

AFSCME

Health & Safety Fact Sheet

TUBERCULOSIS

SUMMARY

- Tuberculosis:*** is a serious bacterial disease that most often affects the lungs and can be fatal.
- How TB is spread:*** Tuberculosis is transmitted through the air (*airborne*) by microscopic droplets of saliva or sputum containing the TB bacteria. TB can only be spread by individuals with active tuberculosis disease!
- Who is a risk at work:*** AFSCME members who work in hospitals and other health care facilities, prisons, homeless shelters, mental health institutions, social services are most likely to come into contact with people that are contagious.
- Prevention:*** Promptly identify and isolate individuals who are or might be contagious in an area with special ventilation. Signs must be posted to entrances to isolation areas and workers who enter must follow airborne isolation precautions, and wear respiratory protection. Worker training should include signs and symptoms of TB, how TB is spread, prevention measures, and treatment.
- Laws:*** There is no Occupational Safety and Health Administration (OSHA) regulation for tuberculosis, but OSHA can require employers to protect workers under the “General Duty” Clause of the Occupational Safety and Health Act.

WHAT IS TUBERCULOSIS?

Tuberculosis (TB) is a bacterial disease that can affect several parts of the body. The most common form of TB is pulmonary (lung) tuberculosis, which can cause severe damage to the lungs, disability, and death. The symptoms of TB include fever, fatigue, night sweats and dramatic weight loss. Coughing up blood, severe chest pain and hoarseness appear in the later stages of the disease.

Most people have mild symptoms or none at all when they are infected. Tuberculosis bacteria can lie “dormant” (without symptoms) for many years after the original infection. Unless the infection is treated, about 10 percent of the people who become infected with tuberculosis will develop active tuberculosis disease at some point in their lives.

HOW IS TUBERCULOSIS SPREAD?

TB can only be spread by individuals with active tuberculosis disease. People who have been infected with TB but do not have active disease are not contagious.

Tuberculosis is transmitted through the air (*airborne*) by microscopic droplets of saliva or sputum containing the TB bacteria. Individuals with active TB disease spread infectious droplets by coughing, sneezing, singing or just talking. These droplets can be inhaled by anyone in the area. The bacteria can survive in moist or dried sputum for up to six weeks, but TB is killed by sunlight or ultraviolet light (UV) in a few hours.

WHAT IS DRUG-RESISTANT TUBERCULOSIS?

Multi-drug-resistant tuberculosis (MDR-TB) is defined as TB that is resistant at least to isoniazid and rifampicin, the two most powerful first-line anti-TB drugs. MDR-TB develops during treatment of fully sensitive TB when the course of antibiotics is interrupted and the levels of drug in the body are insufficient to kill 100 percent of bacteria. This can happen for a number of reasons: Patients may feel better and halt their antibiotic course, drug supplies may run out or become scarce, or patients may forget to take their medication from time to time. MDR-TB is spread from person to person as readily as drug-sensitive TB and in the same manner.

WHO IS AT RISK?

TB poses a risk to workers who are exposed to patients, inmates, clients and others with active disease. The disease spreads more easily in crowded settings, and is made worse by poor ventilation. AFSCME members who work in hospitals, long term care facilities for the elderly and other health care facilities, prisons, homeless shelters, mental health institutions and social services are most likely to come into contact with people who have infectious TB. Workers who are present during autopsies also face an increased risk of exposure.

WHAT TEST IS USED TO IDENTIFY TB INFECTION?

The tuberculin skin test (TST) is used to identify individuals who have been infected with tuberculosis. The test is performed by injecting a small amount of purified protein derivative (PPD) under the skin. Infected individuals will develop a small swollen area where the injection was given 48-72 hours after the injection. A positive skin test by itself does not mean that a person has active tuberculosis. Additional tests performed as part of a medical examination must be performed to make a diagnosis of TB disease.

WHAT CAN BE DONE TO PREVENT THE SPREAD OF TUBERCULOSIS?

The following steps to prevent worker exposure to tuberculosis are based on the Occupational Safety and Health Administration's (OSHA) proposed standard on TB and guidelines from the Centers for Disease Control and Prevention (CDC) for the prevention of tuberculosis in hospitals, prisons, and other settings.

