

Tuberculosis

What is Tuberculosis (TB)?

Tuberculosis is a curable disease caused by the bacteria (germ) *Mycobacterium Tuberculosis*. TB most commonly affects the lungs but can also affect other parts of the body. There are approximately 1,400 cases in Australia each year. The treatment, if taken as instructed, is expected to result in a complete recovery.

How does Tuberculosis spread?

TB spreads through the air when a person with TB disease in the lungs or throat, coughs, sneezes, breathes or talks, spreading bacteria into the air. If a person breathes in these bacteria, they may become infected, but most people need to have very close day-to-day contact with someone who has the disease (such as a family member or a close friend) to catch TB. TB is not spread by sharing household items such as cutlery, cups, linen and clothing.

What is the difference between TB infection and TB disease?

TB infection (or 'latent TB infection')

TB infection means the person has TB bacteria in their body in a dormant or inactive state. This is called latent TB infection. This means that the bacteria cannot do any damage or cause harm to the person infected. While the TB bacteria are inactive, people experience no symptoms, do not feel sick and cannot spread TB bacteria to others.

TB disease (or 'active TB infection')

When inactive bacteria become active, TB disease can develop (also referred to as 'active TB infection'). Only 5-10% of people with latent TB infection go on to develop TB disease at some point during their lifetime. Most people (about 90%) with latent TB infection never develop TB disease.

For those that do develop TB disease, it can be several years after a person is infected with TB before they develop active TB infection. This most commonly happens when the body's immune system is weakened by a serious illness, advanced age, stress or other chronic conditions.



What are the signs and symptoms of TB disease?

Lungs are the most common place where TB infection occurs. People with TB disease in their lungs ('pulmonary TB') most commonly have the following symptoms:

- A cough that lasts for more than 3 weeks
- Coughing up blood or phlegm (thick mucus)
- Pain in the chest

Although most commonly affecting the lungs, TB infection can affect any part of the body. When the infection occurs somewhere other than in the lungs (called 'extra-pulmonary TB'), symptoms vary depending on where the infection is located but can include pain, tenderness and swelling at the site of infection. Other symptoms that a person with TB disease (pulmonary and extrapulmonary) may have can include:

- Unexplained weight loss
- Weakness or fatigue
- Fevers and night sweats
- Loss of appetite

Are people with TB disease always infectious?

People with TB disease of the lungs or throat can be infectious to others and should be isolated initially. In most cases, after two weeks of taking the prescribed antibiotics, they are no longer considered infectious and can resume normal activities such as school and work. People with TB in other parts of their body (extrapulmonary TB) are not considered to be infectious to others.

Who is at risk?

Generally, TB disease is not common among people who were born and have lived in Australia their whole lives, although it is a bit more common among Aboriginal and Torres Strait Islander Peoples.

There are countries where TB is very common. People who were born in, lived in, or have visited (for three months or more) a country where TB disease is common are at higher risk of having TB infection and developing TB disease.

People who have spent a lot of time in close contact with a person with TB disease, such as household contacts, family and close friends, may be at higher risk of being exposed and developing TB infection.

Of those with TB infection, people with a weakened immune system have the highest risk of developing TB disease. This includes those with a chronic illness that affects their immune system (e.g. HIV/AIDS or diabetes) as well as those who take medications that lower their immune system (e.g. chemotherapy, radiation therapy, immunosuppressive therapy).



How is TB diagnosed?

Your doctor may request a range of tests to work out if you have TB infection or TB disease. Depending on the site of infection (pulmonary or extra-pulmonary), these can include:

- **a Tuberculin Skin Test (TST) or Mantoux test** to show if there has been exposure to TB.
- **an IGRA (blood test)** to show whether a person has latent TB infection.
- **an x-ray, CT scan, or MRI scan** to show whether TB infection/disease has affected the lungs and/or other parts of the body.
- **a sputum (or phlegm) test** shows if TB bacteria are present in phlegm coughed up from the lungs.
- **a biopsy, a wound swab, or a surgical specimen** can be taken from various sites in the body (e.g. lung tissue, lymph node tissue) to see if TB bacteria are present.

As TB diagnosis can be very complicated, if your GP thinks you might have TB infection or disease, you should see the Department of Respiratory and Sleep Medicine at The Canberra Hospital for assessment.

How is it treated?

TB treatment is dependent on whether you have been diagnosed with TB infection or TB disease. If you have been diagnosed with TB infection, treatment may be used to reduce your chance of developing TB disease in the future. Your doctor may prescribe a combination of tablets (preventive therapy) or follow up with regular chest x-rays to monitor your lungs. It is important that you follow your doctor's instructions and take medications as directed.

If you have been diagnosed with TB disease, your doctor will prescribe a combination of antibiotics to take for at least 6 months (sometimes 12 months or longer). A nurse will supervise your treatment and provide support as well as education. TB disease can be cured if the treatment is completed. It is really important that you follow your doctor's instructions and take medications as directed. If medicines are not taken properly or are stopped too early, there is a chance that your TB disease will return and it may be more difficult to treat/cure.

Who do TB patients need to tell about their disease?

TB is a confidential matter between a patient and their doctor. If you have TB infection or disease, you do not have to tell your employer or anyone else about your diagnosis.

Family members and household contacts of patients with TB disease will be screened by nurses at the Department of Respiratory and Sleep Medicine. Sometimes close friends, work colleagues, and school/university contacts may need to be screened as well. If this is the case, those people will be contacted by the Department of Respiratory and Sleep Medicine to arrange screening. When contacted, they are told that they may have been exposed to TB and require screening, but they are not told who may have exposed them.



TB prevention

People who are diagnosed with latent TB infection can be offered a course of preventive treatment to reduce their chances of developing active TB disease in the future.

A BCG vaccine is available for children aged younger than 5 years who will be traveling to and/or staying in (for an extended period of time) an area where TB is common. The BCG vaccine does not prevent TB infection, but if given to infants/young children, it can protect against severe TB disease, such as miliary TB (widespread TB infection throughout the body) and TB meningitis (infection of the membranes that surround the brain). However, this vaccine is not routinely available in the ACT. You can contact the Department of Respiratory and Sleep Medicine for advice about where to get a BCG vaccine.

Need more information?

If you have a concern that has not been answered by reading this fact sheet, you can call one of the nursing staff at the Department of Respiratory and Sleep Medicine for advice on 02 5124 2066 Monday – Friday, 8:30am-5pm, except on public holidays.

The Department of Respiratory and Sleep Medicine at The Canberra Hospital provide care and management of patients with latent TB infection and active TB disease. They also perform contact tracing and screening of people identified as possibly having been exposed to TB. A referral from your doctor is not required. These TB-related services (screening of exposed contacts, and treatment of TB infection/disease) are provided free (no out of pocket cost) – a Medicare card is not needed. The Department also perform routine pre-employment TB screening, however there are charges (out of pocket costs) associated with these services.

The Communicable Disease Control Section is responsible for the investigation and surveillance of notifiable or infectious conditions in the ACT in order to control or prevent their spread in the community. This includes the promotion of immunisation, education and other strategies that help to limit the spread of diseases.

Tuberculosis is a notifiable disease. Cases notified to ACT Health are investigated by nurses at the Department of Respiratory and Sleep Medicine, at The Canberra Hospital.

Accessibility

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