



**UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
Office of Marine and Aviation Operations**

**EVERYTHING YOU ALWAYS WANTED TO KNOW ABOUT TUBERCULOSIS  
(AND SOME THINGS YOU DIDN'T KNOW)**

**WHAT IS TUBERCULOSIS (TB)?** TB is a disease caused by the germ *mycobacterium tuberculosis* and can affect almost any organ or tissue in the body. It is spread by inhaling the germ, most commonly affects the lungs, and can cause serious health problems if not treated. NOAA is concerned about TB because it is easily spread from one person to another, especially when they reside in close quarters such as a ship or airplane environment. This problem is addressed by testing for the presence of TB and by medications to treat it.

**HOW DO YOU TEST FOR TB?** Testing is performed to identify infected individuals who are at higher risk for TB exposure or infection and those at a higher risk for TB disease once infected. This is done by injecting a tiny amount of purified protein derivative (PPD) under the skin on the forearm. The area the test was administered on your forearm will be viewed by a medical professional in several days. They will measure and record any area of elevated redness. This does not mean you have active TB disease, but it may mean that you have come in contact with the TB germ. It takes 2-10 weeks from the time you are exposed to the germ for the PPD to become positive. If your skin test is read as positive, you will be asked to get a chest x-ray to make sure that you do not have active disease.

**WHEN IS A TB TEST READ AS POSITIVE?** A TB skin test is read as positive if the raised red area on the skin where the test is measured:

- Greater than or equal to 5 mm and you have known HIV, have recently been exposed to active TB, have a chest x-ray suggestive of previous TB, or have other health problems that affect your immune system.
- Greater than or equal to 10 mm if you have been to another country where TB is common less than 5 years ago, you use drugs that you inject, you live or work in a high risk setting, or you have other medical risk factors.
- Greater than or equal to 15 mm if you have no known risk factors for TB and are otherwise healthy.

**WHO HAS TO TAKE MEDICATION FOR TB?** If your chest x-ray is positive, you will be referred to your doctor to begin medication to treat the infection. You will also need to begin medication if you have a positive PPD skin test, have no physical symptoms of the disease, and have normal or minimal changes on your chest x-ray (called latent TB). Taking medication for latent TB will reduce the risk that the TB infection will progress to the actual disease. Your doctor will make the decision where you will be treated with medications. You will be allowed to sail on a NOAA ship once you have begun medications and you continue to take them as prescribed.

**WHAT IF I ALREADY HAD A VACCINE FOR TB (CALLED BCG)?** This vaccine is not widely used in the United States but is often given to children in other countries where TB is common. This vaccine, however, does not always protect people from getting TB. You may have a positive reaction to a TB skin test even if you got the BCG vaccine. This reaction may be due to the vaccine itself or due to an actual TB infection. If you have had the BCG vaccine in the past and now have a positive PPD skin test, you may have been infected with the TB germ if you spend time with someone who has active TB disease, if you are from an area of the world where TB is very common (Latin America, Caribbean, Africa, Asia, Eastern Europe, Russia), or if you spend time in an area where TB is common (homeless shelters, migrant camps, drug treatment centers, jail or prison, health care clinics). This vaccine does not provide a lifelong immunity to TB, and you will still be required by NOAA get a skin PPD test every year.

**There is no reliable method to tell if a positive PPD skin test is caused by the vaccine or by contact with the TB germ,** though skin reactions of greater than or equal to 20 mm are not likely caused by the BCG vaccine. A positive reaction to the PPD skin test in a person who received the BCG vaccine more than 5 years ago usually

indicates infection with the TB germ when the tested person is at increased risk for recent infection or has medical problems that increase the risk for TB.

**WHAT IF I HAVE RECEIVED MEDICAL TREATMENT FOR TB IN THE PAST OR HAVE BEEN GRANTED A PERMANENT NOAA WAIVER FOR A POSITIVE PPD SKIN TEST?** If you are one of these people, you will not be required by NOAA to have a PPD skin test now or in the future. Per NOAA policy, however, you will be required to have a chest x-ray every 5 years instead of the yearly PPD skin test. A copy of the results of this x-ray or a letter from your doctor with the date and results of this x-ray must be received by NMAO Health Services before embarking on a NOAA vessel. You will not be allowed to embark without this information on record at NMAO Health Services.

