



TUBERCULOSIS INFORMATION

- Testing for Tuberculosis

In most U.S. populations, targeted testing for TB is done to find persons with latent tuberculosis infection (LTBI) or tuberculosis disease who would benefit from treatment. Therefore, all testing activities should be accompanied by a plan for follow-up care of persons with LTBI or disease. Healthcare agencies or other facilities should consult with the local health department before starting a skin-testing program to ensure that adequate provisions are made for the evaluation and treatment of persons whose tuberculin skin tests results are positive. TB testing should always be done in clearly identified high-risk groups.

Testing Health Care Workers

Health care workers in facilities or communities where TB cases have occurred should be included in a TB testing and prevention program. In addition, testing is recommended for the staff of congregate living facilities who 1) may be exposed to persons with TB on the job (e.g., staff of correctional facilities) or 2) would pose a risk to large numbers of susceptible persons if they developed infectious TB (e.g., staff of AIDS hospices). Such persons should be tuberculin skin tested upon employment and thereafter at intervals determined by the risk of transmission in that facility. This testing is done for two reasons:

- ! To detect TB infection or disease in staff so that they may be given treatment
- ! To determine whether TB is being transmitted in the facility (indicated by skin test conversions among staff)

Health care workers who have a documented history of a positive tuberculin skin test, adequate treatment for disease, or adequate treatment for latent infection, should be exempt from further tuberculin skin testing. Health care workers with newly positive tuberculin skin test results should have a chest radiograph as part of the initial evaluation of their tuberculin skin test; if negative, repeat chest radiographs are **not** needed unless symptoms develop that could be attributed to TB. If health care workers with a documented history of a positive tuberculin skin test develop signs and symptoms suggestive of TB, they should undergo a medical evaluation including a chest radiograph. However, more frequent monitoring for symptoms of TB may be considered for recent converters and other tuberculin skin test-positive health care workers who are at increased risk for developing active TB (e.g., HIV-positive or otherwise severely immunocompromised health care workers).

Testing High-Risk Groups

Testing is done for two reasons. One reason is to determine whether persons are infected with *M. tuberculosis*. Persons who are infected with *M. tuberculosis* may be given treatment of latent infection to prevent them from developing TB disease. Another reason is to determine whether persons have TB disease. Persons who have TB disease are given treatment for the disease. Whether testing focuses on finding infection or finding disease depends on the setting.

Groups that are not at high risk for TB should not be tested routinely, because testing in low-risk populations diverts resources from other priority activities and because positive tests in low-risk persons may not represent TB infection. Flexibility is needed in defining high-priority groups for testing. The changing epidemiology of TB indicates that the risk for TB among groups currently considered high priority may decrease over time, and groups currently not identified as being at risk subsequently may be considered as high priority.

Testing for Latent TB Infection

Testing for latent TB infection is done with the Mantoux tuberculin skin test. Testing should be targeted at either of two groups. The first group is persons at higher risk for TB exposure or infection, for example:

- ! Close contacts of persons known or suspected to have TB (i.e., those sharing the same household or other enclosed environments)
- ! Foreign-born persons, including children, from areas that have a high TB incidence or prevalence (e.g., Asia, Africa, Latin America, Eastern Europe, Russia)
- ! Residents and employees of high-risk congregate settings (e.g., correctional institutions, nursing homes, mental institutions, other long-term residential facilities, and shelters for the homeless)
- ! Some medically underserved, low-income populations as defined locally
- ! High-risk racial or ethnic minority populations, defined locally as having an increased prevalence of TB (e.g., Asians and Pacific Islanders, Hispanics, African Americans, Native Americans)
- ! Infants, children, and adolescents exposed to adults in high-risk categories
- ! Persons who inject illicit drugs; any other locally identified high-risk substance users (e.g., crack cocaine users)
- ! Health care workers who serve high-risk clients

The second group is persons at higher risk for TB disease once infected, for example:

- ! Persons with HIV infection
- ! Persons who were recently infected with *M. tuberculosis* (within the past 2 years), particularly infants and very young children
- ! Persons who have medical conditions known to increase the risk for disease if infection occurs*
- ! Persons who inject illicit drugs; other groups of high-risk substance users (e.g., crack cocaine users)
- ! Persons with a history of inadequately treated TB

Testing for TB Disease

In some circumstances, testing for TB disease with chest radiographs or sputum smears may be more appropriate than testing for infection with the Mantoux tuberculin skin test. For example, chest radiography may be the best method in jails or homeless shelters, where the time required to give skin tests to large numbers of transient persons and to read results makes testing for infection impractical. Testing for disease may also be more appropriate in situations in which a person with infectious TB disease would pose a risk to large numbers of susceptible persons, such as in residential facilities for HIV-infected persons.

*HIV infection, substance abuse (especially drug injection), recent infection with *M. tuberculosis* (within the past 2 years), previous TB (in a person who received inadequate or no treatment), diabetes mellitus, silicosis, prolonged corticosteroid therapy, other immunosuppressive therapy, cancer of the head and neck, hematologic and reticuloendothelial diseases (e.g., leukemia and Hodgkin's disease), end-stage renal disease, intestinal bypass or gastrectomy, chronic malabsorption syndromes, low body weight (10% or more below the ideal).

For More Information

For information about implementing CDC guidelines, call your state health department.

To order the following publications, call the CDC's Voice and Fax Information System (recording) toll free at (888) 232-3228, then press options 2, 5, 1, 2, 2 (Note: You may select these options at any time without listening to the complete message). Request the publication number of the document you would like to order. You may also visit the Division of TB Elimination's Web site at www.cdc.gov/nchstp/tb.

Publication # 99-6422. ATS/CDC. Targeted tuberculin testing and treatment of latent TB infection. *MMWR* 2000;49(No. RR- 6).

Publication # 99-6423. American Thoracic Society. Diagnostic standards and classification of tuberculosis in adults and children. *Am J Respir Crit Care Med* 2000;161:1376–1395.

Publication # 00-6453. American Thoracic Society. Treatment of tuberculosis and tuberculosis infection in adults and children. *Am J Respir Crit Care Med* 1994;149:1359-1374.

Publication # 99-5879. CDC. Prevention and treatment of tuberculosis among patients infected with human immunodeficiency virus: principles of therapy and revised recommendations. *MMWR* 1998;47(No. RR- 20).

Publication # 00-3327. Prevention and control of tuberculosis in facilities providing long-term care to the elderly. *MMWR*. 1990;39(RR-10).

Publication # 99-5791. Recommendations for prevention and control of tuberculosis among foreign-born persons. *MMWR*. 1998;39(RR-18).

Publication # 00-6553. *Controlling TB in Correctional Facilities*. Atlanta: CDC; 1995.

Publication # 00-6148. Prevention and control of tuberculosis in U.S. communities with at-risk minority populations and Prevention and control of tuberculosis among homeless persons. *MMWR*. 1992;41(RR-5).

Publication # 00-6223. Prevention and control of tuberculosis in migrant farm workers. *MMWR*. 1992;41(RR-10).