

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 bacteria. BCG vaccination does not prevent TB infection however its use is in providing protection against invasive disease eg. TB meningitis in children under 5 years of age.

BCG is only useful if it is given before the child is infected with the tuberculosis bacteria.

BCG is also highly protective against leprosy.

It is recommended for children at high risk of contact with active tuberculosis or leprosy.

These include:

- Aboriginal newborn babies
- Children under 5 years old with no previous BCG who will be living overseas in countries of high TB prevalence, or in the NT in high risk Aboriginal communities for more than 3 months at a time
- Newborn babies whose parents have leprosy, or an immediate family history of leprosy.

What are the contraindications?

- Immune compromised children
- Newborn babies of mothers with known HIV infection, known risk factors for HIV or AIDS
- Children with a past history of tuberculosis
- Children with a tuberculin skin test (Mantoux test) result greater than 5 mm
- Febrile (Current Temperature >38.5°C) at time of consultation
- Septic skin disease

- Another injectable live vaccine was given in the preceding 4 weeks (ie. need to postpone BCG administration).

Is a tuberculin skin test necessary before vaccination?

Children over 6 months of age should have a tuberculin skin test prior to BCG vaccination to establish if BCG administration is appropriate.

How is BCG administered?

The vaccine is given intradermally in the left arm.

Children under 12 months should receive 0.05ml.

Children over 12 months and over should receive 0.1ml.

Response and care of the BCG injection site

A small red papule forms and eventually ulcerates (it may discharge pus). This usually occurs within 2 - 3 weeks, forming a crust or ulcer. There is no pain or tenderness around the site of injection, and there are no signs of general ill health. However this ulcer may persist for 2 to 3 months. Keloid (raised and overgrown scar) formation can occur but is minimised if the injection is given at the correct site.

The ulcer may be covered with dry sterile gauze if discharging pus, and should be kept as dry as possible. Antiseptics and sticking plasters are to 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 >38.5°
- 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. The Australian Immunisation Handbook 9th Edition (2008) states that the overall protective

efficacy of BCG for preventing serious forms of TB in children is over 80%. Therefore the vaccine is recommended for high risk infants.

For further information contact Centre for Disease Control

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