**WHAT IS NOAA'S POLICY ON TESTING FOR TB?** NOAA does a PPD skin test for everyone who embarks on one of its ships each year. The exceptions are for those who had an anaphylactic reaction to the test, those who have been treated with medications for latent TB in the last 5-10 years (written documentation from your doctor must be provided to NOAA), and those previously deemed eligible to sail by NOAA and who have a positive TB test. For these people and for those who otherwise refuse a PPD skin test, a chest x-ray and a medical exam for symptoms will be required. Before sailing on a NOAA ship, you must produce proof (i.e. medical records or a letter from the doctor who treated you) that you have received treatment if you have a positive PPD skin test of greater than or equal to 15 mm, your skin reaction to the test has increased by 10 mm from the previous one, if your PPD skin test is greater than 10mm and you have risk factors for TB (discussed above), or if your skin reaction was 20mm or greater and you have received the BCG vaccine in the last 5 years.

**WHAT ARE NOAA'S MEDICAL PROCEDURES FOR THOSE WHO ARE DISQUALIFIED FOR SEA DUTY DUE TO A POSITIVE PPD SKIN TEST?**

For anyone disqualified from sailing for a positive PPD test and who has not undergone medical treatment, there are two options by which you can become qualified. These options are listed below. **In all cases, a chest x-ray and HIV test must be obtained and these results submitted to NMAO's medical personnel ONLY.**

**Option One** – Complete and submit a tuberculosis questionnaire (obtained from the NOAA Health Services Office and submitted back to them when complete).

- A. If it is determined, based on this questionnaire that you have no risk factor(s) for developing active TB, NOAA will deem you qualified to sail.
- B. If it is determined that you DO have risk factors for developing active TB, you will be required to begin medication to protect you before NOAA will qualify you to embark on a NOAA vessel.

Risk factors include: a positive HIV test, taking any medication or having a medical problem that reduces you body's ability to fight infection, history of IV drug abuse, clinical symptoms or chest x-ray results consistent with prior or current TB infection, contact with a known positive case of TB, or travel to or being from a foreign country where TB is common. Other risk factors include a history of: being homeless, being in jail or prison, or working with these populations.

**Option Two** – If for some reason you do not/can not complete and submit the tuberculosis questionnaire to NMAO Health Services, you are advised to sign a medical release form giving the NMAO Health Services medical personnel permission to speak with and receive written documentation from your private medical doctor regarding the questions on the questionnaire.

- A. **If you refuse to sign this medical release, you will remain disqualified and may not embark on any NOAA ship.**
- B. If the medical release form is signed, the questionnaire will be sent to your medical doctor for completion and discussion with NMAO Health Services medical personnel.
  - 1. If the information requested on the questionnaire is not evident or not disclosed by your medical doctor, you will not be qualified to sail on any NOAA ship.
  - 2. After consultation with your medical doctor and the exchange of necessary information, the NMAO Health Services medical personnel will render a decision as to whether or not to recommend that you be qualified to sail.
- C. **All information must be received in writing before a decision to qualify is rendered. All final medical qualification decisions rest with the Director, NMAO.**

- D. If it is determined that you have no risk factors based on this information and the HIV test results for developing active TB, qualification will be granted.
- E. If it is determined that you DO have risk factors for developing active TB, you will be required to begin medication to protect you before a qualification will be granted for you to embark on a NOAA vessel. Risk factors are described above.

In either option, a medical qualification will not be granted until all required information is gathered. The process involved with Option Two can be time consuming. If not properly planned for ahead of time, it may result in an individual not being allowed to sail. Because approximately 10% of individuals with a positive PPD skin test will develop active TB over the course of their life time and because TB is recognized as a contagious disease, the NMAO Health Services Office has been directed by the NMAO to disqualify anyone from sailing aboard a NOAA vessel that poses a risk to others without previous medical treatment for TB.

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