

IV-16. TUBERCULOSIS SURVEILLANCE PROGRAM

- I. Purpose: The purpose of the Tuberculosis (TB) Surveillance Program is to minimize the risk of occupational and/or nosocomial transmission of Mycobacterium tuberculosis to employees and nonhuman primates used in research studies. To this end, the program is intended to provide:
 - A. Early detection of infection among NIH employees.
 - B. Education, counseling, medical evaluation and treatment or referral for clinical care as indicated.
- II. Relevant Occupational Medical Service (OMS) Procedure Manual Sections
 - A. Contact Study Guidelines. Chapter III Section 2
 - B. Occupational Injuries and Illnesses. Chapter III Section 20
 - C. Preplacement Medical Evaluation. Chapter III Section 25
 - D. Animal Exposure Program (AEP). Chapter IV Section 2
- III. Attachments
 - A. Questionnaire for tuberculin skin testing. Attachment I
 - B. Outside placement of tuberculin skin test. Attachment II
 - C. Health survey and TB quiz. Attachment III
 - D. Referral for chemoprophylaxis memorandum. Attachment IV
 - E. TST conversion assessment form. Attachment V
 - F. Tuberculin skin test recall memorandum. Attachment VI
 - G. Tuberculin skin test recall – second notice memorandum. Attachment VII
 - H. Annual medical reminder memorandum. Attachment VIII
 - I. Report of TB exposure form. Attachment IX
 - J. Follow up post-exposure memorandum. Attachment X
 - K. Contact study summary. Attachment XI
- IV. Eligibility
 - A. All regular full-time NIH position applicants who present to OMS for a pre-placement medical evaluation and who will work in the Clinical Research Center, with patients, nonhuman primates, or in a mycobacterial lab are enrolled in the Tuberculosis Surveillance Program.
 - B. Only employees (including volunteers) described in V. G and H are recalled for two-step and periodic testing.
 - C. Other employees requesting tuberculin skin testing will have a risk assessment and be offered testing if indicated. These results will be entered in the OMS electronic medical record, but the employee will not be recalled for periodic testing.

V. Definitions

Occupational Medical Service
Division of Occupational Health and Safety, ORS

Revised 4/4/08
Chapter IV Section 16

IV-16. TUBERCULOSIS SURVEILLANCE PROGRAM

- A. Position applicant: a person not yet hired or who is being considered for a new position.
- B. Tuberculin skin test (TST): the intradermal injection of 0.1 ml of purified protein derivative to detect infection with *M. tuberculosis*.
- C. Positive TST: a reaction to a TST which suggests infection with *M. tuberculosis*. The determination is based on a combination of the transverse diameter of the induration at the test site measured 48 to 72 hours after injection and the individual's medical history.
 - 1. 15 mm, regardless of medical history.
 - 2. 10 mm and
 - a. Residence for ten years or longer, especially as a child, in a country with a high prevalence of TB (Eastern Europe, all of Africa, Asia, Oceania, except for Australia and New Zealand, the Caribbean and Latin America).
 - b. Prior work with high risk populations.
 - c. Diabetes mellitus, high dose corticosteroid and other immunosuppressive therapy, leukemia, lymphoma, silicosis, gastrectomy, jejunum-ileal bypass surgery or IV drug use.
 - 3. 5 mm and
 - a. Infection with HIV-1.
 - b. Close personal contact with a person with active pulmonary tuberculosis.
 - c. Occupational exposure similar in intensity and duration to household contact with sub optimal protection.
 - d. Radiographic evidence of scarring consistent with healed pulmonary tuberculosis.
- D. Negative TST: any reaction to a TST that does not meet the criteria for a positive TST.
- E. Two-step testing: the administration of a second TST one to two weeks after the initial negative TST (refer to Section VI C for additional details).
 - 1. A positive response to the second test is interpreted as indicating infection with TB in the remote past (booster phenomenon).
 - 2. Two-step testing is performed on enrollment for employees who:
 - a. Perform high risk activities (See Section V G),
 - b. Work in areas with heightened protection (see Section V H), or
 - c. Have patient contact.
- F. TST conversion: a "significant increase" in induration within 24 months indicating recent infection with TB. The definition for a "significant increase" is influenced by the individual's age and work responsibilities.
 - 1. If the person is less than 35 years of age or has higher risk work activities (at any age), a 10 mm increase is significant.
 - 2. If the person is at least 35 years of age and does not have higher risk work activities, a 15 mm increase is significant.
- G. Higher risk work activities: responsibilities that may be associated with an elevated risk for exposure to *M. tuberculosis*. Examples include:

