

Latent Tuberculosis Infection (LTBI) and Its Treatment

What is Tuberculosis (TB)?

TB is an infectious illness and in most individuals it is caused by a bacteria "*Mycobacterium tuberculosis*". This is a highly contagious infection and spreads from one person to another person via airborne particles. This disease commonly affects the lungs, but can affect any part of the body, making the person unwell. This is called active TB infection. Active TB is curable with a course of medicines, lasting at least six months (it can be longer as well).

How do we catch TB infection?

Patients who have alive TB bacteria in their sputum, can spread the disease in their community. Mostly these are the patients with active TB involving their lungs or throat. One person with active TB of the lungs can spread this disease to 10 – 15 other people in their community (if appropriate precautions are not taken).

When someone with active TB of the lungs or throat coughs or sneezes, TB bacteria get into air within the tiny droplets of sputum and can remain suspended in the air for a long period of time. Close contacts of an these patients are at a very high risk of catching this infection.

What is Latent TB Infection (LTBI)?

It is also possible to have latent TB. This means TB bacteria are "asleep" in the body. As these bacteria are not causing active infection, so you do not feel unwell.

Mostly when someone catches TB bacteria, the defence mechanisms try to contain this infection. If defence mechanisms are successful then either people clear this infection or can contain this initial infection as latent TB. In both these cases people are non-infectious. In simple words, a person with latent TB does not spread TB infection to others.

TB bacteria may permanently stay asleep in people with latent TB. But at some point these can wake up and cause active TB, making you develop symptoms and become unwell. This is more likely to happen if your immune system becomes weakened.

How is latent TB diagnosed?

Latent TB is a clinical diagnosis. There is no test that definitely establishes the diagnosis of latent TB infection. Your doctor will look into your history and will select a test for immune response to TB antigen (tuberculin skin test or interferon gamma release assay). You will also need some radiological investigations e.g., x-ray.

What treatment do I need for Latent TB infection?

Latent TB is treated with a course of antibiotic/s and this can last for 3 or 6 months. It is important that you finish the full course of treatment to make sure that the TB bacteria are completely killed.

Are these medications safe?

As with any other medication, there can be side effects. Some side effects are minor, while others may be more serious. Commonly used tablets for treatment of LTBI are isoniazid and/ or rifampicin.

Some side effects of Isoniazid (INH) are:

1. Problems with blood cell count (regular blood tests are required to monitor)
2. Nerve disorders (vitamin supplements given to tackle this issue)
3. Derangements in liver functions (regular blood tests are required to monitor)

4. Skin reactions (inform your doctor immediately)
5. Gynaecomastia
6. High blood glucose levels
7. Pancreatitis
8. Some people can develop fever

Some side effects of rifampicin are:

1. Discolouration of body secretions (saliva, urine, tears, sweat); this improves on stopping the tablet
2. This medicine reduces effectiveness of hormonal contraception (other methods needed for contraception)
3. Nausea & vomiting (discuss measures with your doctor to improve this side effect)
4. Diarrhoea
5. Derangements in kidney functions (regular blood tests are required to monitor)
6. Derangements in liver functions (regular blood tests are required to monitor)
7. Derangements in blood cell count (regular blood tests are required to monitor)
8. Skin reactions (inform your doctor immediately)
9. Muscle weakness (inform your doctor immediately)
10. Flue like symptoms

Should I avoid certain food while on these medications?

Avoid food containing high tyramine or histamine rich food (fish, seafood, cheese, salami, yeast extract, fermented soya bean extract, beers, lagers, wines). Also tell your doctor about other medications including anti-epileptics and hormonal contraceptives.

Common symptoms of TB?

Latent TB does not have any symptoms. But common symptoms of active TB are:

1. Ongoing cough (for 3 weeks or longer)
2. Fever
3. Night sweats
4. Weight loss
5. Loss of appetite
6. Fatigue and tiredness

If you develop any then discuss with your doctor.

From where I can get further information and support?

1. British lung foundation website
2. Local TB nurse
3. TB Alert, the UK's national TB charity
4. TB Action Group (TBAG)