

Post-vaccination Serologic Testing 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.

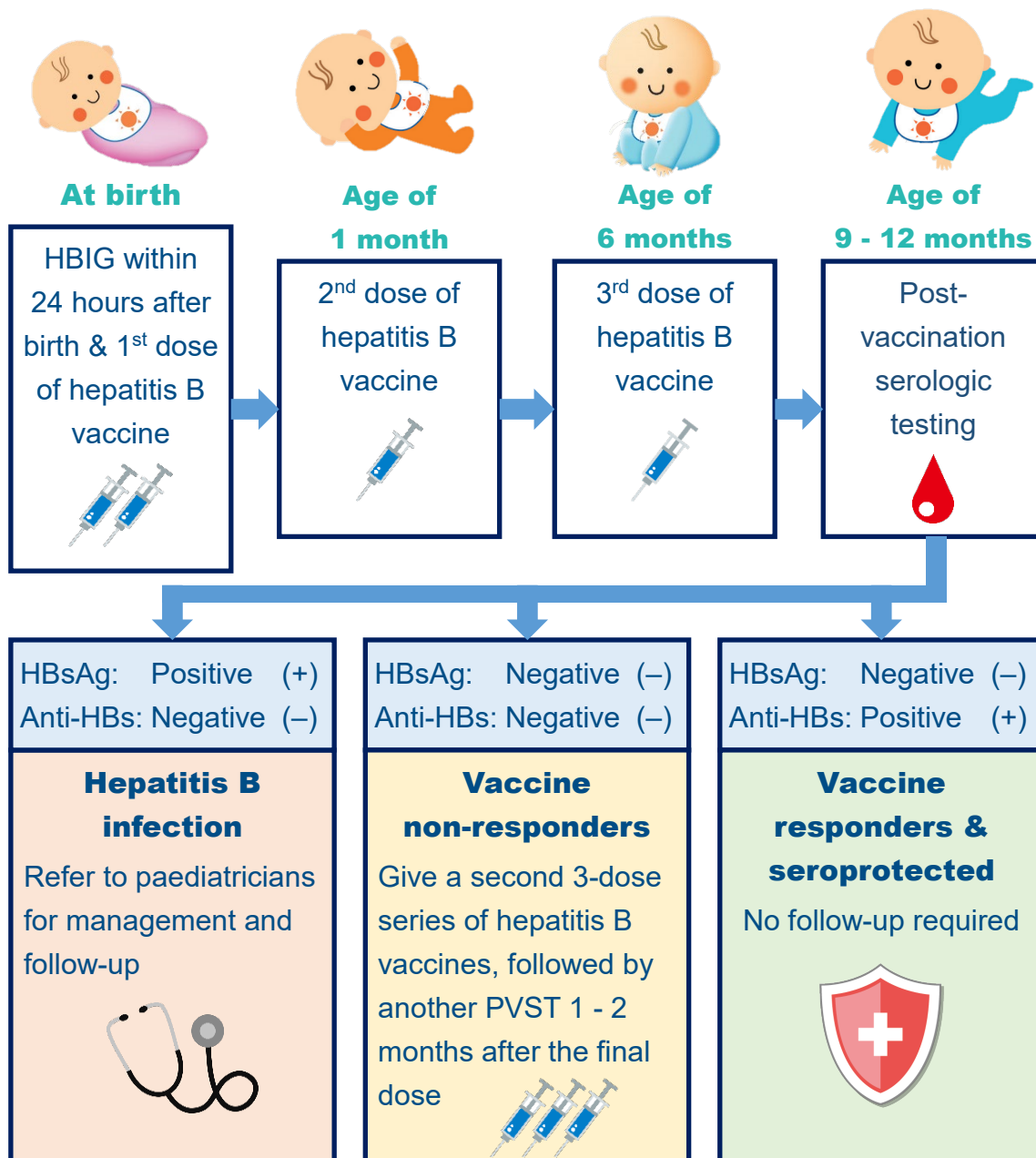
In Hong Kong, all babies are provided with a 3-dose series of hepatitis B vaccines. Babies born to mothers infected with HBV are given hepatitis B immunoglobulin (HBIG) at birth for extra protection. These measures are highly effective in preventing HBV infection, and 90 - 95% of babies can produce adequate 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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接種疫苗後的血清測試

(適用於母親是乙型肝炎患者的嬰兒)

