

In accordance with the Center for Disease Control guidelines for a tuberculosis screening program, the Animal Hazards Program-Occupational Health Office will be implementing the Two-Step TB Screening Program beginning June 1, 2006.

In a TB screening program, employees are skin tested when they start their job. This is called the baseline skin test. If they have a negative skin test then they won't be retested for either 6-months (if working with monkeys) or for 1 year. Employees whose skin test reaction converts from negative to positive between screening intervals have probably become infected with *M. Tuberculosis*. People with skin test conversions are at high risk of developing TB disease because they were infected relatively recently. In order to detect TB transmission and identify people who have skin test conversions, accurate information must be obtained for every employee's baseline skin test, as well as for additional skin tests.

One factor that can affect the accuracy of the baseline skin test is the **booster phenomenon**. The booster phenomenon happens because in some people who have TB infection, the ability to react to tuberculin lessens over time. When these people are skin tested many years after they became infected with *M. Tuberculosis*, they may have a negative reaction. However, if they are tested again within a year of the first test, they may have a positive reaction. This is because the first skin test "jogged the memory" of the immune system, **boosting** its ability to react to tuberculin. It may appear that these people were infected between the first and second skin tests (recent TB infection). Actually, the second, positive reaction is a **boosted reaction** (due to TB infection that occurred a long time ago). The booster phenomenon is illustrated in Figure 1.

To avoid misinterpretation of tuberculosis screening tests (TST), a strategy has been developed for telling the difference between boosted reactions and reactions caused by recent infection. This strategy, called **two-step testing**, means that if a person who has not had a TST for a year or more has a negative reaction to an initial skin test, he or she is given a second test 1 to 3 weeks later (See Figure 2). If the reaction to the second test is positive, it probably is a boosted reaction. IF the reaction to the second test is negative, the person is considered uninfected. Thus it provides accurate information about each employee's baseline skin test reaction.

More information on tuberculosis, tuberculosis testing and disease is available at:
<http://www.cdc.gov/nchstp/tb/default.htm>.

The two-step testing program will be implemented for new and current employees who have not had a TST in the last two years. Please feel free to contact the Occupational Health Office if you have questions: dugger@health.arizona.edu or call 621-2568. Thank you.

Figure 1
The booster phenomenon

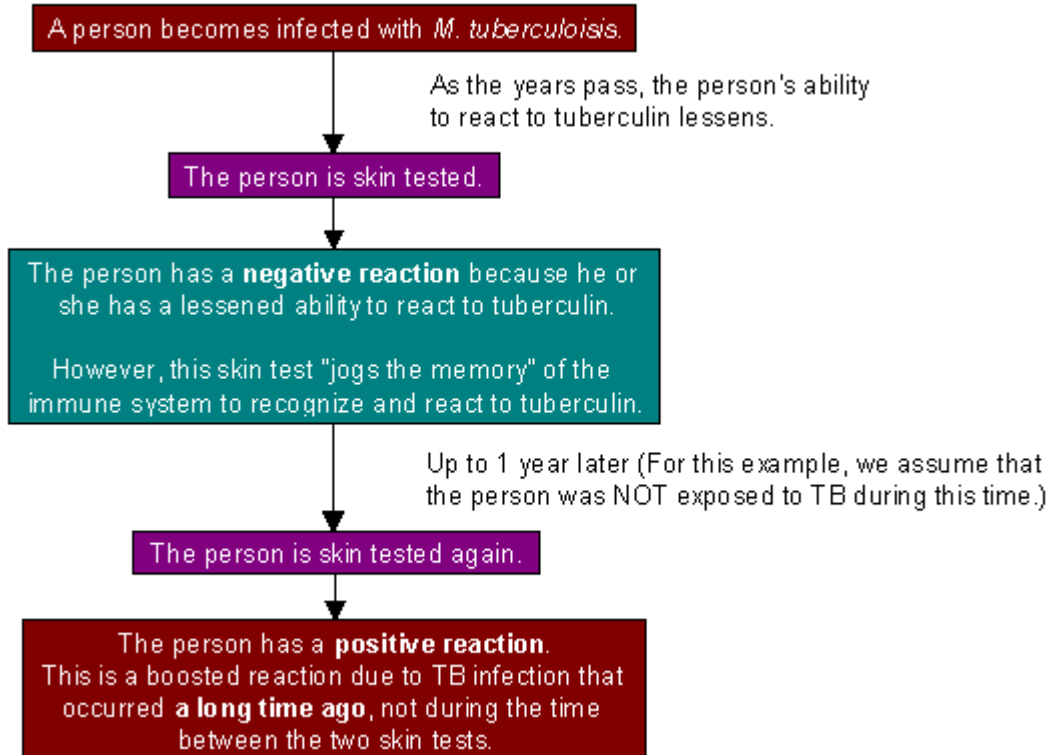


Figure 2
Two-step testing

