

# How to Identify a Positive Tuberculosis (TB) Skin Test



Medically reviewed by Judith Marcin, MD, specialty in Family Medicine, on April 30, 2018 — Written by James Roland

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## Overview

Tuberculosis (TB) is a highly contagious disease. It's caused by an infection of bacteria called *Mycobacterium tuberculosis* (*Mtb*).

Exposure to *Mtb* can result in either active TB disease or latent TB infection. Latent TB means you're infected but have no signs or symptoms. Latent TB can also eventually become active TB disease.

Active TB disease is treated with a combination of medications for six to nine months. Latent TB is usually treated as well to prevent future active disease.

There are two types of tests used to diagnose TB: a blood test and a skin test. Your results from either test won't reveal whether you have latent or active TB. Instead, they're used to determine if you should be treated and with what type of medication.

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## what happens during a TB skin test:

A TB skin test is also called a Mantoux tuberculin skin test (TST). The test is usually well-tolerated, and people rarely have negative reactions to it.

A TB skin test is done in two parts:

### Part one

During one visit to a doctor's office or clinic, a tiny amount of tuberculin is injected under the skin, usually in the forearm. Tuberculin is a sterile extract **purified protein derivative (PPD)** made from the **bacteria** that cause TB.

After receiving the injection, a small, pale bump will form at the site.

### Part two

The second phase of the test takes place 48 to 72 hours later. At that time, your doctor will look at your skin to see how it reacted to the tuberculin. Your skin's reaction will help your doctor determine if you've been infected with TB.

If you wait longer than 72 hours, you'll have to start over with a new test and new injection.

If this is your first TB skin test and it's negative, you may be asked to return in one to three weeks for a repeat test to ensure the results are the same.

## Identifying infection

If you've been infected with **Mtb**, your skin around the site of the injection should start to **swell** and harden by 48 to 72 hours.

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This bump, or induration as it’s referred to clinically, will also turn red. The size of the induration, not the redness, is used to determine your results.

The induration should be measured across the forearm, perpendicular to the axis between your hand and elbow. Several factors affect how the test is interpreted.

Size of induration	Result
less than 5 mm	negative for TB
at least 5 mm	positive if: <ul style="list-style-type: none"><li>• you’ve had recent contact with someone with TB</li><li>• you are HIV-positive</li><li>• you have had an organ transplant</li><li>• you are taking immunosuppressants</li><li>• you have previously had TB</li></ul>
at least 10 mm	positive if: <ul style="list-style-type: none"><li>• you recently immigrated from a country with a high incidence of TB</li><li>• you live in a high-risk environment</li><li>• you work in a hospital, medical laboratory, or other high-risk setting</li><li>• you’re a child under the age of 4</li><li>• you’ve used injected drugs</li></ul>
15 mm or more	positive

An induration of less than 5 millimeters (mm) is considered a negative test result. If you have symptoms or you know you’ve been exposed to someone with TB, you may be advised to get another test later.

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- have had recent contact with a person with TB
- are HIV-positive
- have had an organ transplant

If you're taking immunosuppressant medications or you previously had TB, a 5 mm induration may also be interpreted as a positive test.

An induration of at least 10 mm may be considered a positive test if you're a recent immigrant from a country with a high prevalence of TB.

The same is true if you live in a high-risk environment such as a nursing home or work in a high-risk setting such as a hospital or medical laboratory. A 10 mm induration may also be considered positive in children under the age of 4 or people who use injected drugs.

