Latent Tuberculosis Infection

Information for patients and families

Read this information to learn:

• What Latent Tuberculosis Infection is
• How to treat it
• About the TB Clinic
• Who to contact if you have any questions
What is TB?
Tuberculosis (TB) is a bacterial infection caused by tiny bacteria called “Mycobacterium tuberculosis”. TB can affect any part of the body but usually affects the lungs. If a person who has Active TB disease in their lungs coughs, sneezes or shouts, the TB bacteria spray into the air. Another person may breathe the bacteria into their lungs.

Most people who breathe in the TB bacteria are able to stop it from growing because their body’s immune system controls it. The bacteria remain alive but not growing. This is called inactive or Latent TB Infection.

TB can be cured with antibiotic medications.

How contagious is TB?
TB is not as contagious as the flu or chickenpox. A person must spend many hours every day in close contact with a person with active TB disease in their lungs. People cannot get infected with TB by handshakes, sitting on toilet seats or sharing dishes with someone who has TB.

Some people are at higher risk of having TB Infection:
- People who have had close and long contact with people who have active TB of the lungs or throat
- People from areas of the world where TB is common
- People with alcohol use disorder
- Injection drug users
- People experiencing homelessness
- Staff and residents of nursing homes, shelters, hospitals and jails
- Older adults, especially those who have lived at a time when TB was common
What is Latent TB infection?

A person with Latent TB infection has breathed in TB bacteria into their lungs. Sometimes the immune system is able to control the bacteria. If a person's immune system is able to control the bacteria, this person has Latent TB infection.

A person with Latent TB infection does not feel sick and cannot spread TB to others. They do not have to take any precautions to stop the spread of TB. They should continue to go to work or school and do their normal activities. However, people with TB infection may develop Active TB disease in the future, especially if their immune system weakens. Treating TB infection can prevent TB disease.

When Latent TB infection progresses to Active TB disease

Why does Latent TB infection develop into Active TB disease?

A person with Latent TB infection may develop Active TB disease if their immune system can't stop the bacteria from growing. The highest risk of TB disease is within the first 2 years of becoming infected. After the first 2 years, there is about a 5 to 10% chance of developing TB disease during an otherwise healthy person's lifetime.

Once infected, who is more likely to get Active TB disease?

People with weakened immune systems are even more likely to get TB disease. Babies, preschool children and older adults have weaker immune systems than healthy adults. The following conditions also weaken the immune system:

- organ transplants
- HIV infection
- silicosis
- kidney disease
- diabetes
- cancer
- low body weight
- substance use such as alcohol or drugs
- steroid medications
How do I prevent Latent TB developing into Active TB disease?
If you have Latent TB, it is important to protect your immune system from becoming weak. Treatment with antibiotics will help your immune system fight the bacteria and prevent TB disease.

How is Latent TB Infection diagnosed?
People with Latent TB infection do not feel sick and may not know they have been exposed to TB. Having a TB skin test is the only way to find out if you have been infected. If your skin test is positive, you will have a chest x-ray to see if you have TB in your lungs.

TB Skin Tests

What is a TB skin test?
A TB skin test is used to diagnose TB infection. Your health care provider uses a needle to inject TB proteins under the skin. If you are infected with TB, a hard swelling (induration) develops where the needle went in within 48 to 72 hours. A doctor or nurse must interpret all TB skin tests. They will consider the size of the reaction, your medical history, and your risk factors.

Sometimes people receive a TB vaccine called BCG. If you had BCG and have risk factors for TB infection, the vaccine will not affect how your health care provider interprets your TB skin test.

Sputum Induction

What is Sputum Induction?
Getting sputum (phlegm) samples for testing is important to diagnosing TB disease in the lungs. In some TB clinics, patients who cannot give samples must have a bronchoscopy. Since this procedure is uncomfortable for patients, the Toronto Western Hospital TB Clinic developed a Sputum Induction Booth. Here, patients can give a sputum sample safely and more comfortably.
The Sputum Induction Booth is a clear plexi-glass booth. The booth uses a special air filtration unit to clean the air and vent it outside the building to protect you and the TB Clinic staff.

During the procedure you sit comfortably in the booth and breathe in a salty mist through a mask. A Respiratory Therapist gives you the mist and stay with you during the test.

The salty mist loosens the phlegm in the lungs and makes you cough. Samples can be taken of the phlegm. It usually takes 30 to 60 minutes to complete sputum induction. We send the sputum samples to the Ontario Ministry of Health Lab for testing.

**Treating Latent Tuberculosis Infection**

Your doctor may recommend an antibiotic to lower the chances of your TB infection developing into TB disease. You will need to take this medication for up to 9 months to kill all the TB. Taking antibiotics gives you up to a 90% chance of protection against TB disease, depending on the medication used. **You must take your medication every day.**

Treatment may include these medications:

- Isoniazid (INH)
- Rifampin (RMP)
- Pyridoxine (Vitamin B6)

TB medications are **free** and will be provided by the TB Clinic.

Most people have no problems or side effects while taking these medications.

During your treatment you **must** be seen at the clinic every month for check-ups, blood tests and refills of your pills.
How to take your medication:

• Store your pills at room temperature in a dry place, away from children.

• Take your pills on an empty stomach if possible. If this causes an upset stomach, take the pills with food.

• Take your medication at the same time every day to help you remember (for example, before breakfast).

• Do not drink alcohol (such as wine, beer, other alcoholic drinks) while taking these pills.

• Avoid antacids that have aluminum.

• If you forget to take your medication one day, continue taking your next dose as usual. **Do not** double the dose.

