

Post Vaccination Serologic Testing (PVST)

According to the ACIP recommendations, the post vaccination serologic testing (PVST) should be completed at **9-12 months of age** (and 1-2 months after completion of the Hepatitis B vaccine series). PVST consists of both the hepatitis B surface antigen (HBsAg) and the hepatitis B surface antibody (HBsAb or anti-HBs) only. Collection of PVST at age 9–12 months provides opportunities for testing at either the 9 or 12-month well child visit. It is very important that the parents and the provider know and understand the reason for the timing of PVST. The optimal period to detect a vaccine response generally is 1–2 months after the final dose of the Hep B vaccine series. The infant must be at least **9 months of age** to maximize detection of HBV infection and to avoid detection of passive anti-HBs from the administration of Hepatitis B Immune Globulin (HBIG) at birth. Following the recommended time frame may increase compliance with recommendations for completion of PVST and conserve public health resources involved in providing case management.

Failure to obtain PVST during the recommended time frame increases the risk for transmission of the hepatitis B virus to susceptible infants and delays prompt revaccination with hepatitis B vaccine if the infant results are (-) for both HBsAg and anti-HBs. As the interval between completion of the hepatitis B vaccine series and PVST increases, measured anti-HBs levels decrease (but may still provide protection), which could lead to misclassification of some infants as vaccine non-responders and therefore lead to unnecessary revaccination. It is imperative that the local health department work closely with providers to ensure that PVST recommendations are followed and that parents understand the importance of testing. Extensive effort needs to be made to educate parents and to attempt to bring infants in for testing on time (either at the LHD or the provider's office). Be proactive with providers and notify them **before** the infant is due for testing instead of when they are overdue.

Although LHDs can defer testing of the infant to the primary care provider, it is ultimately the responsibility of the LHD to ensure that appropriate vaccination and testing is conducted and Hepatitis B immunity confirmed after vaccination. Infants must be tested for **both HBsAg and anti-HBs**. Testing for only one serological marker and not both is considered "indeterminate", which results in the infant needing to be retested. If only one of the PVST tests are completed, both the HBsAg and HBsAb must be tested at the re-draw. The child is still at risk for exposure to Hepatitis B if we do not know the result of both tests.

If a PVST is drawn anytime prior to 9 months of age, the LHD will consult with the State Perinatal Hep B Coordinator who will consult with the NC State Viral Hepatitis Medical Director for further guidance.