IV-16. TUBERCULOSIS SURVEILLANCE PROGRAM

1. Working in the CC Mycobacteriology Laboratory or with *M. tuberculosis* cultures.
 2. Conducting bronchoscopies or cough-inducing procedures.
 3. Working in the Pulmonary Lab.
 4. Working with patients diagnosed with active pulmonary or laryngeal tuberculosis.
 5. Working with animals that are infected with tuberculosis.
- H. Heightened protection work areas: areas containing nonhuman primates.
- I. Latent infection with *M. tuberculosis*: evidence of previous infection with *M. tuberculosis*, not currently infectious to others.
- J. Active pulmonary or laryngeal tuberculosis (active tuberculosis): the phase of an infection with *M. tuberculosis* when the individual is infectious to others. Active pulmonary tuberculosis is suspected when a combination of the following occur: otherwise unexplained fever of 100° lasting two weeks or more, night sweats, a cough lasting at least three weeks, bloody sputum, weight loss, anorexia or fatigue.
- K. TB exposure: prolonged contact with an individual with active pulmonary or laryngeal tuberculosis (index case).
1. Exposure is suspected when an individual lives in the same home, works together in a confined environment (decision is made on a case-by-case basis in consultation with HES or DOHS) or otherwise is in contact through a common ventilation system for a prolonged time with an individual with active pulmonary or laryngeal tuberculosis or to aerosolized *M. tuberculosis*.
 2. Casual contact with an index case for a few minutes or longer periods of contact in an open area is not considered a significant exposure.

VI. Skin Testing

- A. Prior to administering the TST, the position applicant is asked to provide a personal medical history for:
1. Receipt of a live virus vaccine in the prior six weeks, viral infection with the preceding month, immune suppressive treatment or a history or a positive TST. This information is contained in the questionnaire for tuberculin skin testing (Attachment I).
 2. If a prior TST was positive, the chest radiographic result, recommended treatment, and the worker's compliance with the treatment recommendations.
- B. Skin testing is not performed if the applicant:
1. Has a history of a positive TST. Further evaluation is outlined in Section VIII.
 2. Has a history of a negative TST within the past 12 months and the individual is not required or recommended to receive periodic retesting (see V E 2).
 3. Declines to receive a tuberculin skin test. The employee is then instructed to negotiate relief from the requirement with the party

IV-16. TUBERCULOSIS SURVEILLANCE PROGRAM

requiring the testing.

- C. An individual eligible for two-step skin testing (employees with patient contact and those defined in Section V G and H) does not receive the second test if the worker has documentation of:
 - 1. A negative TST in the prior twelve months.
 - 2. Two-step testing in the preceding five years.
- D. Prior immunization with BCG is not a contraindication to skin testing.
- E. Pregnancy does not exclude a female employee from being skin tested as part of a regular skin testing surveillance program. If the employee declines a skin test due to pregnancy, she is placed on the deferral list (maintained by the TB Surveillance Program Coordinator).
- F. Administering a skin test:
 - 1. 0.1 ml of purified protein derivative is injected into the intradermal space of the volar surface of the forearm. A 27 gauge needle is used with the bevel side of the needle up and parallel to the skin surface. Done correctly, this produces a visible and palpable wheal, 6 to 10 mm in diameter.
 - 2. If the entire amount is not injected into the skin, or if the wheal is not produced, the test is repeated on the opposite arm and the occurrence is noted in the record. The test is repeated only once. If the test is unsuccessful on the second attempt, the occurrence is noted in the employee's medical file and the employee is instructed to return to the clinic in one week for another attempt.
- G. Measuring the response:
 - 1. Reactions are read 48 to 72 hours after injection.
 - 2. The transverse diameter of the response (induration) is determined using a ballpoint pen.
 - a. The pen is held perpendicular to the skin surface and, while applying mild pressure, a line is drawn from normal skin toward the center of induration, stopping when resistance from the "edge" of induration is encountered. The patient will typically report increased sensitivity when the true edge of induration is felt, the "ouch point." The distance between opposing interrupted lines is measured in millimeters.
 - b. Erythema in the absence of induration is not significant but is reported in the progress note.
 - c. Employees are not permitted to "self read" nor have a co-worker read their skin tests as an official reading.
- H. Employees who work a part-time schedule and cannot have the test placed and read in OMS may have their skin tests placed by their personal physician (Attachment II) with the understanding that the reading will be done in OMS.

VII. TST Negative

- A. The applicant is medically cleared for duty.
 - 1. If the individual is newly hired, a Request for Medical Determination and

IV-16. TUBERCULOSIS SURVEILLANCE PROGRAM

Report of Findings is given to the employee (reference the Pre-placement Medical Evaluation).

2. Applicants eligible for recall through the TB Surveillance Program (see Section IX A) are scheduled to return for a second TST within two weeks, unless the worker can provide documentation of a negative TST within the prior 12 months or two-step testing in the preceding five years.
 - a. The second test is performed on the opposite forearm.
 - b. Exceptions to the administration of the second TST are listed in Section VI B and C.