- ***Exposure Control Plan:*** Identifies workers who are exposed to TB and the tasks or procedures which put them at risk of exposure. The risk assessment includes finding out the number of TB cases in the community, or are likely to enter a facility from other jurisdictions. Health departments are responsible for surveillance of TB cases.

- **Prompt Identification of Confirmed and Suspected Cases:** Screening programs to identify contagious individuals in hospitals, long-term care facilities, prisons, and other institutions. Identification of TB cases is made through medical examinations, skin tests, and laboratory tests.
- **Prompt Isolation of Confirmed and Suspected Cases:** Move patients, inmates or others who have a known case of active TB or have symptoms that might be caused by TB to an isolation room.
- **Engineering Controls:** Removing or decreasing the number of infectious bacteria in the air reduces the spread of TB. The most important method is ventilation. Isolation rooms must be under “negative pressure” to prevent contaminated air from leaving the room. The airflow in the isolation room should be able to exchange contaminated air with clean air.

Research is continuing to determine how well the spread of TB can be prevented by using ultraviolet (UV) light to kill TB bacteria in the air. UV lights have been used in laboratories and patient waiting areas.

- **Warning signs:** “AFB Isolation Precautions” signs posted at the entrance to a room or area where there is TB patient.
- **Restricting Access to Isolation Rooms:** Limiting the number of staff allowed to enter isolation rooms. For example, staff that must be in the isolation room to provide care can also bring in food trays, rather than exposing dietary staff. All staff who may have to enter the patient’s room, including housekeeping staff, must be trained on and follow airborne isolation precautions.
- **Performing “High Hazard” Procedures in Isolation:** Engineering controls are used to capture infectious droplets that are released by patients during "high hazard" medical procedures. High hazard procedures include bronchoscopy, sputum induction, and endotracheal intubation or suctioning. Autopsies are also high hazard procedures that require precautions to prevent exposure.
- **Treating TB Cases:** Medication usually reduces the amount of infectious bacteria in the sputum within a few weeks, unless the bacteria is drug-resistant.
- **Respiratory Protection:** Wearing a respirator that is certified by the National Institute for Occupational Safety and Health (NIOSH) to prevent breathing in TB bacteria when staff enter a TB isolation room or have contact with a patient. At a minimum, workers should be fit tested and wear an N-95 disposable respirator when entering an isolation room. Workers who are present for high hazard procedures such as bronchoscopy or autopsy need a more protective respirator, such as a half or full-face respirator with disposable particulate filter cartridges, or a powered air-purifying respirator (PAPR).

A surgical mask is not a respirator and does not provide adequate protection.

- **Screening:** Skin testing staff who work in areas where there is a high rate of TB. A baseline skin test should be performed at the time of hiring and on an annual basis thereafter. Workers in high risk jobs should receive skin tests every six months. Workers should also

be skin tested ten weeks after there has been a definite exposure incident. An "exposure incident" means that a worker has had an unprotected exposure to airborne TB.

- **Treatment:** Providing workers who have converted from a negative to a positive skin test with a medical evaluation, including a chest x-ray. Certain drugs can be effective in preventing the TB infection from progressing into TB disease. Workers who are diagnosed with active disease must be provided with proper medical treatment.
- **Worker Training:** Training for workers in settings where there are or may be people with active TB should include:
 - signs and symptoms of TB infection,
 - how TB is spread,
 - the difference between TB infection and TB disease,
 - methods for diagnosing cases of TB,
 - how to prevent the spread of TB, and
 - treatment of TB infection and active disease.

WHAT LAWS ARE THERE TO PROTECT WORKERS?

After a decade long effort by AFSCME and other unions, the Occupational Safety and Health Administration at the end of 2003 withdrew its proposed regulation to protect workers from occupational exposure to tuberculosis. OSHA still has the authority to require employers to implement steps to protect workers from TB under the "General Duty" Clause of the Occupational Safety and Health Act. The General Duty requires that "...every employer covered under the Act must furnish to his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees."

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For more information about protecting workers from workplace hazards, please contact the AFSCME Research & Collective Bargaining Department, Health and Safety Program at (202) 429-1215. You can also contact our office located at 1625 L Street, NW Washington, DC 20036.