

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

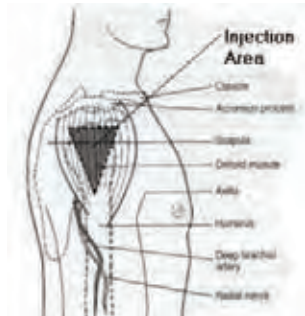
Before administering the BCG vaccine, the following must **always** be done:

- 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.

The BCG vaccine is administered as follows:

1. Freeze-dried BCG vaccine should be given, using a disposable syringe and a 26 or 27-gauge needle.
2. Wear protective goggles and gloves. **Protective eyewear is required** to ensure that an eye splash does not occur.
3. Cleanse the right **deltoid area** with an alcohol swab and let dry completely.



It is necessary to have two nurses available: one to hold the infant, the other to immunize.

4. Holding the syringe parallel to the skin surface, insert the needle (bevel **upward**) into the **intradermal layer** of skin in the upper right deltoid area and slowly inject the solution.

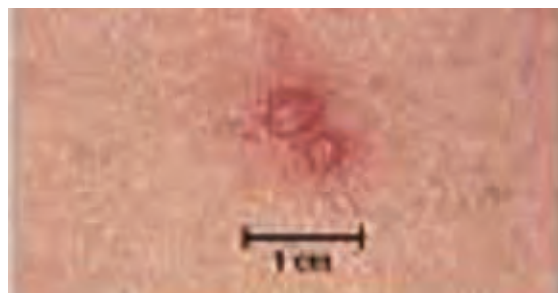


5. Record information required for documentation
 1. Date given
 2. Dose administered
 3. Site of administration
 4. Route of administration
 5. Lot number of vaccine
 6. Name of antigen, manufacturer
6. Advise the parent/guardian to contact clinic if there are any concerns about the reaction/site or patient's health (see **Section 3, Adverse Reactions**)
7. Observe site at subsequent visits until healing is complete

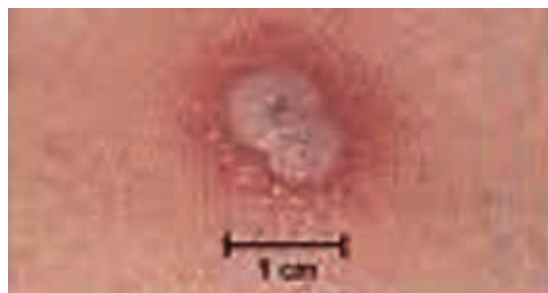
After receiving a BCG vaccine, it is expected that a local reaction occur at the site of injection. For 90–95% of cases, the area becomes red and tender, changes to a vesicle and develops into an ulcer in about 2–4 weeks. The ulcer will take 2–5 months to heal. The remaining lesion at the immunization site is a 2–10mm superficial scar. See Figures below for details.

Figure 3.2: Local Reaction (Progression) of BCG Vaccine at Site of Administration

Day 4



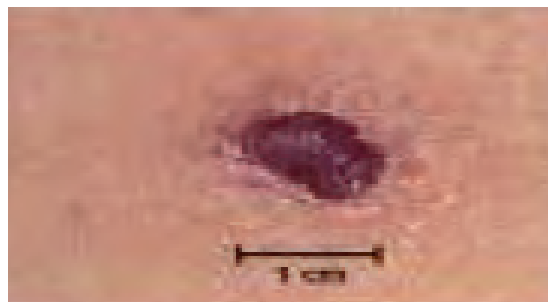
Day 7



Day 14



Day 21



Safety

In the event of any exposure to the vaccine (i.e. on a mucous membrane or open wound), wash area thoroughly with saline or water. Contact the OCPHO at (867) 920-8646 for further advice on how to proceed with post-exposure treatment.

Contraindications

BCG is a live vaccine. If BCG is given to a person diagnosed with certain immune compromising conditions, they are at high risk of developing disseminated TB disease (severe form of TB). The infant or individual should **never** receive the BCG vaccine when:

- HIV status is positive or unknown
- Has immune deficiency disorder or past family history of immune deficiency disorder (i.e. SCIDS)
- Has active TB disease or recent TB exposure