VIII. TST Positive

- A. Applicants with a history of a positive TST are questioned regarding the type and duration of any treatment and their compliance with treatment. In addition, the health survey and TB quiz (Attachment III) is administered. The quiz is intended to detect symptoms of active tuberculosis and to enhance the employee's understanding of the illness. A history of prior receipt of BCG does not alter the following steps:
 1. If the applicant received appropriate treatment, the worker is medically cleared for duty as outlined in Section VII.
 2. If the applicant did not receive appropriate treatment:
 - a. A PA chest radiograph is ordered, unless the applicant can provide documentation of a normal radiograph two or more years following the original discovery of the positive TST.
 - b. The course of action for an applicant without clinical or radiographic evidence of active tuberculosis is as outlined in Section VIII B 5.
 - c. The course of action for an applicant with either clinical or radiological evidence of active tuberculosis is as outlined in Section VIII C.
 - d. Applicants are instructed to report to OMS if they develop an unexplained fever that lasts more than two 2 weeks, night sweats or a persistent cough.
- B. If the applicant is discovered to have a positive TST by OMS:
 1. The applicant receives detailed counseling and written information regarding the signs and symptoms of early pulmonary tuberculosis and is encouraged to receive treatment if appropriate (see Section VIII B 5).
 2. The TB health survey and quiz (Attachment III) is administered.
 3. A posterior-anterior (PA) chest radiograph is ordered, unless the applicant can provide documentation of a normal chest radiograph within the past 12 months.
 4. For those employees with clinical or radiographic evidence of active tuberculosis, see Section VIII C.
 5. Employees without clinical or radiographic evidence of TB are referred to their personal health care provider for consideration of treatment for latent TB. For this, they are given a referral memo (Attachment IV) and a

IV-16. TUBERCULOSIS SURVEILLANCE PROGRAM

- copy of the chest radiograph from CC Diagnostic Radiology.
6. Applicants 35 or more years old are not referred for treatment unless the positive TST represents a skin conversion.
 7. The applicant is medically cleared for duty as outlined in VII.
 8. If the positive test represents a skin test conversion and the applicant does not complete the recommended prophylaxis, the applicant is asked to return to OMS six months from the discovery of the positive TST to complete the TB Quiz and Health Survey and receive a PA chest radiograph, followed by 3 additional PA chest radiographs, spaced every 6 months.
 9. Employees eligible for recall receive a periodic memorandum that reviews the signs and symptoms of pulmonary tuberculosis and encourages them to seek treatment if they experience unexplained fever lasting two weeks, night sweats or a persistent cough.
 10. A proportion of all “positive” TST are false positives, that is, they do not indicate actual past infection with *M. tuberculosis*. OMS may offer re-testing of “positives” in an attempt to distinguish true from false positives. This is always done in consultation with a physician.
- C. If the applicant is discovered to have a positive TST by OMS and the worker has either clinical or radiographic evidence of active TB:
1. The individual is not medically cleared to return to the work site, is provided with a mask and receives detailed verbal counseling and written information appropriate to the employee’s level of education and comprehension of spoken English (see Section VIII B 1).
 - a. If the individual has not yet been hired, the NIH 750-2 form is not issued and the Human Resources Department is immediately notified by telephone that the applicant is not medically cleared for duty. The applicant is referred to a personal physician or appropriate health department for further evaluation and treatment.
 - b. If the individual is already employed, the supervisor is advised that the employee is not permitted to return to the worksite until the medical evaluation is completed and the individual is medically cleared by OMS.
 - c. If the individual is already employed, has work responsibilities that may have involved an exposure to *M. tuberculosis*, and has a prior negative TST performed by OMS:
 - i. The employee is asked to complete the TST Conversion Assessment (Attachment V).
 - ii. The infection is presumed to be occupationally acquired unless there is a definite non-NIH exposure documented.
 - iii. The occurrence is recorded as an occupational illness and the appropriate Federal Workers’ Compensation claim forms are issued (reference the OMS Occupational Injuries and Illness procedure).
 - iv. Further evaluation and treatment is provided by the

IV-16. TUBERCULOSIS SURVEILLANCE PROGRAM

- individual's personal health care provider or health department and costs are reimbursed through the Workers' Compensation Program (see IX H 5).
- d. Ideally, three sputum samples are obtained during the following three days via the individual's personal health care provider or health department. If necessary, the Clinical Center respiratory therapy department can be utilized to obtain the first specimen. This process is initiated by calling the respiratory therapy supervisor on call who will arrange for the use of an appropriate room in the Clinical Center. A smear from each of the samples is stained for acid-fast bacilli (AFB) and the specimens are cultured for *M. tuberculosis*.
 - e. If all three sputum smears are negative for AFB and the clinical or radiographic findings can reasonably be attributed to a condition other than active pulmonary tuberculosis, the applicant is medically cleared for duty as described in Section VII A.
 - f. If any of the three sputum smears are positive for AFB or the clinical or radiographic finds cannot reasonably be attributed to a condition other than active tuberculosis:
 - i. If the individual works in any capacity with, or in close proximity to nonhuman primates, the appropriate IC Animal Program Director is notified.
 - ii. Medical clearance is provided only after the individual completes at least two weeks of therapy and has three consecutive negative sputum smears.
 - iii. If the individual is already employed, HES or Division of Occupational Health and Safety (DOHS) is notified and, when the clinical impression of active tuberculosis is confirmed, a TB contact study is initiated (see Section X).
 - iv. The OMS TB Surveillance Program Coordinator closely monitors the subsequent clinical course and compliance with treatment.