Possible side effects of TB treatment:

Most people have no problems while taking TB medications, but if you notice any of these changes in your health while taking your pills, **call the TB Clinic**.

• skin rash, itching

• nausea, vomiting, upset stomach

• yellowish skin or eyes

• very dark urine

• flu-like symptoms (fever, chills, dizziness, shortness of breath)

• pain, numbness or tingling in your fingers or toes.

• loss of appetite

• fatigue (feeling very tired)

• fever for 3 days or more

• swollen or painful joints

• blurred vision or changes in how you see colour

• stomach cramps

If you have any of these serious side effects, **STOP** taking your pills and call Reception Desk at 416 603 5853.
If you have any serious side effects during holidays or weekends, go to the Emergency department at the Toronto Western Hospital.

What if I don’t take all my medication?

It is important to take every dose of your medication. The treatment will not work if you miss too many doses. If you need to stop taking the medication, you will have to start the treatment again in the future to be protected from developing TB disease.

Isoniazid (INH)

Tips for taking INH:

• Take this medicine on an empty stomach. If it upsets your stomach, take it after meals.

Why might I need to take Vitamin B6 (Pyridoxine) at the same time?

Vitamin B helps to prevent numbness and tingling in your fingers and toes that can be caused by the INH. You may not need to take vitamin B if you are able to get enough from your meals.

Rifampin

Tips for taking Rifampin:

• Birth control pills will not work while taking this medicine. You will need to use a different form of birth control. Please speak to the clinic staff, your family doctor or public health about other types of birth control.
• If you are pregnant or breastfeeding (or chestfeeding), talk to your doctor before taking Rifampin.
• Do not wear soft contact lenses. Dyes in the medicine will permanently stain the lenses.
• Rifampin causes orange or red coloured saliva, tears, pee and poo. This is not harmful and will stop at the end of treatment.
• Take Rifampin on an empty stomach. If it upsets your stomach, take it after meals.
TB and HIV Infection

Why are TB and HIV infection dangerous?
HIV is a virus that weakens the immune system. People who have TB and HIV are at a very high risk of TB infection developing into TB disease. People with HIV are more likely to develop TB and the TB symptoms may not be typical, delaying the diagnosis and the treatment of TB disease. We may ask you to have an HIV test because everyone with HIV should be tested for TB, and everyone with TB should be tested for HIV.

Visiting the TB Clinic

What do I have to bring with me to clinic appointments?
- All of your medicines (you must bring them with you every time)
- Ontario health card (OHIP)
- Interim Federal Health Papers (if you are a refugee)

What should I expect at a TB Clinic appointment?
The Toronto Western Hospital TB Team tries to make the clinic area as comfortable and relaxing as possible.
- You are checked in at the clinic reception desk where you may notice staff wearing masks to protect themselves against TB.
- Please give the receptionist your health card (OHIP).
- We then take you to a clinic room, where a clinic staff member sees you. If you need blood tests or x-rays, they are done at the hospital.

What if I cannot come to my appointment?
Call the TB Clinic at 416 603 5853 at least 48 hours before your appointment to let the clinic know and to rebook your appointment. It is very important for your health and your TB treatment to keep regular clinic appointments.
What if I need an interpreter?
If possible, please bring a family member or friend to interpret for you. If this is not possible the TB Clinic may be able provide an interpreter. Please call the TB Clinic in advance to request an interpreter.

The Toronto Western Hospital TB Clinic Team

- The Toronto Western Hospital TB Clinic has a variety of staff to help you through your TB treatment.
- The TB Clinic doctors have many years of experience treating TB.
- The TB Clinic Nurse Practitioner and Nurse Clinician have special training in treating TB and will be your main contact with the TB Clinic. Please call them if you have any questions or problems with your medication.
- The Public Health Nurse Liaison provides education about how public health helps to treat and control the spread of TB. They explain contact tracing, follow-up procedures and DOT programs.
- The Social Worker provides support to TB Clinic patients, families and anyone supporting you. They help you adjust to treatment and talk about the myths of TB. The Social Worker can also link you with community resources and services such as welfare, shelters, legal and immigration matters.
- The Respiratory Therapists are specially trained to do the sputum induction test and operate the sputum induction booth. They provide education and support and may also provide care during your visits to the clinic.
Other Resources

Where can I get more information about TB?

Toronto Public Health Department
TB Prevention Team
Phone: 416 392 7457
Email: targettb@city.toronto.on.ca

Health Canada Tuberculosis – Prevention and Control
Website: https://www.canada.ca/en/health-canada/services/health-concerns/diseases-conditions/tuberculosis.html

The Lung Association
Website: https://www.lung.ca and search “tuberculosis”

Stop Tuberculosis Canada
Website: www.stoptb.ca

Centers for Disease Control, Division of Tuberculosis Elimination
Website: www.cdc.gov/nchstp/tb

Rutgers New Jersey Medical School, Global Tuberculosis Institute
Website: http://globaltb.njms.rutgers.edu

International Union Against Tuberculosis and Lung Disease
Website: https://www.theunion.org
Contacts

Clinic hours
Monday, Tuesday and Thursday
8:30 am to noon

Location
Toronto Western Hospital
East Wing – 8th Floor
399 Bathurst St., Toronto, Ontario, M5T 2S8

Appointment booking
Phone: 416 603 5853
Fax: 416 603 5987

For problems with medication, side effects, questions or concerns:
Please call the TB Clinic Reception Desk at 416 603 5853
Monday to Friday, 8:00 am to 4:00 pm

For problems with side effects during the weekend or holidays
go to the Toronto Western Hospital Emergency Department,
399 Bathurst St.