# Tuberculosis vaccination program for children (BCG vaccine) - Questions & answers for healthcare professionals

## **BCG VACCINATION**

1. WHY IS THE BCG VACCINE RECOMMENDED FOR NUNAVIK'S INFANTS AND YOUNG CHILDREN?

BCG vaccination is one of the TB prevention and control measures adopted in Nunavik. It was reintegrated into the vaccination schedule in 2012, given the increase in TB cases in the region and with the objective of preventing the severe forms of the disease (disseminated/miliary tuberculosis and tuberculous meningitis) among infants and young children.

2. When should the BCG vaccine be administered?

BCG vaccination should be performed as soon as possible after a child is born, following a negative screening result for severe combined immunodeficiency (SCID), and up to the age of 24 months. In some cases, a TST may be recommended prior to the vaccine's administration (see *Decision-Making Algorithm – BCG vaccination*).

#### TST SCREENING PRIOR TO BCG VACCINATION

3. Why conduct a TST before administering the BCG vaccine?

The high incidence of active TB in Nunavik entails a risk of being exposed even at a very young age. Because the BCG vaccine can impact the interpretation of TST results, it may be relevant to conduct a screening prior to vaccination in certain cases. This being said, a risk-benefit analysis must be carried out with input from the parents and the nurse's clinical judgement must be given credence if it is likely that performing a TST would delay vaccine administration.

4. What are the recommendations regarding TST, based on age?

Infants aged up to 2 months: A TST is not recommended for infants in this age group. The Canadian Tuberculosis Standards do not recommend a TST at this stage, given the short duration of exposure, the significant risk of a false negative result, and the lengthy delay before receiving a positive response (between 3 and 8 weeks after a contact with a contagious case of TB). Infants aged between 2 and 6 months: While the reliability of the TST is limited in this age group (possibility of a false negative result), the test could nonetheless allow for detecting and treating latent TB infections. It is therefore recommended to conduct a brief individual assessment of the risks and benefits of performing a TST prior to offering the BCG vaccine to infants in this group.

<u>Children aged 6 months or more:</u> The TST is considered reliable for children as of the age of 6 months. It is recommended to systematically perform this screening prior to administering the BCG vaccination, to identify children with a TB infection who could benefit from treatment.

The vast majority of children exposed to a person with active TB should generally have already been identified as contacts by Public Health authorities. The priority at the time of vaccination is thus not to carry out a comprehensive assessment of the risks of exposure to the disease, but rather, to move forward with the BCG vaccine while also offering the possibility of being screened if desired or in the presence of specific clinical concerns (e.g., when parents are worried about a possible exposure to TB).

5. CAN A CHILD RECEIVE A BCG VACCINE EVEN IF THE PARENTS REFUSE A PRE-VACCINATION TST?

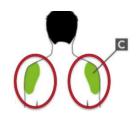
Yes. Not undergoing a TST is not a contraindication as regards BCG vaccination. This being said, it does allow for identifying children infected by tuberculosis who could benefit from treatment.

6. IS THERE A RISK IF THE BCG VACCINE IS ADMINISTERED TO A CHILD WITH A TB INFECTION?

No, administering the BCG vaccine to a child infected with TB is not dangerous. However, what should be prioritized in such a case is beginning the TB treatment, and this prior to considering BCG vaccination.

### BCG VACCINF ADMINISTRATION

7. What are the Specific Issues to Consider when administering the BCG vaccine? BCG is a live attenuated vaccine administered by intradermal injection. The upper third section of the arm is the recommended vaccination site. A single dose of 0.05 ml is recommended for infants less than one year old, and a single dose of 0.1 ml is recommended for infants aged one year or more. The vaccine can be administered upon receipt of a negative SCID screening result. Other precautions and contraindications apply to BCG vaccination; these are described in the Québec Immunization Protocol (PIQ).



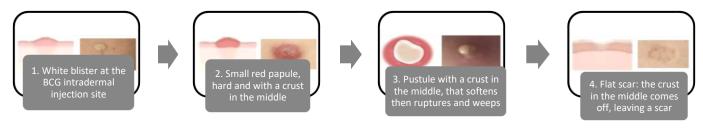
8. What intervals should be adhered to with regard to BCG vaccination?

#### **INTERVALS**

LIVE ATTENUATED VACCINE	The BCG vaccine can be administered on the same day as another live attenuated vaccine administered by injection, or at a minimum interval of 4 weeks.  Live vaccines administered orally or by intranasal route (e.g., rotavirus vaccine or intranasal influenza vaccine) can be administered at the same time as the BCG vaccine, or at any time before or after.
ANTI-TB TREATMENT	The BCG vaccine should not be administered to individuals who are receiving anti- tuberculosis medication, which can render the vaccine's bacillus inactive.
TST	A TST can be performed on the same day as another live attenuated vaccine administered by injection, or at a minimum interval of 4 weeks, as the latter can reduce the responsiveness of the tuberculin. It can notably be performed at the same time as an inactive vaccine or a live attenuated vaccine administered orally, or at any time before or after.
BLOOD PRODUCTS AND IMMUNOGLOBULINS	The BCG vaccine can be administered at the same time as immunoglobulins or other blood products, or at any time before or after (this also includes RSV preventive antibodies).

In cases involving children receiving preventive treatment or undergoing treatment for a latent TB infection or active TB, wait until the TB medication has been given in full, then make BCG vaccination available to children if under 24 months of age.

9. What progressive changes can be observed on the skin at the intradermal injection site following the administration of the BCG vaccine?



These effects are normal, and do not need to be flagged as an unusual clinical presentation (MCI).