IX. Recall

- A. Periodic recall for repeat TST testing is mandatory for individuals with a negative reaction and who have higher risk work activities or access nonhuman primates or their living quarters (see V G and H above):
- B. Identification of work locations and individuals eligible for recall:
 - 1. Work areas and occupational groups within the CC are identified by HES.
 - 2. Like areas and occupational groups on the remainder of the NIH campus are identified by the DOHS.
 - 3. Individuals are identified at the time of the pre-placement medical evaluation or at a later date by the employee or the supervisor.
 - 4. Periodic risk assessments in the CC are conducted by the CC HES.

IV-16. TUBERCULOSIS SURVEILLANCE PROGRAM

Changes to periodic recall for a particular area or group are conveyed to OMS by the HES.

- C. Periodicity for recall:
 - 1. Employees identified as having work responsibilities which may place them at greater risk for exposure to *M. tuberculosis* are retested every twelve months.
 - 2. Employees working in areas with nonhuman primates are retested every six months.
 - 3. Repeat testing may be offered every three months for employees in the area or occupational group where a significant increase in the rate of TST conversions has occurred.
 - 4. Although any NIH employee may request and receive a voluntary TST as often as once a year, they are not recalled by OMS for the testing.
- D. Employees who are required to participate in the TB Surveillance Program (see Section IX A) are notified by inter-office mail to schedule their periodic visit (Attachment VI).
 - 1. A participant who does not return for re-evaluation within four weeks of the recommended date is sent a second reminder notice to schedule an appointment (Attachment VII).
 - 2. If a participant who works in the Clinical Center does not return for the periodic visit after the second notice, HES is informed. HES notifies the employee's department chief of the non-compliance.
 - 3. Employees who work with live non-human primates are required to participate in this program. If these workers do not return for periodic reevaluation, their supervisor and the Animal Program Director for the IC are notified (reference the Animal Exposure Program).
- E. If the employee has a prior positive TST, the employee is not eligible for periodic skin testing and an annual TB memorandum is sent by inter-office mail (Attachment VIII).
- F. Periodic testing is performed as described in Section VI.
- G. If the periodic TST is negative, the employee is returned to duty. Individuals working with nonhuman primates are returned to duty with an OMS AEP Medical Evaluation form (reference the Animal Exposure Program) to give to their supervisor. The employee is given a copy to retain for their personal records.
- H. If the periodic TST is positive (e.g. a conversion):
 - 1. The employee completes the TST Conversion Assessment form (Attachment V).
 - 2. A PA chest radiograph is obtained.
 - 3. If the employee's work responsibilities involve potential exposure to *M. tuberculosis* and there is no known non-occupational exposure to TB, the infection is assumed to be occupationally acquired.
 - a. The occurrence is recorded as an occupational illness and the appropriate Federal Workers' Compensation claim forms are issued (refer to Occupational Injuries and Illnesses Procedure).
 - b. HES is notified and a review is undertaken to determine whether

IV-16. TUBERCULOSIS SURVEILLANCE PROGRAM

other employees in the same work area or occupational group have converted. A special surveillance is conducted by OMS and repeat skin testing is administered at three months.

4. If the employee was recalled because of contact with live nonhuman primates or if the risk assessment identifies a likely non-occupational source, the infection is not presumed to be occupationally acquired (reference VIII C 2 and 3).
5. If the employee does not have either clinical or radiographic evidence of active tuberculosis:
 - a. Treatment for latent TB is offered to the NIH employees whose work responsibilities involve potential exposure to *M. tuberculosis*.
 - b. Treatment for latent TB is not offered to an employee who is eligible for recall only on a basis of work with nonhuman primates. If the risk assessment identifies a likely non-occupational source, the course of action is followed as outlined in Section VIII B.
 - c. OMS will consider offering treatment for latent TB if the employee works with nonhuman primates and cannot obtain treatment from a community health care provider.
6. If the employee has either clinical or radiographic evidence of active tuberculosis, the course of action is as outlined in Section VIII C.