接種疫苗後的血清測試包括乙型肝炎表面抗體和乙型肝炎表面抗原的血液測試，旨在評估嬰兒對乙型肝炎疫苗的免疫反應及乙型肝炎感染情況。

為什麼接種疫苗後要進行血清測試？

慢性乙型肝炎感染是肝硬化和肝癌的主要成因。如果嬰幼兒感染乙型肝炎病毒，發展為慢性乙型肝炎患者的風險非常高，所以確保你的嬰兒已受保護非常重要。

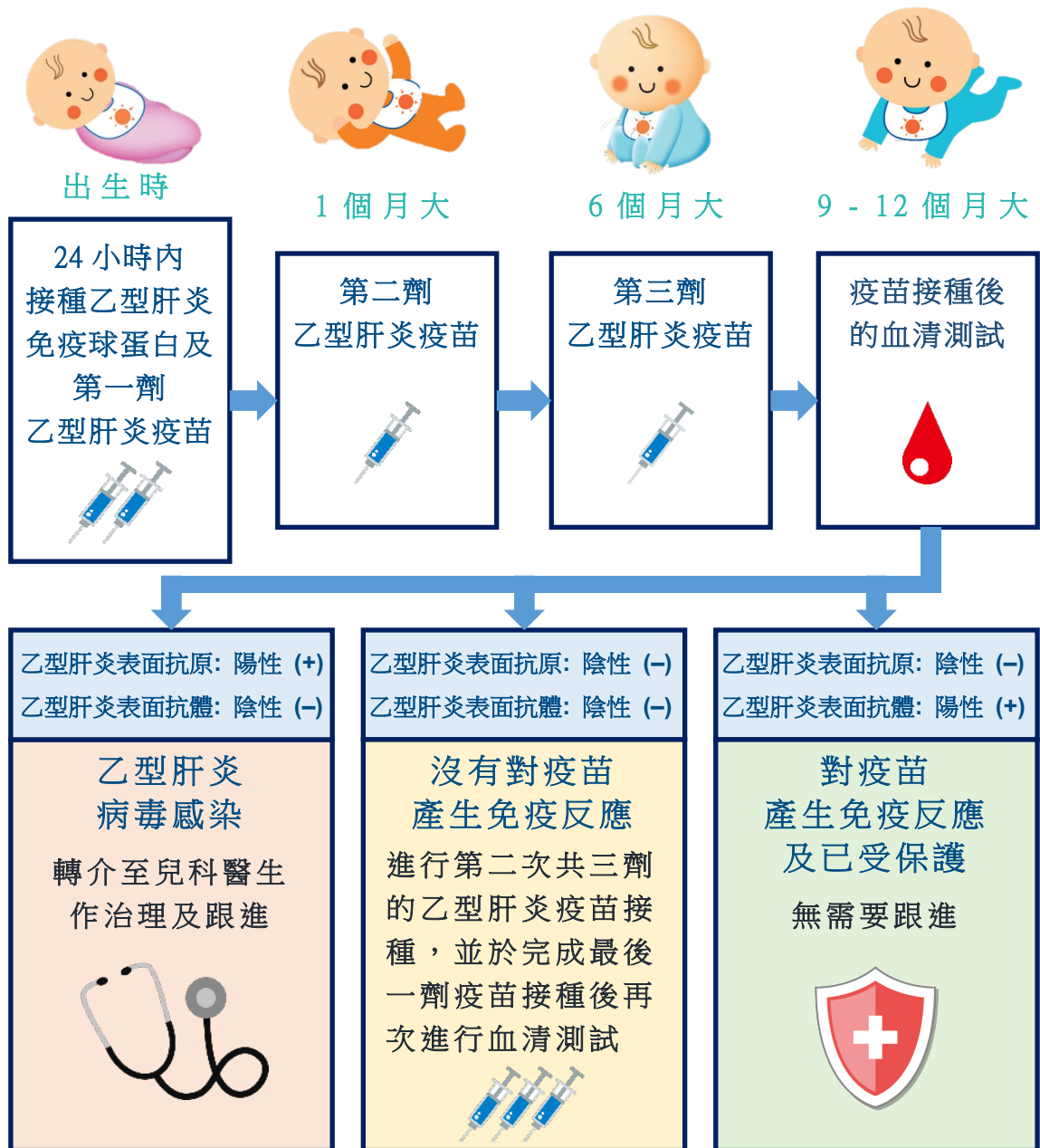
香港所有初生嬰兒均會接種三劑乙型肝炎疫苗。若媽媽已感染乙型肝炎病毒，嬰兒出生後須接受乙型肝炎免疫球蛋白注射，以得到額外保護。這些措施能有效預防嬰兒感染乙型肝炎病毒，90 - 95% 的嬰兒能於接種疫苗後產生足夠的抗體。

接種疫苗後的血清測試

1. 可確定嬰兒是否已受保護，免受乙型肝炎病毒感染。
2. 如果驗出嬰兒未能產生足夠抗體，即仍有機會受乙型肝炎病毒感染。嬰兒可以接種第二次共三劑的乙型肝炎疫苗，並於完成接種後的 1 - 2 個月再次進行血清測試。大部分嬰兒接種第二次共三劑的乙型肝炎疫苗後都能產生免疫反應。
3. 如果驗出嬰兒感染乙型肝炎病毒，可獲轉介至兒科醫生作治理及跟進。

應何時進行接種疫苗後的血清測試？

嬰兒完成接種共三劑的乙型肝炎疫苗後，應於 9 - 12 個月大時進行血清測試。



備註:

- 不足 9 個月大的嬰兒不應進行測試，以免檢測到出生時從注射乙型肝炎免疫球蛋白所得的乙型肝炎表面抗體。
- 若疫苗接種有所延誤，血清測試應安排於完成接種最後一劑疫苗後的 1 - 2 個月進行。
- 乙型肝炎表面抗體呈陽性的測試結果是指抗體水平達每毫升 10 毫國際單位或以上 ($\geq 10\text{mIU} / \text{mL}$)。
- 只有極少數嬰兒為無反應者，即接種兩次各三劑的乙型肝炎疫苗後仍不能產生足夠抗體。他們應避免接觸感染者的血液或體液，並於有需要時接受接觸後的預防治療。



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