

**Serologic testing after hepatitis B vaccination
for babies born to mothers infected with hepatitis B virus**

Answers

CME/CPD point 0.5-1

CNE/PEM point: 1

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1. Which of the following is **NOT** a correct description about the importance of post-vaccination serologic testing (PVST) for babies born to HBsAg-positive mothers?
 - A. Chronicity is common following acute HBV infection in neonates and young children.
 - B. The efficacy of hepatitis B vaccination in infants is low, and a large proportion of vaccinated babies do not mount adequate immune response. ✓**
 - C. PVST is an essential strategy to ensure full protection from hepatitis B vaccination for high-risk babies.
 - D. PVST is an essential strategy to identify high-risk babies who do not respond to the primary course of hepatitis B vaccination for offering second course of vaccination.
 - E. PVST is an essential strategy to ensure appropriate medical care for infected babies.

2. Which of the following markers can indicate protective efficacy of hepatitis B vaccination?
 - A. Hepatitis B surface antigen (HBsAg)
 - B. IgM antibodies to hepatitis B core antigen (IgM anti-HBc)
 - C. Total hepatitis B core antibodies (Total anti-HBc)
 - D. Hepatitis B e antibodies (anti-HBe)
 - E. Hepatitis B surface antibodies (anti-HBs) ✓**

3. According to World Health Organisation's recommendations, which of the following does **NOT** belong to the groups, for which serologic testing after hepatitis B vaccination is recommended?
 - A. Health-care workers
 - B. Infants born to HBsAg-positive mothers
 - C. Chronic haemodialysis patients
 - D. HIV-positive and other immunocompromised persons
 - E. Young healthy adults ✓**

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4. Which of the following is **NOT** part of the preventive measures for MTCT of HBV in Hong Kong?
- A. Routine screening of pregnant women for HBsAg
 - B. Universal childhood hepatitis B vaccination
 - C. **Administration of HBIG to HBsAg-positive pregnant women ✓**
 - D. Administration of HBIG to babies born to HBsAg-positive mothers
 - E. Provision of maternal antiviral prophylaxis to HBsAg-positive mothers with high viral load
5. Which of the following is **NOT** the purpose of PVST programme for babies born to HBsAg-positive mothers in Hong Kong?
- A. **To examine the liver function of all babies born to HBsAg-positive mothers ✓**
 - B. To identify babies who do not have an adequate immune response to an initial hepatitis B vaccine series
 - C. To arrange hepatitis B re-vaccination if needed
 - D. To enable identification of HBV-infected babies for appropriate medical care
 - E. To provide useful and systematic information to monitor the effectiveness of the overall MTCT prevention strategy
6. Which of the following serological marker(s) would be tested in the PVST programme in Hong Kong?
- A. HBsAg only
 - B. Anti-HBs only
 - C. HBsAg and anti-HBc
 - D. **HBsAg and anti-HBs ✓**
 - E. HBsAg, anti-HBs and anti-HBc
7. What level of anti-HBs concentration measured 1 – 2 months after the last dose of the primary vaccination series would be considered a reliable serological marker of long-term protection against HBV infection?
- A. ≥ 0.1 mIU/mL
 - B. ≥ 0.5 mIU/mL
 - C. ≥ 1.0 mIU/mL
 - D. ≥ 5.0 mIU/mL
 - E. **≥ 10.0 mIU/mL ✓**

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8. What is the best timing for conducting PVST on both HBsAg and anti-HBs for babies born to HBsAg-positive mothers and having completed hepatitis B vaccination at the age of 6 months?
- A. Within one week after the last dose of hepatitis B vaccine
 - B. Before the age of 9 months
 - C. At the age of 9 – 12 months ✓**
 - D. At the age of at least 24 months old
 - E. At the age of 6 years
9. Which of the following is the reason for conducting PVST at the minimum age of 9 months for babies born to HBsAg-positive mothers?
- A. To avoid detection of passively acquired anti-HBs from HBIG administered at birth ✓**
 - B. To avoid detection of passively acquired maternal anti-HBc
 - C. To optimise the acceptance and uptake of PVST
 - D. Anti-HBs is not detectable before the age of 9 months
 - E. The minimum age to offer a second course of HBV vaccination is 9 months
10. Which of the following is the recommended follow-up action for babies tested negative for both HBsAg and anti-HBs after primary series of hepatitis B vaccination?
- A. No follow-up action required
 - B. Give a second 3-dose course of hepatitis B vaccination and re-test for HBsAg and anti-HBs after the final dose of the second course of hepatitis B vaccination ✓**
 - C. Re-test for HBsAg again before giving a second 3-dose course of hepatitis B vaccination
 - D. Re-test for anti-HBs again before giving a second 3-dose course of hepatitis B vaccination
 - E. Refer to paediatrician immediately for medical follow-up