X. TB exposure Contact Studies

- A. Eligibility: anyone (including a contractor, visitor, etc.) who is identified as significantly exposed in the course of his/her duties or time at NIH to an individual with active tuberculosis, is encouraged to fully participate in an epidemiological contact study.
- B. Identification of index patient: HES or DOHS identify the index patient to OMS staff responsible for conducting the contact study. The index case is identified by initials to maintain confidentiality. Necessary medical information is conveyed to the responsible OMS staff as it becomes available.
- C. Identification of contacts: HES or DOHS identify those exposed depending on the NIH location of the exposure (refer to the Contact Study Guidelines for additional details).
- D. Initial visit:
 1. Individuals exposed are questioned regarding their exposure and relevant symptoms, if any, using the Report of TB Exposure form (Attachment IX).
 2. If the employee can document a prior positive TST, the course of action is as outlined in Section VIII A.
 3. Employees with a previously documented negative TST are skin tested unless their most recent documented negative TST was administered with two weeks.
 - a. If the TST is negative, an appointment is scheduled for the

IV-16. TUBERCULOSIS SURVEILLANCE PROGRAM

employee to return for repeat testing twelve weeks from the date of their last contact with the index case. If the employee is eligible for recall through this program, but has not previously had two-step testing and the last documented TST occurred more than two months prior to this test, two-step testing is performed.

- b. If the first contact study TST is positive, the course of action is as outlined in Section VIII B and C based upon the absence or presence of symptoms suggestive of active tuberculosis. Infection in this situation is presumed not to be work-related.

- E. Follow-up visit
 1. The Report of TB Exposure form (Attachment IX) is completed twelve weeks from the date of the last contact with the index case.
 2. If the initial contact study TST was negative, the tuberculin skin test is administered.
 3. If the TST is negative, the procedure outlined in Section IX G is followed.
 - a. If the TST is positive, the course of action is as outlined in Section IX H.
 4. If the initial contact study TST was positive and the employee has not begun treatment for latent TB, the interval health survey and TB quiz (Attachment III) is administered at the twelfth week visit. If the employee has symptoms suggestive of active tuberculosis, a PA chest radiograph is obtained and procedures as outlined in Section VIII C are followed.
- F. Treatment Eligibility: a NIH employee with a TST conversion, which is presumed to result from employment activities, is eligible for treatment by OMS. The employee may be identified as part of a contact study (Section X, B and C) or during routine periodic testing (Section IX, H).
 1. Treatment for latent TB is also considered for employees who are immunosuppressed and are known contacts of individuals with active tuberculosis.
 2. Individuals who are not NIH employees are not eligible for treatment by OMS.
- G. Prior to initiating treatment, the employee undergoes a focused physical examination. Serum transaminase levels (AST/ALT) and complete blood count (CBC) are checked. Women of childbearing age undergo pregnancy testing.
- H. Treatment consists of isoniazid (INH) 300 mg and pyridoxine (Vitamin B6) 50 mg daily for six to nine months.
 1. Treatment is provided for twelve months if the employee is immunosuppressed.
 2. If the index patient is infected with a strain of *M. tuberculosis* resistant only to isoniazid, treatment as a four-month course of rifampin may be offered in consultation with an Infectious Disease specialist.
 3. If the index patient is infected with a multi-drug resistant strain of *M. tuberculosis*, the decision regarding the medications used for treatment is made in consultation with an Infectious Disease specialist.

IV-16. TUBERCULOSIS SURVEILLANCE PROGRAM

- I. An OMS clinician counsels the employee regarding symptoms of drug toxicity, provides a one month supply of medication, and instructs the employee to return to OMS for routine laboratory testing in three weeks. In addition, the clinician instructs the employee to discontinue treatment and immediately return to OMS if any symptoms suggestive of medication-related toxicity occur.
 - J. A log is maintained for all employees receiving treatment, recording the worker's name, indication for treatment, whether or not Workers' Compensation claim forms were issued, the treatment provided and results of laboratory tests performed. The log is stored in the OMS medication room and is updated with each treatment-related visit to OMS.
- XI. Reports
- A. Reporting is provided to the Director, DOHS on a situation by situation basis.
 - B. DOHS and HES receive quarterly summaries of any TB exposure contact study completed during the interval. Personal identifiers are excluded from contact study summaries to maintain the medical confidentiality of both the index case and participating employees (refer to Contact Study Guidelines).
 - C. The HES receives semi-annual reports which include the number of eligible employees in the CC who are enrolled in the Tuberculosis Surveillance Program and the number that are participating in the recall portion of the program.
 - 1. This information is subdivided by the number of employees who are TST negative and the treatment status of those that are TST positive.
 - 2. This information is also subdivided by occupational group (e.g. housekeepers, nurses, etc.) and work location.
 - D. The HES is immediately notified of skin test "conversions" in a Clinical Center employee that is believed to be occupationally related.
 - 1. This report includes the name, occupation and work location(s) of the employee when the conversion is discovered.
 - 2. The underlying conversion rates for each work area and occupational group are reported as well.
 - E. In the same fashion, if a TST conversion is documented in a non-Clinical Center employee, this information is transmitted promptly to the DOHS for epidemiologic investigation.
 - F. The supervisor and related IC Animal Program Director are notified if an employee who has contact with a live non-human primate fails to comply fully with the provisions of the Tuberculosis Surveillance Program.
- XII. References
- A. Essential Components of a Tuberculosis Prevention and Control Program. Screening for Tuberculosis and Tuberculosis Infection in High-risk Populations: Recommendations of the Advisory Committee for the Elimination of Tuberculosis. MMWR 1995; 44 (RR-11).
 - B. Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings. MMWR 2005; 54 (RR-17).

