB infection to active TB disease can easily be prevented. And active TB disease can be treated in HIV-infected persons.

Treatment

There are a number of treatment options for HIV-infected persons with either latent TB infection or active TB disease. For the latest guidelines on treatment regimens, refer to the resources listed on the back of this brochure, and also consult with your state or local health department. It is important for HIV-infected patients to be closely monitored by a physician during any type of treatment to make sure they are not hurt by side effects from taking TB and HIV medicines together. Monitoring is also important to ensure the TB medicines are not interacting with patients' HIV medicines in a way that could alter the effect.



People with latent TB infection

- Have TB bacteria in their body that are alive, but inactive
- Do not feel sick
- Cannot spread TB bacteria to others
- Usually have a positive TB skin test or QFT-G test
- Will have a normal chest x-ray
- May become sick if the bacteria become active in their body
- Need treatment for latent TB infection **as soon as possible** to prevent them from developing active TB disease

People with active TB disease

- Have active TB bacteria in their body
- Feel sick and may experience symptoms such as fever, weight loss, and a bad cough that lasts 3 weeks or longer
- May spread TB bacteria to others
- Usually have a positive TB skin test or QFT-G test
- May have an abnormal chest x-ray
- **Can die from this life-threatening disease if undiagnosed or untreated**
- Need treatment with multiple medications to treat active TB disease

The medicine usually used to treat latent TB infection:

- Isoniazid (INH)

Taken as prescribed, INH will kill the TB bacteria in the body and prevent the development of active TB disease.

Multiple medicines are used to treat active TB disease:

- Isoniazid (INH)
- Rifampin or Rifabutin
- Pyrazinamide
- Ethambutol

To treat active TB disease, several different medicines are needed. This is because there are many bacteria to be killed. Taking several drugs will do a better job of killing all of the bacteria and preventing them from becoming resistant to the drugs.

A crucial component of treating active TB disease is directly observed therapy (DOT). With DOT, a health worker watches the patient swallow each dose of TB medication. DOT increases patient adherence and prevents relapses, continued transmission of infection to others, and the development of drug resistance. If resources are available, DOT may also be beneficial for the treatment of latent TB infection, especially in HIV-infected persons. To find out if your organization can help with DOT services, please contact your State or local health department's TB control program.