



Perinatal Hepatitis B Prevention Program - Post-vaccination Serologic Testing (PVST)

WHO:

Post-vaccination serologic testing, or PVST, should be done on all infants born to all women known to be infected with hepatitis B, or who tested positive for hepatitis B surface antigen (HBsAg) during pregnancy and/or at delivery.

WHY:

PVST is necessary to determine if high-risk infants are protected against, susceptible to, or infected with the hepatitis B virus. Although postexposure prophylaxis (PEP) is highly effective, approximately 1% of infants who receive PEP will still develop infection and up to 5% may remain susceptible to infection. Infants who become infected during childhood have a 90% chance of becoming chronically infected, thereby increasing their risk of early onset cirrhosis and hepatocellular carcinoma.

WHEN:

The Centers for Disease Control and Prevention (CDC) recommend that all infants born to women who tested HBsAg-positive during pregnancy or upon delivery be tested 1 - 2 months after completion of the hepatitis B vaccine series, but no earlier than 9 months of age. Testing before 9 months of age could detect antibodies from hepatitis B immune globulin (HBIG) administered at birth or result in a false-positive HBsAg result due to vaccination. Alternatively, delayed PVST (post 12 months) can result in low antibody results leading to unnecessary re-vaccination.

WHAT:

All infants born to HBsAg-positive women should be tested for both HBsAg and hepatitis B surface antibody (anti-HBs). If the HBsAg result is positive, a confirmatory test (CPT 87341) should be performed.

Test Name	CPT Code
HBsAg	87340
Anti-HBs (Quantitative)	86317

RESULTS:

Tests	Results	Interpretation
Anti-HBs HBsAg	Positive Negative	Immune due to vaccination
Anti-HBs HBsAg	Negative Negative	Susceptible, repeat hepatitis B vaccine
Anti-HBs HBsAg	Negative Positive	Infected, notify Public Health within 1 work day

Susceptible infants who have anti-HBs <10 mIU/mL need to receive a single dose of hepatitis B vaccine and have PVST repeated 1 - 2 months after immunization. Infants who have repeat anti-HBs <10 mIU/mL should receive the next two vaccines in the series, followed by PVST 1 - 2 months after the final dose. Providers may also choose to have these infants repeat the entire 3 dose vaccine series followed by PVST 1 - 2 months after the final dose. Infants who fail to respond to 6 or more doses of vaccine should be considered non-responders and counseling should be provided. Send all PVST results to your DSHS Health Service Region or local health department, regardless of results.

References:

- <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6439a6.htm>
- <http://www.cdc.gov/vaccines/pubs/pinkbook/hepb.html>
- <https://www.cdc.gov/vaccines/programs/vfc/downloads/resolutions/2017-02-01-hepb.pdf>