IV-16. TUBERCULOSIS SURVEILLANCE PROGRAM

- C. Sokal JE: Editorial, Measurement of Delayed Skin-Test Responses. N Eng J Med 293:501502, 1975.
- D. The Use of Preventive Therapy for Tuberculosis Infection in the United States: Recommendations of the Advisory Committee for Elimination of Tuberculosis. MMWR 1990; 39 (RR-8) 1-7.
- E. Villarino et. al.: Skin Testing with Two Commercial Tuberculin Reagents: Indistinguishable Specificity in Persons at Low Risk for Tuberculosis Infection. JAMA 1999, Jan 13; 281 (2): 169-71.

Questionnaire for Tuberculin Skin Testing

Some immunizations, viral infections and medical treatment can decrease your response to the skin test for tuberculosis.

Please tell the nurse if you have had:

- An immunization for measles, mumps, rubella, yellow fever, or varicella within the past six weeks.

OR

- A viral infection (for example, influenza, mononucleosis, hepatitis, chicken pox, herpes simplex, or HIV) within the past month.

OR

- Current treatment with prednisone or other medication that may suppress your immune system.

Also, please tell the nurse if you ever have had a positive tuberculin skin test (TST).

The nurse will discuss your tuberculosis screening options with you.

Date:

To: Tuberculosis Surveillance Program (TBSP) Participant

From: TBSP Coordinator
Occupational Medical Service, DOHS

Subject: Outside Placement of a Tuberculin Skin Test

If you are unable to have your tuberculin skin test (TST) placed and read by the Occupational Medical Service (OMS), you may have your personal health care provider place the skin test. Please have your health care provider complete the form at the bottom of this memorandum.

An OMS clinician must read the test either two or three days after it is placed. Bring this memorandum with you when you visit OMS. You may schedule an appointment through the scheduling clerk at (301) 496-4411.

This is to certify that we placed a tuberculin skin test for:

_____ on _____

TST 0.1 ml ID _____ L _____ R forearm

Manufacturer Lot # _____

Signature _____

Address _____

Health Survey and TB Quiz

Name: _____ SSN (last 4 only): _____

Date: _____ Institute/Center: _____ Bldg: _____

Room: _____ Phone: _____

Have you had any of the following within the past 12 months:

	<u>Yes</u>	<u>No</u>	<u>Comments</u>
1. Fatigue or general loss of energy lasting two weeks or more.	<input type="checkbox"/>	<input type="checkbox"/>	_____ _____
2. New, unexplained cough lasting three weeks or longer.	<input type="checkbox"/>	<input type="checkbox"/>	_____ _____
3. Loss of appetite for more than two weeks.	<input type="checkbox"/>	<input type="checkbox"/>	_____ _____
4. Unexplained weight loss of 10 lbs. or more than 10% of your normal weight.	<input type="checkbox"/>	<input type="checkbox"/>	_____ _____
5. Fever greater than 100° F that lasted for at least two weeks.	<input type="checkbox"/>	<input type="checkbox"/>	_____ _____
6. Night sweats (drenching bed clothes with sweat) that lasted for at least one week	<input type="checkbox"/>	<input type="checkbox"/>	_____ _____
7. Any significant change in your health. If yes, please explain.	<input type="checkbox"/>	<input type="checkbox"/>	_____ _____

OVER

Please mark the following questions as True or False.

Tuberculosis is a disease caused by bacteria which grows best in the small sacs of the lungs, but may also infect other parts of the body.

True

False

Tuberculosis is usually spread from respiratory (lung) droplets which become airborne by coughing, sneezing and talking.

True

False

A positive TB skin test, even with a negative chest x-ray, can suggest infection with *M. tuberculosis*.

True

False

The risk of acquiring a TB infection from a person with active disease increases if the room is poorly ventilated, if the number of TB bacteria in the air increases or if the exposure takes place over a long period of time.

True

False

A person with active TB typically experiences low grade fever, night sweats, fatigue, weight loss and a persistent cough.

True

False

If your tuberculin skin test is positive and you do not have any symptoms of the active disease, your risk of developing clinical (active) tuberculosis is greatest in the first two years following your infection with TB.

True

False

Active TB can be successfully treated by seeking appropriate medical attention and taking multiple medications prescribed by your physician for a minimum of 6 months.

