

Post-vaccination Serologic Testing for babies born to mothers infected with hepatitis B virus

Post-vaccination serologic testing (PVST) consists of blood tests on **hepatitis B surface antibody (anti-HBs)** and **hepatitis B surface antigen (HBsAg)**. It assesses a baby's immune response to hepatitis B vaccination and hepatitis B infection status.

Why should PVST be done?

Chronic hepatitis B virus (HBV) infection is the major cause of cirrhosis and liver cancer. Risk of becoming chronically infected is very high among neonates and young children infected with HBV. It is important to ensure that your baby is protected from HBV infection.

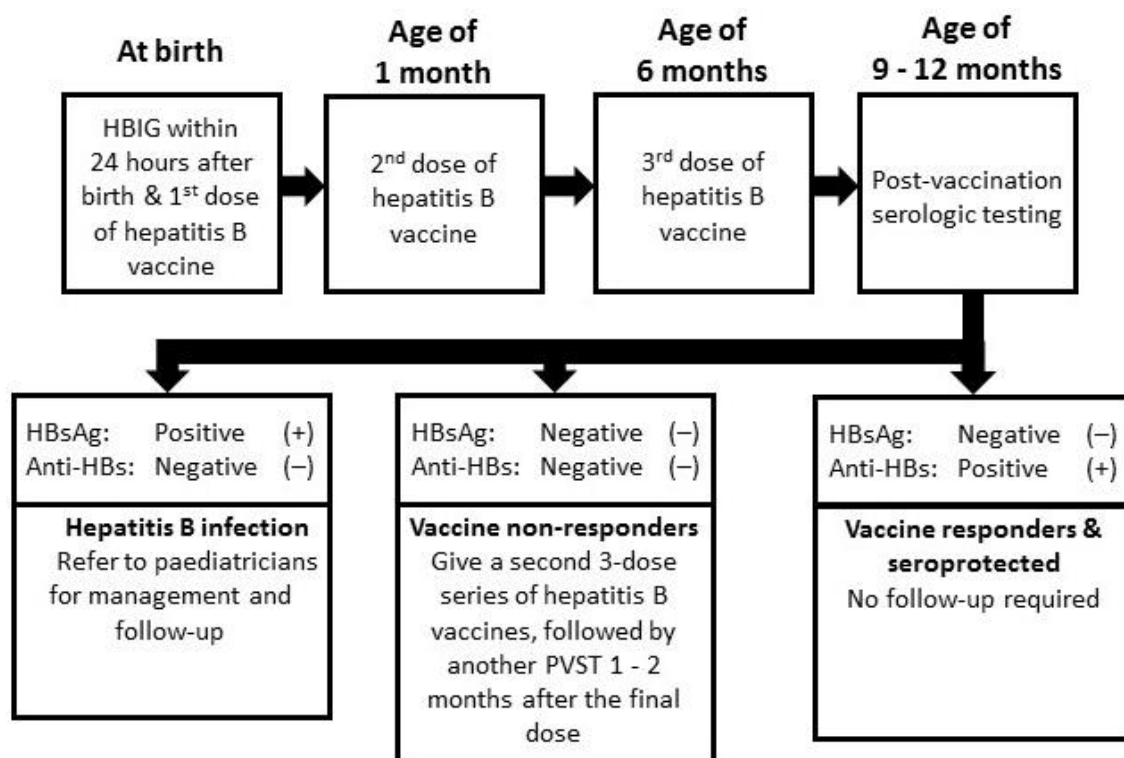
In Hong Kong, all babies are provided with a 3-dose series of hepatitis B vaccines. Babies born to mothers infected with HBV are given hepatitis B immunoglobulin (HBIG) at birth for extra protection. These measures are highly effective in preventing HBV infection, and 90 - 95% of babies can produce adequate protective antibodies after vaccination.

Post-vaccination serologic testing (PVST)

1. PVST can **confirm if your baby is protected from HBV infection**.
2. Babies who do **not develop adequate antibodies** remain susceptible to HBV infection. They will be given a second 3-dose series of hepatitis B vaccines, followed by another PVST 1 – 2 months after the final dose. Most babies have immune response after the second course of 3-dose hepatitis B vaccination.
3. Babies **infected with HBV can be referred to paediatricians** for management and follow-up.

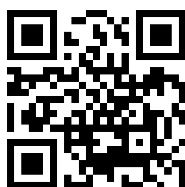
When should PVST be done?

PVST should be conducted at the **age of 9 - 12 months** after the 3-dose course of hepatitis B vaccination.



Notes:

- PVST should not be performed before the age of 9 months to avoid detection of passive anti-HBs from HBIG administered at birth.
- If the hepatitis B vaccination is delayed, PVST should be conducted 1 – 2 months after completion of the final dose of primary vaccination series.
- A positive test result for anti-HBs refers to an antibody concentration of at least 10 mIU/mL.
- Only a very small proportion of babies are non-responders who do not produce adequate antibodies after two courses of 3-dose hepatitis B vaccination. They should minimise potential exposure to infected blood or body fluid and receive post-exposure prophylaxis if indicated.



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