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 a tiny germ 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 (germs) spray into the air. Another person may breathe the bacteria into his/her 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 (LTBI).

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
- Alcoholics
- Injection drug users
- The homeless
- Staff and residents of nursing homes, shelters, hospitals and jails
- Elderly people, especially those who have lived at a time when TB was common

Latent TB infection

What is Latent TB infection?

A person with Latent TB infection has breathed in TB bacteria into his/her 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. These people do not have to take any precautions to stop the spread of TB. They should continue to go to work/school and do their normal activities. However, people with TB Infection may develop ActiveTB disease in the future, especially if their immune system weakens. Treatment of TB infection can prevent TB disease.
Progression of Latent TB infection to Active TB disease

Why does Latent TB infection develop into Active TB disease?

A person with Latent TB infection may develop ActiveTB 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 ActiveTB disease?

People with weakened immune systems are even more likely to get TB disease. Babies, preschool children and the elderly 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
- Abuse of alcohol or drugs
- Steroid medications

How do I prevent the progression to Active TB disease?

If you have Latent TB infection, 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.

Diagnosis of Latent TB Infection:

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 is used to diagnose TB infection. TB proteins are injected under the surface of the skin. If a person is infected with TB, a hard swelling (induration) will develop at the site of the injection in 48 to 72 hours. A doctor or nurse must interpret all TB Skin Tests. They will take the size of the reaction, your medical history and risk factors into consideration.

Sometimes people receive a TB Vaccine called BCG. If you have had BCG and have risk factors for TB Infection, the vaccine will not affect the interpretation of your TB Skin Test.

Sputum Induction

What is Sputum Induction?

Obtaining sputum (phlegm) samples for testing is important in the diagnosis of 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 has developed a Sputum Induction Booth. Here, sputum samples can be safely obtained in a more comfortable manner.

The Sputum Induction Booth is a clear plexi-glass booth. The booth's special air filtration unit has filters, which 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, who will stay with you during the test, will give this to you.

The salty mist loosens the phlegm in the lungs and makes you cough. Samples can be taken of the phlegm. The time required for sputum induction varies, but is usually completed within 30 to 60 minutes. Sputum samples are then sent to the Ontario Ministry of Health Lab for testing.
Treating Latent Tuberculosis Infection

Your doctor may recommend an antibiotic to reduce the chances of your TB infection progressing to TB disease. The TB germ is very strong and you will need to take this medication for up to 9 months. This will give 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 of charge to you 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, you may take the pills with meals.
- 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, alcoholic drinks) while taking these pills.
- Avoid antacids that contain aluminum.
- If you forget to take your medication one day just 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 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 the TB Clinic Nurse Practitioner immediately at 416 603 5395 OR the TB Clinic Nurse Clinician at 416 603 5800 ext. 3844.

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 doses for a long period of time. You will have to restart your treatment if you wish to be protected from developing TB disease in the future.
**Isoniazid (INH):**

**Tips for taking this medicine:**

- 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 will help to prevent numbness and tingling in your fingers and toes that can be caused by the INH. You may not need to take this vitamin if you are able to get enough as part of a healthy diet.

**Rifampin:**

**Tips for taking this medicine:**

- Birth control pills will not work while taking this medicine. Use an alternate form of birth control. Please speak to the clinic staff, your family doctor or public health about alternative methods.
- If you are pregnant or breast-feeding talk to your doctor before taking Rifampin.
- Do not wear soft contact lens while taking Rifampin. Dyes in the drug will permanently stain the lenses.
- Rifampin will cause orange or red coloured saliva, tears, urine, and stool. This is not harmful and will stop at the end of treatment.
- Take this medicine on an empty stomach. If it upsets your stomach, take it after meals.

**TB and HIV Infection**

**Why is TB and HIV infection dangerous?**

HIV is a virus that weakens the immune system. People who have TB and HIV infection are at a very high risk of TB infection progressing to TB disease. People with HIV infection are more likely to develop TB and the TB symptoms may not be typical, delaying the diagnosis and the treatment of TB disease. Everyone with HIV should be tested for TB and everyone with TB should be tested for HIV. You may be asked to have an HIV test.
Visiting the TB Clinic

What do I have to bring with me to clinic appointments?

- All of your medicines (you must bring these with you every time)
- 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 environment as comfortable and relaxing as possible. You will be checked in at the clinic reception desk, where you may notice staff wearing masks to protect themselves against the TB germ. Please give the receptionist your health card (OHIP). You will then be escorted to a clinic room, where a clinic staff member will see you. If you require blood work or x-rays, these tests will be done at the hospital.

What if I cannot come to my appointment?

Call the TB Clinic at 416 603 5853 as soon as possible 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 happens if I don't come for my scheduled appointment?

If you do not come to your appointment and have not cancelled it, the clinic will send a letter to your home, advising you about the missed appointment and asking you to book another one as soon as possible.

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 this service.

The Toronto Western Hospital TB Clinic Team

- The Toronto Western Hospital Tuberculosis Clinic has a variety of staff to
help you through your TB treatment.

- The TB Clinic Doctors specialize in the treatment of TB and have many years of experience.

- The TB Clinic Nurse Practitioner and Nurse Clinician have special training in the treatment of TB and will be your main contact with the TB Clinic. Please call them if you have any problems with your medication, questions or concerns.

- The Public Health Nurse Liaison will provide education about the role of the Public Health Department in the treatment and control of TB. They will explain contact tracing and follow-up procedures, as well as DOT programs.

- The Social Worker provides support to TB Clinic patients, families and significant others. They will help you understand the illness and help you adjust to treatment, as well as explain the myths and misconceptions about 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 perform the sputum induction procedure and operate the sputum induction booth. They provide education and support during this procedure 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
📞 416 392 7457
✉ targettb@city.toronto.on.ca

Health Canada Tuberculosis Prevention and Control

The Lung Association
✉ www.lung.ca/tb/main.html

Stop Tuberculosis Canada
✉ www.stoptb.ca

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

New Jersey Medical School National Tuberculosis Center
✉ www.umdnj.edu/ntbcweb

International Union Against Tuberculosis and Lung Disease
✉ www.iuatld.org
Contacts

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

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

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

Call for problems with medication, side effects, questions or concerns:

Nurse Practitioner: Judith Lang
📞 Phone: 416 603 5395

Nurse Clinician: Andrea Moore
📞 Phone: 416 603 5800 ext. 3844
Fax: 416 603 5987

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.