True

False

Date: _____

_____ is referred to your for consideration for tuberculosis prophylaxis. His/her intermediate strength (5 TU) tuberculin skin test read today measures _____ millimeters of induration. The PA chest radiograph does not reveal any pulmonary abnormalities. The patient has a copy of the radiograph.

Please call (301) 496-4411 if you have any questions.

Occupational Medical Service
Building 10, Room 6C306
(301) 496-4411

County Health Department recommendations:

Signature

TST Conversion Assessment Form

Employee Name: _____ SSN (last 4 digits) _____

Current city and state of residence: _____

1. Since your last negative TST, have you resided in (check all that apply)
- | | | |
|--|---|--------------------------------|
| <input type="checkbox"/> New York City | <input type="checkbox"/> Honolulu, Hawaii | <input type="checkbox"/> Texas |
| <input type="checkbox"/> Jersey City | <input type="checkbox"/> Washington, DC | |
| <input type="checkbox"/> Miami | <input type="checkbox"/> California | |

If any selected, give details: _____

2. Since your last negative TST, have you traveled outside the U.S. to any foreign countries:
- Yes No

If yes, give details: _____

3. Since your last negative TST, have you had outside employment or volunteer activities where you were exposed to:
- recent immigrants
 - homeless persons
 - clients of correctional institutes
 - immunosuppressed persons

If any selected, give details: _____

4. Since your last negative TST, have any close friends or family members had symptoms of active tuberculosis (persistent cough over 2 weeks, unexplained weight loss, fever, night sweats, malaise)?

If any selected, give details: _____

5. Since your last negative TST, have you had close contact with any persons who you believe had active tuberculosis:
- Yes No

If yes, give details: _____

Date:

To:

From: Surveillance Program Coordinator
Occupational Medical Service, DOHS

Subject: Tuberculin Skin Test Recall

Your Occupational Medical Service (OMS) record indicates that you are due to receive a tuberculin skin test as part of your participation in either the TBSP or the AEP. Participation in this program is mandated for individuals who are at an increased risk for exposure to tuberculosis at work and for employees who have access to nonhuman primates of their living quarters.

Please call 301 496-4411 within two weeks of the date of this memorandum to schedule an appointment to receive a skin test. Please be aware that your department head or clinical director will be notified if you do not comply with the recommended tuberculosis surveillance. **Noncompliance with this program may result in administrative action.**

Date:

To:

From: Surveillance Program Coordinator
Occupational Medical Service, DOHS

Subject: Tuberculin Skin Test Recall - Second Notice

Occupational Medical Service (OMS) records indicate that you did not respond to a prior request to return to the clinic for tuberculin skin testing as part of your participation in the either the TBSP or the AEP. Participation in this program is mandated for individuals who are at an increased risk for exposure to tuberculosis at work and for employees who have access to nonhuman primates of their living quarters.

You may also call 301 496-4411 within two weeks of the date of this memorandum to schedule an appointment to receive a skin test. Please be aware that your department head or clinical director will be notified if you do not comply with the recommended tuberculosis surveillance. **Noncompliance with this program may result in administrative action.**

Date:

To:

From: Surveillance Program Coordinator
Occupational Medical Service, DOHS

Subject: Annual Reminder - Tuberculosis Surveillance Program (TBSP) and/or Animal
Exposure Program (AEP)

Your Occupational Medical Service (OMS) record indicates that you are enrolled in the TB Surveillance Program and that you have had a positive tuberculin skin test (TST). A positive TST indicates that you have been infected with the TB bacterium. Most people who have been infected with the TB bacterium remain healthy and cannot infect others. However, about one out of ten infected people may develop active tuberculosis sometime during their life. People who have completed the recommended course of INH prophylaxis against active tuberculosis greatly reduce their chances of developing active disease, but even they are not completely protected.

OMS sends this annual memorandum to remind you of the earliest symptoms of active tuberculosis. These symptoms include: a fever of 100° F (38° C) or greater that lasts two weeks and cannot be explained; profuse sweating at night; a new, unexplained cough lasting three weeks or longer; fatigue; loss of appetite; and loss of weight.

You do not need to report to OMS unless any of these symptoms suggestive of active tuberculosis do occur. If you have any questions, please call the TB Surveillance Coordinator at (301) 496-4411.

Employee Report of TB Exposure

Report Date _____
 Index pt. _____

Baseline History:

Employee Name _____ Job Title _____
 Work Address _____ Work Phone _____
 Social Security Number _____ Date of Birth _____

Employee Health History:

Chronic illness Yes No
 Stated medical condition(s) _____
 In the past month, has there been any change in your health? Yes No
 Describe briefly _____
 Have you ever been told that you had a positive tuberculin skin test? Yes No
 Size of test _____ mm If so, when? _____
 Last CXR _____ Result _____
 Have you ever received medical treatment for tuberculosis? Yes No
 If so, what did you receive and for how long?

