

# TB and BCG Vaccine

## What is BCG?

BCG (Bacille Calmette-Guerin) vaccination gives protection against the disease Tuberculosis.

Tuberculosis (TB) is one of the leading causes of death from infectious diseases worldwide. One-third of the world's population is infected with TB, and nearly two third of those live in Asia. However, of those infected, only a small proportion will become ill.

Infants and the elderly are particularly at risk. Most infections are confined to the lung. However, infants are more prone to rapid and widespread illness (e.g. meningitis - where the infection spreads to the lining of the brain). TB is spread through close contact with infected individuals. Usually, people acquire the disease from household contacts or in constant contact with high-risk populations. The BCG vaccination does not prevent TB. However, it decreases the likelihood of severe illness, spread beyond the lungs, and death in young children.

## Recommendations

There is a great range of recommendations for vaccination from various health authorities worldwide. For example, the CDC in the USA does not recommend BCG for travellers unless they are children and have the potential to be continuously exposed to high-risk groups/populations.

The World Health Organization, Australia, the UK and The Netherlands recommend vaccination for those five years or younger (extended stay). BCG has a less certain role for those over five years old, which should be discussed with your doctor. The Singapore immunization authority recommends BCG vaccination at birth.



### BCG and other vaccinations

No further vaccinations should be given in the arm used for BCG for three months to decrease the chance of local lymph node inflammation. A month's interval is required if administering another "live" vaccine if not administered on the same day.





### **The Vaccine**

A Mantoux test is necessary before the BCG vaccination if your child is more than six months old. This is done to make sure there has been no previous contact with TB. The Mantoux test is done on the forearm and is read by the doctor at 48-72 hours. If the test is negative, then the BCG is given. The BCG is given in the left upper arm as an injection just below the skin's surface. The site and depth of the vaccine are essential to minimize the chances of side effects of the vaccination. It can also be given in the gluteal region.

The normal response to the BCG vaccination initially is a small red raised area, which forms an open sore and usually takes several weeks to heal. Abscesses and more significant local reactions can occur. These can take several months to heal. A permanent scar can be expected from a BCG vaccine.

### **Caring for the BCG sore**

In general, the sore created by the vaccination should be left alone. Within 2-6 weeks of injection, a small lump may develop at the vaccination site. This will slowly increase in size (often up to 1cm in diameter) and may have a flaky, scaly or bruised appearance. This is normal. Occasionally a blister and then a small ulcer will develop. This may "weep" a little.

Protecting the site from becoming wet during washing and bathing is not necessary. However, should any oozing occur, a temporary dry dressing may be used until a scab forms. The area must be allowed to "breathe". Air must reach the site; otherwise, healing will be delayed, and a larger scar may develop. It takes several months for the swelling to subside completely. You may be left with a small flare scar at the injection site. This is permanent. The scar is usually much smaller than the area of initial swelling. Occasionally the glands in the armpits/groin may become swollen and tender after the BCG vaccination. This is a normal reaction.

Please get in touch with the clinic if you are worried about anything related to the vaccination or what you see.



- Stomach pain
- Fever comes and goes
- Sore throat
- Unresponsive or limp
- High-pitched crying
- Stiff neck
- Soft spot on head swells (babies)
- Whimpering
- Pale
- Wheezing/problems breathing





### **When should you try to lower your child's fever?**

Fevers are more frightening than harmful; they are usually a sign that the body is fighting an infection. The main reason to treat your child is to make him/her feel better.

### **How much medicine is needed to lower a fever?**

Paracetamol is a medicine that relieves pain and lowers fever. It is sold in stores under the name Calpol or Panadol, as well as other brand names. Tylenol and Tempra contain acetaminophen, which is chemically similar to paracetamol. Ibuprofen (Nurofen) is also used to relieve fever and pain. As it works via a different mechanism, it can be used simultaneously with paracetamol. Ibuprofen should always be given after food.

