

Pregnancy, Perinatal, and Infant Hepatitis B Virus (HBV)

- 1. Where can I obtain a copy of the most recent recommendation of the Advisory Committee on Immunization Practices (ACIP) for the prevention of perinatal transmission of HBV infection?**

You can access the official document and appendices at the following link:

<http://www.cdc.gov/mmwr/PDF/rr/rr5416.pdf>

- 2. Do women who have been vaccinated previously against HBV infection still need to be screened during pregnancy?**

Yes. Women who have received hepatitis B vaccine should still be screened for hepatitis B surface antigen (HBsAg) early with each pregnancy. Just because a woman has been vaccinated does not mean she is HBsAg negative. Since postvaccination testing is not performed for most vaccinated persons, she could have been vaccinated even though she was already HBsAg positive.

- 3. What can birthing hospitals do to prevent newborns from "falling through the cracks" (missing the birth dose) and becoming infected with hepatitis B?**

The two most important things hospitals can do are (1) develop written policies and procedures for giving the birth dose that are based on the recommendations of CDC, AAP, and AAFP and (2) implement the policies and procedures they've developed. By putting this policy into place, hospitals ensure that every newborn will receive the birth dose prior to hospital discharge. You will find guidelines for implementing birth dose policies in CDC's recommendations on hepatitis B prevention in children, which is available at <http://www.cdc.gov/mmwr/pdf/rr/rr5416.pdf>

Effective hospital policies and procedures include establishing standardized admission orders for administration of hepatitis B vaccine as part of routine medical care of all medically stable infants weighing 2 kg (4.4 pounds) or more. You can use IAC's "Admission Orders for Labor & Delivery and Newborn Units to Prevent Hepatitis B Virus (HBV) Transmission" <http://www.immunize.org/catg.d/p2130.pdf> as a model in developing your hospital's admission orders.

Note: According to the CDC recommendations, an order to delay the birth dose until after hospital discharge can be done on a case-by-case basis and only in rare circumstances. Further, it requires that a physician's order to withhold the birth dose and a copy of the original laboratory report indicating that the mother was HBsAg negative during this pregnancy be placed in the infant's medical record.

Delivery hospitals should also enroll in the federally funded Vaccines For Children (VFC) program to obtain free hepatitis B vaccine for administration of the birth dose to newborns who are eligible (i.e., Medicaid eligible, American Indian or Alaska Native, underinsured, or uninsured). The VFC information is available at <http://www.cdc.gov/vaccines/programs/vfc/index.html>

- 4. What are the hepatitis B vaccination recommendations for preterm infants who weigh less than 2kg (4.4 pounds), and for premature infants who weigh more?**

Preterm infants weighing less than 2 kg (4.4 pounds) at birth have a decreased response to hepatitis B vaccine administered before age 1 month. (By age 1 month, medically stable preterm infants, regardless of initial birth weight or gestational age, have an immunologic response to hepatitis B vaccination that is comparable to that of full-term infants.) For preterm infants weighing less than 2 kg at birth:

- If maternal HBsAg status is positive: Give hepatitis B immune globulin (HBIG) plus hepatitis B vaccine within 12 hours of birth. Give 3 additional hepatitis B vaccine doses (with single-antigen vaccine at ages 1, 2-3, and 6 months, or hepatitis B-containing combination vaccine at ages 2, 4, and 6 months [Pediatrix] or 2, 4, and 12-15 months [Comvax]). Test for HBsAg and antibody to HBsAg 1-2 months after completion of at least 3 doses of a licensed hepatitis B vaccine series (i.e., at age 9-18 months, generally at the next well-child visit). Testing should not be performed before age 9 months nor within 4 weeks of the most recent vaccine dose.
- If maternal HBsAg status is unknown: Give HBIG plus hepatitis B vaccine within 12 hours of birth. Be sure to test the mother's blood for HBsAg. Give 3 additional hepatitis B vaccine doses (with single-antigen vaccine at ages 1, 2-3, and 6 months, or hepatitis B-containing combination vaccine at ages 2, 4, and 6 months [Pediatrix] or 2, 4, and 12-15 months [Comvax]).
- If the maternal HBsAg status is negative: If you are certain that appropriate maternal testing was done and a copy of the mother's original laboratory report indicating that she was HBsAg negative during this pregnancy is placed on the infant's chart, delay the first dose of hepatitis B vaccine until age 1 month or hospital discharge, whichever comes first. Complete the vaccine series per the recommended schedule.

For preterm infants weighing 2 kg or more at birth, follow the recommendations for full-term infants including the birth dose for all, keeping in mind the special needs of newborns whose mother's HBsAg status is positive or unknown.

5. What is the recommended time to do hepatitis B testing for evidence of success or failure of immunoprophylaxis given at birth to an infant born to an HBsAg-positive mother?

For infants born to HBsAg-positive mothers, postvaccination testing is recommended 1-2 months after completion of at least 3 doses of a licensed hepatitis B vaccine series (i.e., at age 9-18 months, generally at the next well-child visit). Testing should not be performed before age 9 months, as HBIG might still be present for 6-8 months nor should testing be performed within 4 weeks of the most recent vaccine dose, as a false positive HBsAg might occur. Anti-HBc testing of infants or children is not recommended because passively acquired maternal anti-HBc might be detected up to age 24 months in children of HBV-infected mothers.

HBsAg-negative infants with anti-HBs levels of at least 10 mIU/mL are protected and need no further medical management. HBsAg-negative infants with anti-HBs levels less than 10 mIU/mL should be revaccinated with a second 3-dose series and retested 1-2 months after the final dose of vaccine. Children who are HBsAg positive should receive medical evaluation and ongoing follow-up.

Acquired from http://www.immunize.org/askexperts/experts_hepb.asp#pregnancy on January 24, 2013. We thank the Immunization Action Coalition.