Medication	Duration
Isoniazid (INH)	
Rifampin	
Pyrazinamide	
Ethambutol	
Streptomycin	

Enrolled in TB surveillance? Yes No
 Enrolled today? Yes No
 If no, why not? contract not occupationally indicated short stay
 Last PPD _____ Result _____

Exposure to index patient:

Period of infectivity (index) _____
 Date(s) of exposure _____
 Frequency weekly daily hourly
 # of times with index _____
 Duration _____ hours/minutes (total time spent)
 Purpose PT. Care Physical Examination Hskp
 Nutrition Phlebotomy Social Work
 Other, explain _____
 Was the index patient coughing? Yes No
 Personal protection _____

Employee Report of TB Exposure

Report Date _____
Index pt. _____

Baseline History:

PLEASE CIRCLE ONE:

> 30 minutes: significant 15-30 minutes: intermediate <15 minutes: minimal

Baseline exposure PPD testing: Initial 2 step test required Yes No

Step One:

PPD date/time _____ Read PPD date/time _____
0.1ml PPD (5TU), ID:R/L arm _____ mm negative/positive
manufacturer/lot# _____ Read by _____
Placed by _____

Step Two:

PPD date/time _____ Read PPD date/time _____
0.1ml PPD (5TU), ID:R/L arm _____ mm negative/positive
manufacturer/lot# _____ Read by _____
Placed by _____

TB quiz/health survey:

CXR date _____ Results _____ Yes No
Ordered by _____

Ordered on the basis of:

- Positive PPD at baseline testing
- History of symptoms suggestive of TB
- No CXR within 2 years post positive TB test

Follow up in 12 weeks

Employee prefers e-mail notification Yes No
 inter office mail

Employee Report of TB Exposure

Report Date _____

Index pt. _____

12 Week Post Exposure follow up:

In the past month, have you had:

	Yes	No
Persistent cough	<input type="checkbox"/>	<input type="checkbox"/>
Night sweats	<input type="checkbox"/>	<input type="checkbox"/>
Unexplained fever/chills	<input type="checkbox"/>	<input type="checkbox"/>
Unexplained weight loss	<input type="checkbox"/>	<input type="checkbox"/>

If yes, explain _____

Follow up testing:

PPD date/time _____ Read PPD date/time _____

0.1ml PPD (5TU), ID:R/L arm _____ mm negative/positive

manufacturer/lot# _____ Read by _____

Placed by _____

Tb Quiz Yes No Not Applicable

CXR date _____ Results _____

Ordered by _____

Ordered on the basis of:

- Positive PPD at baseline testing
- History of symptoms suggestive of TB

OMS recommendations:

- HES notification
- No further recal
- Recall per OMS TB surveillance
- Treatment as follows per _____ M.D.

Occupational Medical Service

CONTACT STUDY SUMMARY: M. tuberculosis

Contact with: Human
 Non-human primate

Index Patient's Initials	Index Patient's Diagnosis	Index Patient's Location		
HES/OSHB Consultant	Date OMS Notified	OMS Contact Phone		
DESCRIPTION		DATE(S)	#	%
Employees potentially exposed				NA
Employees reporting for baseline evaluation				
PPD prevalent positive				
PPD positive, discovered at baseline				
Converter				
Not a converter				
PPD negative				
Follow up evaluation				
PPD prevalent positive – TB Quiz & Health Survey				
PPD Positive, converter				
PPD negative				
Comments:				

Date:

To: Whom It May Concern

From: Occupational Medical Service

Subject: Tuberculin Skin Test Results

This is to certify that _____ has been screened for Tuberculosis on _____.

The Tuberculin test: PPD 5 TU (0.1 ml) ID _____ L _____ R forearm
Aventis Pasteur Lot # _____
Parkedale Lot # _____

Signature: _____

The Tuberculin test was read on _____ .

Results:

Negative _____ mm reaction Comments:
 Positive _____ mm reaction

Signature: _____
RN, PA, or Physician

Occupational Medical Service
National Institutes of Health
10 Center Drive
Building 10/6C306
Bethesda, MD 20892
301-496-4411

Date:

To: Whom It May Concern

From: Occupational Medical Service

Subject: Certificate of Tuberculin Skin Test Results

This is to certify that _____ has been screened for tuberculosis.

PPD 5 TU (0.1 ml) ID _____ L _____ R forearm
Mfg/Lot # _____

Placed on _____ and read on _____.

Results:

- Negative _____ mm induration
- Positive _____ mm induration **
- Conversion: _____ Yes _____ No
- Chest x-ray done on _____
Results:

Referred to personal physician to discuss TB prophylaxis.

Comments:

RN, PA, MD
Occupational Medical Service
(301) 496-4411

**Do not receive another TB skin test. Keep this form for your records.