

Tuberculosis (TB)

Tuberculosis (TB) is a bacterial infection that can affect almost any part of the body but most commonly affects the lungs when it is called 'pulmonary tuberculosis'.

It is spread only from person to person and can affect people of all ages and any ethnic origin. The risk of catching TB in Queensland is very low and most people in Queensland who develop TB originally acquired their infection in a country where the rates of TB are much higher.

TB can stay dormant in the body for months or even many years before making a person ill.

When TB is dormant the person has no symptoms of TB - this is called 'latent tuberculosis'. Not all persons with latent TB need to be treated but a doctor may recommend preventative therapy in those most at risk of progression to active TB. The lifetime risk of developing active tuberculosis is only 5 to 10% for most people diagnosed with latent disease.

Active TB can be a very serious disease if not diagnosed early and treated.

Tuberculosis is curable when treated with special antibiotics. Queensland Health facilities provide services to diagnose and treat TB without the patient incurring any out of pocket costs.

Signs and Symptoms:

Tuberculosis seldom begins with striking signs or symptoms. It may progress for weeks or even months before suspicion is aroused; however, there may be:

- a cough that persists for more than 2 - 3weeks
- production of sputum (phlegm)
- coughing up blood
- fevers
- night sweats
- a steady loss of weight
- poor appetite
- fatigue
- hoarseness
- persistent or recurring chest pains
- swollen lymph glands particularly in the neck

Treatment:

Active TB:

TB is treated using anti-tuberculosis medications that are prescribed for at least 6 months but in some cases the treatment may be prescribed for longer. This treatment is sometimes known as TB Chemotherapy (and differs from chemotherapy used for other conditions). In Queensland it is recommended that only doctors experienced in treating TB prescribe these medications.

The following medications are commonly used **together** to treat TB:

- Isoniazid
- Rifampicin
- Ethambutol
- Pyrazinamide

Vitamin B6 (pyridoxine) is usually also given to prevent side-effects from isoniazid.

Other medications are sometimes used if the strain of TB is antibiotic resistant or one or more of the above medications are not tolerated.

Medications may have different names on the packaging where the manufacturer has their own trade name written prominently.

While many patients can be treated without hospital admission, this is not always the case.

To ensure cure and to prevent recurrence of the disease, it is essential that treatment is taken as prescribed under the direction of the treating doctor for the exact length of time without interruption, even if the patient feels improved.

Usually medications are given daily. Queensland Health staff will almost always supervise the treatment by watching while the patient takes their medication (DOT-Directly Observed Therapy) or by preparing the medications in a special dosage box to ensure they take the correct type and dose of medication on a daily basis. DOT can occur in the patient's home or in the clinic – whichever works best.

As with all medication, there are possible side effects that should be reported immediately to the treating doctor, assigned case nurse or local general practitioner. Out of hours, hospital emergency departments should be consulted if the side effects are severe.

Latent TB:

Treatment is usually with a single medication given for 6—9 months. Isoniazid is most commonly used and vitamin B6 is also given. Children may be given a shorter course of treatment but with two medications at once.

Transmission:

Pulmonary TB is spread by inhaling TB germ-containing droplets of moisture expelled directly from the lungs of infectious persons during coughing and sneezing, laughing and speaking. Those who live with a person with active TB are most at risk of becoming infected as it usually takes a prolonged period of time for transmission to occur.

Very young children (less than 5 years of age) and persons with weak immune systems are at greatest risk of developing active TB after exposure to an infectious case.

TB is not spread by touching objects, so using separate household items (such as cutlery, glasses, or sheets) is not needed.

Once appropriate treatment is established, the patient usually becomes non-infectious after 2 to 3 weeks when normal activities may be resumed whilst continuing treatment. The treating team will always advise when the infectious period has passed.

Where TB does not involve the lungs, transmission to others is not a significant risk.

Ongoing management:

After a patient completes treatment for active TB, periodic follow up over the next 2 years or longer is recommended to detect any relapse early.

Diagnosis

A diagnosis of TB is made by:

- taking a medical history
- physical examination
- Special tests which may include:
 - chest x-ray
 - sputum test—these are sent to a specialised laboratory: initial results return in a day or two but final results may take several weeks.
 - a medical biopsy e.g. of a lymph gland.

Tests to diagnose latent (dormant) tuberculosis include:

- tuberculin skin test (Mantoux test)
- “Quantiferon” TB Test – a blood test which is an alternative to the skin test

Sometimes repeat testing is needed to determine whether TB exposure has caused infection.

Screening for TB

If a person thinks they may have been exposed to someone with active TB they should contact their local GP or nearest TB service.

Once someone is diagnosed with active TB there are processes for identifying and contacting people they may have been in contact with, for example family or household members, close friends and colleagues.

People who are commonly screened because they are at greater risk of developing active TB are:

- people who may have been in recent contact with a person diagnosed with active TB
- migrants from countries where TB is common
- people with weakened immune systems
- people working in healthcare
- people who have visited a country where TB is common and stay has been 3 months or longer

Prevention:

The most important way to prevent TB is to reduce the source of the germs by diagnosing people with TB and ensuring they are fully treated. By reducing the number of people with infectious TB in the community, the chance of exposure to TB is reduced.

Those people with suggestive symptoms should quickly seek a medical check-up to ensure early diagnosis.

Patients with the disease can help prevent infection to others by:

- adhering to the prescribed treatment as instructed by the doctor, even if they feel well
- following simple, hygienic precautions such as covering one's mouth while coughing or sneezing.

A vaccine for TB (BCG vaccine) has been available for many years but it is only partially effective. It works best in young children. In Queensland it is recommended for Aboriginal and Torres Strait Islander children when it is usually given soon after birth. It is also recommended for young children travelling for 3 months or more to countries with high rates of TB.

Since 2012, there have been interruptions to the supply of BCG by the manufacturer – your closest TB control unit can provide up to date information on the availability of BCG.

Help and assistance:

Contact your closest [tuberculosis control unit](#)

(<https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/diseases-infection/diseases/tuberculosis/contact-a-service>)

Translated information

Find [translated information about tuberculosis](#)

(<https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/diseases-infection/diseases/tuberculosis/about/translated-fact-sheets>)