

Indications for Use

BCG is currently recommended in Canada. See **Canadian Immunization Guide, BCG Chapter**):

- For infants in high-incidence (TB rates >30/100,000 total cases) settings and;
- Travellers returning for extended stays to a high TB incidence country where BCG is routinely given.

BCG is **NOT** recommended for adults, such as HCPs, before travel to high-incidence settings.

Infants in High Risk Communities

Vaccination is recommended for infants in First Nations and Inuit communities and for groups of people with an:

- average annual rate of smear-positive pulmonary TB greater than 15/100,000 population, or
- annual rate of culture-positive pulmonary TB greater than 30/100,000 during the previous 3 years, or
- annual risk of TB infection (ARI) greater than 0.1%, or
- if early identification and treatment of LTBI are not available.

HIV testing of the infant's mother must be negative, and there must be no evidence or known risk factors for immunodeficiency in the infant being vaccinated. Typically, BCG is given at birth, but if vaccination is delayed after birth, a TST test is recommended in those over 6 months of age to ensure that the vaccine is only given to TST-negative infants.

For infants aged between 2 months and 6 months, an individual assessment of the risks and benefits of tuberculin skin testing before BCG vaccination is indicated.

Before an infant receives the BCG vaccine:

- The mother's HIV status is negative
- There is no risk or evidence of immunodeficiency in the infant being vaccinated
- No history in immediate or extended family of immunodeficiency in the infant being vaccinated (i.e. history of neonatal or infant deaths, history of severe combined immunodeficiency syndrome (SCIDS) or unusual infections)

If any of these conditions cannot be guaranteed, the infant is **excluded** from receiving the BCG vaccine. A pediatrician should be consulted to help determine the suitability of any infants with questionable immune status.

Travellers

Vaccination of travelers is recommended if planning extended stays in areas of high TB incidence, particularly when a program of serial TST and appropriate chemotherapy is not possible or where the prevalence of drug resistance, especially multidrug-resistant TB, is high.

This recommendation largely pertains to infants born in Canada who will be moving to and/or staying for extended periods of time in a country with high TB incidence and where BCG vaccination is still standard practice. In this situation, it is often more practical to recommend vaccination prior to arrival in the high-incidence country.

For adults, such as health care practitioners, planning temporary travel to high-incidence countries, previous guidelines suggested that BCG vaccination should be considered. In the absence of evidence for the efficacy of BCG in such a situation, this is **NO** longer recommended. Infection can be monitored using serial skin testing.

Occupational Setting

In general, workers do not need BCG vaccine. Appropriate personal protection, environmental controls, treatment of the source, and TB screening and preventative treatment of the exposed person as indicated are the typical approaches to TB control in workers.

Booster Doses and Revaccination

Revaccination with BCG is not recommended as there is no evidence that it confers additional protection. Because there is no correlation between skin test reactivity and protection, the TST is not recommended as a method to evaluate immunogenicity.

Administration Procedure

***Before** administering the BCG vaccine, the following must **always** be done:*

- Explain risks and benefits of BCG vaccine to parents or individual
 - Obtain informed consent (according to your Regional Health and Social Services Authority's policy)
 - Assess general health and fitness to immunize (i.e. HIV status **AND** past diagnosis or family history of immune disorder **AND** TB exposure)
 - Assure the individual has had a **negative** 2-step tuberculin skin test (TST) before getting the vaccine. Infants do not require a 2-step TST.
 - If the **infant is less than 2 months of age**: give BCG vaccine without prior TST
- because the risk of prior TB exposure is low and the sensitivity of the TST at detecting latent TB infection is unknown.
- If the **infant is between 2 and 6 months of age**: complete an individual risk-benefit assessment because the validity of TST in infants under 6 months of age is unknown.
 - Perform a one-step TST if infant is **>6 months old**; therefore plan for next visit to read TST (48–72 hours later) and if **negative** give BCG vaccine
 - Wear personal protective equipment (mask, gloves, and eyewear).

The dose in neonates is 0.05ml, half the usual dose of 0.1ml. The higher dose is recommended in children greater than 12 months of age, given intradermally.