



Preventing Perinatal Transmission of Hepatitis B

Guidelines for Prenatal Care Providers

BACKGROUND

Up to 90% of infants born to HBsAg positive mothers can become chronically infected with hepatitis B infection, the major cause of liver cancer worldwide, if they do not receive postexposure prophylaxis at birth. Timely postexposure prophylaxis of infants born to HBsAg-positive women is very effective in preventing perinatal hepatitis B transmission. When a mother is HBsAg positive, her infant must be given two injections as soon as possible and within 12 hours of birth: hepatitis B immunoglobulin (HBIG) and hepatitis B vaccine. The following guidelines are based on the U.S. Advisory Committee on Immunization Practices (ACIP) recommendations¹.

TEST PREGNANT WOMEN FOR HBsAg

- **Providers are mandated to test pregnant women for hepatitis B surface antigen (HBsAg)** per California Health and Safety Code, Section 125085. The HBsAg test should be ordered at an early prenatal visit.
- **Re-test HBsAg-negative pregnant women before delivery** if clinical hepatitis is noted or if there was a risk for hepatitis B exposure during pregnancy. Risk factors include recent intravenous drug use, an HBsAg-positive sex partner, more than one sex partner in the past six months, or recent treatment for a sexually transmitted disease.
- **Submit a copy of the HBsAg laboratory report** documenting the woman's HBsAg status to the designated birth hospital. Notation of the woman's HBsAg status on the prenatal record is not sufficient because transcription errors can occur. Infants of hepatitis B infected women have failed to receive postexposure prophylaxis because of mistranscription of laboratory results.

REPORT HBsAg POSITIVE WOMEN

- **Laboratories and medical providers are mandated to report positive HBsAg results** to the county health department of the patient's residence per California Code of Regulations, Section 125085, and Title 17, Section 2500 [b]. It is important to inform the health department that the patient is pregnant.

VACCINATE THE UNPROTECTED

- **Vaccinate** women who are at risk for infection with hepatitis B virus during their prenatal or postnatal visits.

For additional information, please see: <http://www.cdc.gov/hepatitis/HBV/PerinatalXmntn.htm> or <http://www.cdph.ca.gov/HealthInfo/discond/Pages/PerinatalHepatitisBPrevention.aspx>

INFORM AND ADVISE HBsAg-POSITIVE PREGNANT WOMEN

¹A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States, Recommendations of the Advisory Committee on Immunization Practices (ACIP) Part 1: Immunization of Infants, Children, and Adolescents, MMWR, December 23, 2005 / 54(RR16);1-23. Please see: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5416a1.htm?s_cid=rr5416a1_e



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- Inform HBsAg-positive women that their test results indicate that they have chronic hepatitis B, ask about sexual, needle-sharing and household contacts and refer close contacts and family members for HBsAg and anti-HBs testing to see if they are also chronically infected with hepatitis B or are unprotected against hepatitis B and should get vaccinated.
- Advise HBsAg-positive women to remind their pediatricians that their infants must complete the hepatitis B vaccine series by 6 months of age and undergo blood testing for HBsAg and anti-HBs at 9-18 months of age to make sure they are protected against hepatitis B and have not become infected.
- Advise HBsAg-positive women that breastfeeding is safe if their infant receives HBIG and hepatitis B vaccine at birth.

FOLLOWUP CARE OF HBsAg POSITIVE PREGNANT WOMEN

- There is no evidence that a C-section reduces vertical transmission.
- Positivity for hepatitis B “e” antigen (HBeAg) and a high viral load (HBV DNA) are associated with an increased risk of perinatal transmission of hepatitis B virus even when postexposure prophylaxis is provided to the infant at birth.
- Risk of transmission to the fetus due to amniocentesis is low, but may be higher in the setting of maternal HBeAg positivity and/or high viral load. Prior to amniocentesis, check HBeAg and HBV DNA viral load to help assess the risks and benefits of the procedure. Transplacental amniocentesis should always be avoided.
- The following additional testing is recommended for HBsAg positive pregnant women:
 - Perform HBeAg testing and determine quantitative HBV DNA level to assess infectivity; and
 - Monitor ALT (SGPT) levels during pregnancy to detect a flare up of hepatitis that will require evaluation for oral antiviral treatment.
- If the HBsAg-positive pregnant woman is currently on oral antiviral therapy for chronic hepatitis B infection, she should discuss the risks and benefits of continuing treatment during pregnancy with the healthcare provider who prescribed the treatment.
- If the HBsAg-positive pregnant woman does not have a healthcare provider to provide long-term care for her chronic hepatitis B infection, refer her for care and long-term monitoring for liver cancer.
- Routine administration of oral antiviral drug treatment for chronic hepatitis B without careful evaluation is not recommended for HBsAg-positive pregnant women because the efficacy and safety of the use of these drugs during pregnancy has not been proven.

DEFINITIONS

- HBsAg (hepatitis B surface antigen) = A positive test means that the person is either acutely or chronically infected with hepatitis B.
- Anti-HBs (hepatitis B surface antibody) = In persons who are HBsAg negative, a positive anti-HBs result means they are immune to hepatitis B due to immunization or recovery from past infection.
- HBeAg (hepatitis B e antigen) = In patients not receiving antiviral therapy, a positive HBeAg test is a serologic marker of a high degree of HBV infectivity (although some mutant hepatitis B strains are associated with a high viral load, but are negative for HBeAg).
- HBV DNA level = The most direct blood test used to measure the hepatitis B viral load and infectivity.