

Latent Tuberculosis Infection (LTBI)

Brown Health Services Patient Education Series

What is TB?

Tuberculosis (TB) is a disease caused by *Mycobacterium tuberculosis*, a bacteria that is spread from person to person through respiratory droplets, when an infected person coughs or sneezes. TB usually affects the lungs, but can affect other parts of the body, such as the brain, the kidneys or the spine.

What is Latent TB Infection (LTBI)?

Not everyone infected with TB becomes sick. TB lives in the bodies of most infected people in an inactive form and does not cause any symptoms of disease. This condition is referred to as Latent TB Infection (LTBI). Persons with LTBI do not spread the disease to others. LTBI requires treatment with TB medications to prevent it from becoming active TB.

What is Active TB?

Over their lifetimes, 10% of people with untreated LTBI will develop active TB and become very sick. The risk for developing active TB is greatest within the first year after becoming infected. Risk is also greater as people age, and for those individuals who use intravenous drugs, have weakened immune systems, or chronic conditions such as HIV, silicosis, diabetes, leukemia, kidney disease.

If LTBI becomes active TB, it requires treatment with multiple, sometimes toxic drugs for many months. In active TB organisms easily spread to others. Treatment of LTBI with medication can stop the conversion of latent to active TB in over 90 % of people who complete the full course of LTBI medicine.

What are the symptoms of active TB?

Some people don't have symptoms. Others may develop:

- cough, sometimes with blood-tinged mucous
- fever
- night sweats
- unintentional weight loss
- unusual decreased appetite
- shortness of breath
- body sweats at night

What is a TB skin test (TST)?

The TB skin test is used to screen people who have been "targeted" for being at risk for tuberculosis. A small amount of inactivated TB protein (antigen) is inserted under the skin and observed for a skin reaction within a few days. A positive TST means that antibodies have reacted to the presence of TB bacteria in your body.

What else can cause a positive TST?

A recent BCG vaccine may sometimes cause a positive TST. BCG is a vaccine given in many countries where TB is endemic to prevent TB infection, but its protective effect is limited. BCG is not routinely given in the US and the Center for Disease Control generally advises that those with positive TST receive treatment for LTBI regardless of BCG history.

What about the TB Blood test?

Sometimes a TB blood test (IGRA) is advised for those who have received BCG in the past to help in diagnosis of LTBI. A positive TB blood test with no signs of active disease indicates latent TB infection, for which treatment is advised. Your provider will discuss whether this is indicated for you.

- This documentation can be presented in the future to any agency or medical provider who may request TB screening, as an explanation for why you do not need a TB screen again.

How do I know whether I have LTBI or active TB?

To distinguish between the active and latent form of TB, you will need to have a chest x-ray, medical history and brief physical exam with your provider. If you have a normal chest x-ray and do not have evidence of active disease in your lungs or elsewhere, then you have LTBI.

How is LTBI treated?

The good news is that there are effective medications available to treat LTBI and prevent development of active TB.

At Health Services three different medication regimens are used to treat LTBI:

- Isoniazid (INH) and Rifapentine weekly for 12 weeks OR
- INH daily for 9 months OR
- Rifampin daily for 4 months

Your provider will discuss which medication makes sense for your LTBI treatment.

How am I followed during my LTBI treatment?

- At Health Services, you will generally be required to have follow-up appointments with an RN (working together with your provider) every 1-2 months to make sure all is going well.
- You will receive reminders for LTBI re- visits.

What happens after I finish my LTBI treatment?

Once you have been treated for LTBI, there is no need to ever have another TB skin test (TST); once a TST is positive, it is positive for life.

- You do not need to repeat the IGRA test in the future either.
- When you complete a course of treatment for LTBI, Health Services will provide you with a card which documents your past history and your treatment.