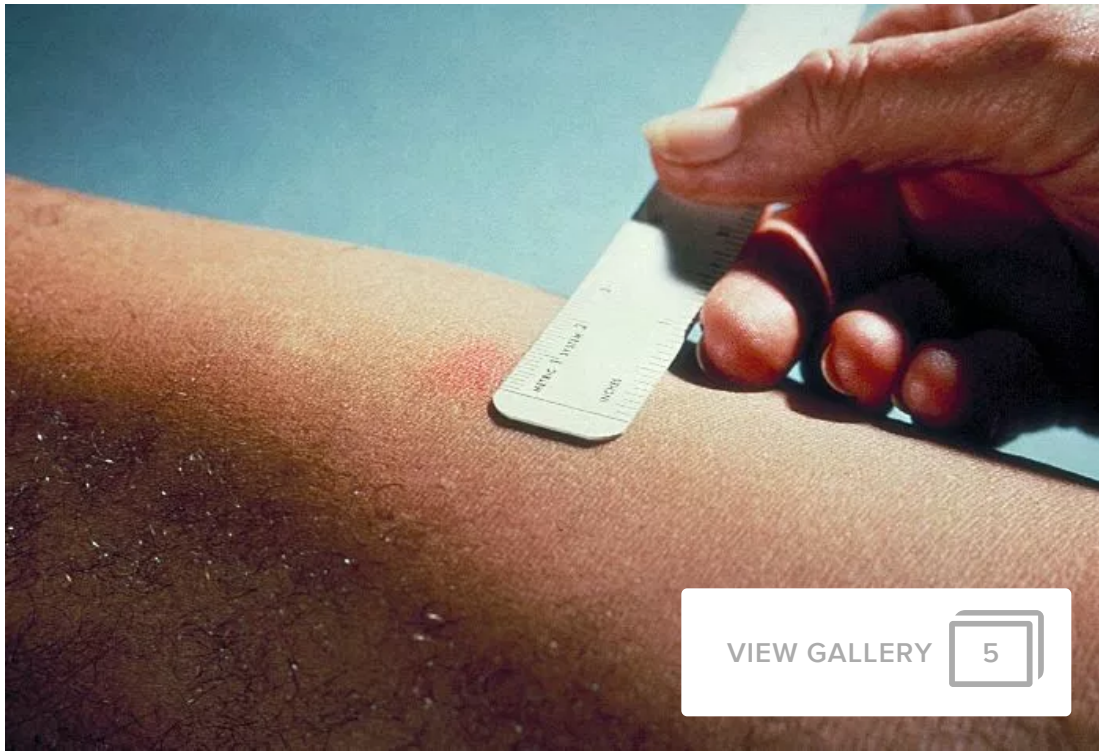
An induration of 15 mm or more is considered positive in anyone, even those who don't think they've been exposed to anyone with TB.



## Images of indurations

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## Understanding your test results

If you have a positive test result and you have symptoms or are considered at high risk of TB exposure, you'll likely be prescribed medications to clear up the infection and relieve symptoms.

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than the blood test, so you could have a positive skin test and a negative blood test.

## False positive result

If you've received the [bacillus Calmette-Guérin \(BCG\) vaccine](#), you may have a false-positive skin test result. It's used in certain countries to reduce a person's risk for developing TB.

Other reasons for a false-positive result include:

- improper administration of the test
- inaccurate interpretation of your test results
- infection with nontuberculous mycobacteria

## False negative result

You can also get a false-negative result, meaning the test is negative but you're actually infected with TB. Again, incorrect administration of the test or interpretation of the result could lead to a false-negative test result.

Certain immune system conditions, especially [an organ transplant](#), may also cause a false-negative skin test.

If you were exposed to TB in the past few weeks, you may not yet test positive for TB. Infants, even if they have TB, may not always have a positive skin test.

If a negative result appears, but your risk of TB exposure or your symptoms suggest it's likely that you have the infection, a second skin test can be done right away. A blood test can also be done any time.

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## Symptoms of TB

You'll only have symptoms if you have active TB disease. Having only the TB infection will not produce any noticeable symptoms.

One of the most common symptoms of TB is a cough that won't go away. You may also [cough up blood](#). Other symptoms include:

- [fatigue](#)
- [fever](#)
- [night sweats](#)
- [weight loss](#)
- [decreased appetite](#)

These symptoms can occur with many other conditions, so it's important to get tested.

Even a negative test is helpful because it can rule out TB and help your doctor find other causes for your symptoms.

## Next steps after a positive test

A positive skin test will usually be followed by a [chest X-ray](#). This can help determine the difference between active TB disease and latent TB infection. Your doctor will look for white spots that indicate areas where your immune system is responding to bacteria.

There may be other changes in your lungs caused by TB disease. Your doctor may decide to use a [CT scan](#) instead of (or as a follow-up to) a chest X-ray because a CT scan provides images of much greater detail.

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can identify the type of TB bacteria causing the infection. This helps doctors decide which medication to prescribe.

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## Takeaway

TB is treatable.

If you have TB, take all medications as prescribed and follow your doctor's recommendations to improve your odds for a full recovery.

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