



Tuberculosis Vaccination (BCG)

What is BCG?

BCG (Bacille Calmette–Guérin) vaccine is a live vaccine made from an attenuated or weakened strain of the tuberculosis (TB) bacteria. BCG vaccination does not prevent TB infection however it provides protection against progression to disease, specifically providing over 70% protection against severe disease e.g. TB meningitis and disseminated disease in young children. BCG is only useful if it is given before the child is infected with the TB bacteria.

BCG is also highly protective against leprosy.

It is therefore recommended for young children at high risk of contact with active TB or leprosy.

These include:

- Indigenous newborn babies
- Children under 5 years old with no previous BCG who will be living in NT Indigenous communities
- Children under 5 years who have a high probability of travelling to countries of high TB incidence for an extended period
- Newborn babies whose parents have leprosy, or who have an immediate family history of leprosy.

BCG may also be considered in the following:

- Children between 5 and 16 years of age who will be travelling or living in countries with a high incidence of TB for extended periods. BCG should ideally be given at least 3 months before travel.
- Healthcare workers (with no previous BCG), who may be at high risk of exposure to drug resistant cases.

Which groups or persons should not be given BCG?

- Immune compromised persons including those with cancer of the bone marrow or lymphoid system

- People on medications which suppress the immune system e.g corticosteroids, chemotherapy
- Persons who are known or suspected to have HIV infection
- Those with a past history of BCG
- Those with a current or past history of tuberculosis
- Those with a Mantoux test (tuberculin skin test) result ≥ 5 mm or positive IGRA (blood test for TB exposure)
- Any serious illness including malnutrition
- A person who has been given an injectable live vaccine given in the preceding 4 weeks, unless given at the same time. In this situation the BCG administration needs to be postponed for 4 weeks
- Pregnant women.

Precautions are required in: generalised skin infections and conditions such as eczema, dermatitis and psoriasis and with significant febrile illness (fever more than 38.5°C).

For more information refer to resources below.

Is a Mantoux test necessary before vaccination?

Children over 6 months of age should have a Mantoux test prior to BCG vaccination to establish if BCG administration is appropriate. Infants less than 6 months of age who have been exposed or may have been exposed to TB also require a Mantoux test.

How is BCG given?

The vaccine is given by injection into the skin of the upper arm (usually left).

Children under 12 months should receive 0.05mL.

Children 12 months and over should receive 0.1mL.

The person holding the child during the injection and the vaccine provider should wear eye protection.

Response and care of the BCG injection site

A small red papule forms and over 2 to 3 weeks forms an ulcer, which may crust. It may also discharge pus. There is no pain or tenderness around the site of injection, and there are no signs of general ill health. The ulcer may persist for two to three months. Keloid (raised and overgrown scar) formation can occasionally occur .

The ulcer may be covered with dry sterile gauze if discharging pus, and should be kept as dry as possible. Antiseptics and sticking plasters should be avoided. The ulcer will eventually heal.

Adverse reactions are rare but need to be reported to the TB unit and the local immunisation coordinator.

Please seek medical advice if your child develops:

- Fever greater than 38.5° C
- Soreness, redness and swelling around the ulcer (larger than a 50c piece)
- Swollen glands under the arms, around the neck or in the groin

Please note:

BCG immunisation provides some immunity to tuberculosis but should not be presumed to be 100% effective against contracting tuberculosis.

For further information

- 1 Australian Government, Department of Health and Ageing. *The Australian Immunisation Handbook*. 2013. 10th Edition.
- 2 Northern Territory, Department of Health. *Guidelines for the Control of Tuberculosis in the Northern Territory*. 5th Edition May 2014.

For further information contact the TB Clinic in your region:

Alice Springs	8951 7548
Darwin	8922 8804
Katherine	8973 9049
Nhulunbuy	8987 0282
Tennant Creek	8962 4259
or www.nt.gov.au/health/cdc	