

# Tuberculosis (TB)

## BACILLE CALMETTE-GUÉRIN (BCG) VACCINATION



BCG (bacille Calmette-Guérin) is a live vaccine that helps protect against some types of tuberculosis (TB).

The vaccine is made from a bacteria called *Mycobacterium bovis*, which is similar to the TB bacteria. The bacteria in the BCG vaccine have been altered to ensure they do not cause harm. It is very rare for the BCG vaccine to cause disease, however the healthcare team will discuss the risks and benefits of the vaccine.

### What is TB?

The BCG vaccine does not completely prevent the risk of TB, so it is important to be aware of the signs and symptoms of TB disease, such as:

-  a cough that lasts for more than 2 weeks
-  coughing up blood
-  fevers (feeling hot, sweaty, tired, or cold and shivery).
-  night sweats
-  weight loss (without trying to lose weight)
-  fatigue or always feeling tired
-  loss of appetite (not feeling hungry)
-  swollen glands or lumps in the neck or other parts of the body.

TB is a disease caused by an infection with the TB bacteria called *Mycobacterium tuberculosis*. It can affect any part of the body, but most commonly affects the lungs.

TB spreads through the air when someone with TB in their lungs coughs, sneezes, laughs, sings, or talks. Tiny droplets with TB bacteria come out, and other people can breathe them in and get sick.

TB is uncommon in Australia and can be treated with a combination of antibiotic medication taken over several months.

### Who needs to be vaccinated for TB?

BCG vaccination works best in babies and young children to prevent severe TB disease and complications, such as TB meningitis. Sometimes, a doctor may recommend vaccination for older children or adults.

### In Queensland, BCG vaccination is recommended for:

- children under the age of 5 years and living in First Nation's communities
- children under the age of 5 years and travelling to high-risk TB countries\* or who have household visitors from a high-risk TB country. The vaccination should be given at least three months before travel
- children under the age of 5 years who are a household contact of a person with leprosy
- healthcare workers working overseas in high TB incidence settings, particularly those with limited infection prevention and control measures, should be assessed for BCG vaccination
- healthcare workers in any setting who are at high risk of exposure to drug-resistant tuberculosis.

\*Information on high-risk TB countries or countries with a TB incidence of at least 40 cases per 100,000 people is available [www.health.qld.gov.au/tuberculosis](http://www.health.qld.gov.au/tuberculosis)



Further information:  
[www.health.qld.gov.au/tuberculosis](http://www.health.qld.gov.au/tuberculosis)



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## Vaccination services in Queensland

In Queensland, the BCG vaccine is a single-dose and usually given for free by TB services.

To book a vaccination appointment, please contact your local TB service.

Before TB vaccination the nurse will ask some general health-related questions. The vaccination will not be given or may be delayed if a person:

- has a temperature, a skin rash or dermatitis/eczema
- is being treated for cancer, or is taking medication that weakens the immune system
- is at risk of HIV infection
- is pregnant
- has had tuberculosis in the past or is taking medicine to treat tuberculosis
- is under 2,500 grams in weight
- has had a live vaccine for measles, mumps, rubella, Japanese encephalitis, chicken pox or yellow fever in the last four weeks.

Sometimes a tuberculin skin test (Mantoux test) is needed before the BCG vaccine is given to check for previous infection. If the test is positive, a BCG vaccine should not be given.

## What to expect after vaccination

The BCG vaccine is given as an injection under the skin. A small, raised bubble can be seen at the site of the injection.

After 2 to 4 weeks, a red spot or small bump will appear and turn into an open sore or pustule. This sore will last for weeks or a few months and then heal as a small flat scar.

If the sore appears quickly, 2 to 3 days after the injection, contact the TB service.



Side effects from the BCG vaccine are uncommon, but can include fever, headache, or swollen and sore glands in the neck and/or armpit.

Rare side effects include severe allergic reaction, keloid scarring (a type of raised scar) or osteitis (bone inflammation). In rare instances, the BCG vaccine can cause widespread infection with the BCG bacteria.

## Caring for the vaccine site

- Keep the site clean, uncovered and dry.  
**Do not** use a band-aid or dressing.
- Bathe as normal and pat dry the site with a clean towel.
- **Do not** use antiseptics, lotions or creams on the site.
- If the sore leaks fluid, pat it dry with a clean tissue.  
**Do not** squeeze or scratch it.

If there are any questions or concerns, please contact the local TB service.



Further information:  
[www.health.qld.gov.au/tuberculosis](http://www.health.qld.gov.au/tuberculosis)

# Pre-vaccination questions

If the response is “Yes” to any of the following questions, or there are any concerns, please discuss with the nurse before giving consent for you or your child to have the vaccination.

## Has / is the person who is receiving the vaccine:

- ever had tuberculosis or currently being treated for tuberculosis?
- had contact with anyone diagnosed with tuberculosis?
- ever had a positive tuberculin skin test (Mantoux test) or IGRA blood test result?
- ever had BCG vaccination before?
- been diagnosed with HIV or is awaiting testing for HIV?
- been diagnosed with cancer including any kind of lymphoma or leukemia?
- receiving any oral or injectable steroid medications or other immune-suppressing treatment or medication e.g., prednisolone, TNF inhibitor medication, radium or anticancer chemotherapy?
- suffering from major skin conditions e.g., eczema, dermatitis, or keloid (severe) scars?
- currently taking antibiotics?
- is or could be pregnant?
- received another live vaccine within the last four (4) weeks i.e., measles, mumps and rubella, yellow fever, chicken pox, rotavirus or Japanese encephalitis vaccine.

