

Give first dose of HepB vaccine within 24 hours of birth: AAP

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Infants who weigh at least 2,000 grams (g) should receive their first dose of hepatitis B (HepB) vaccine within the first 24 hours of life, according to a new AAP policy. The recommendation aligns with that of the Centers for Disease Control and Prevention's (CDC's) Advisory Committee on Immunization Practices (ACIP).

The number of new cases of HepB infection has decreased by more than 90% since the introduction of hepatitis B immunization in 1982. Unfortunately, about 1,000 U.S. infants acquire HepB perinatally each year. These infants face up to a 90% chance of chronic HepB infection. If untreated, about 25% will die of hepatocellular carcinoma or liver cirrhosis.

Prevention of perinatal HepB infection involves identification of the infection in women before or during pregnancy and appropriate management of their infants after delivery. The birth dose of HepB vaccine is a critical component of this strategy.

In October 2016, ACIP recommended that all U.S.-born infants who weigh at least 2,000 g receive a dose of HepB vaccine before 24 hours of age. The Academy endorses this recommendation in the policy statement *Elimination of Perinatal Hepatitis B: Providing the Birth Dose within 24 Hours*. The policy, from the Committee on Infectious Diseases and Committee on Fetus and Newborn, is available at <https://doi.org/10.1542/peds.2017-1870> and will be published in the September issue of *Pediatrics*.

Birth dose a critical safety net

ACIP recommended a birth dose of HepB vaccine in 2005, but the recommendation contained permissive language that allowed practitioners to delay this dose. The decision to delay can be made correctly only when the mother is known to be HepB surface antigen (HBsAg)-negative (uninfected) by the time of the infant's birth. Therefore, the birth dose of HepB vaccine is a critical safety net for infants born to infected mothers when the mother's results are not obtained, are misinterpreted, are falsely negative, are transcribed or reported inaccurately, or are not communicated to the infant care team.

Completing a three- or four-dose series of HepB vaccine results in protective antibody concentrations in 98% of healthy full-term infants. The vaccine is considered safe and is well-tolerated in infants. Perinatal HepB prevention strategies, consisting of administration of HepB vaccine and HepB immune globulin (HBIG) when appropriate, are considered cost-effective.

Key steps in implementation

- Identify HBsAg-positive mothers before delivery and document maternal HBsAg status in infant records.
- Resolve unknown HBsAg status of mothers as soon as possible around delivery, and document maternal status in infant records.
- For all infants with birth weight of at least 2,000 g born to HBsAg-negative mothers, administer HepB vaccine as a universal routine prophylactic treatment within 24 hours of birth.
- For all infants with a birth weight of less than 2,000 g born to HBsAg-negative mothers, administer HepB vaccine as a universal routine prophylactic treatment at 1 month of age or at hospital discharge (whichever is first).
- For all infants born to HBsAg-positive mothers, administer both HepB vaccine and HBIG within 12 hours of birth, regardless of any maternal antenatal treatment with antiviral medications.
- For all infants born to HBsAg-unknown mothers, administer HepB vaccine within 12 hours of birth and:
 - For infants with a birth weight of at least 2,000 g, administer HBIG by 7 days of age or by hospital discharge (whichever occurs first) if maternal HBsAg status is confirmed positive or remains unknown.
 - For infants with a birth weight of less than 2,000 g, administer HBIG by 12 hours of birth unless maternal HBsAg status is confirmed negative by that time.
- Document infant vaccination accurately in hospital birth records and in the appropriate CDC Immunization Information Systems/state immunization registry. Review documentation accuracy periodically and address identified errors.
- Develop procedures to educate all personnel involved in newborn care about recommendations for the birth dose of HepB vaccine.

ALF resolution called for birth dose of HepB vaccine

Earlier this year, attendees at the 2017 Annual Leadership Forum adopted a resolution (<http://bit.ly/2gXtaBH>) calling on the Academy to promote the birth dose of hepatitis B vaccine worldwide, in both in- and out-of-hospital settings.

Chronic hepatitis B infection is a significant global problem, the resolution noted.

“Many mothers world-wide are not consistently screened for hepatitis B surface antigen (HBsAg) in pregnancy, and the birth dose administration of hepatitis B vaccine could serve as a safety net when a mother has undiagnosed or misdiagnosed positive HBsAg status. ...” the resolution stated.

Those at risk of infection include foreign-born children adopted by U.S. families.

Dr. Barnett, the lead author of the policy, is a member of the AAP Committee on Infectious Diseases.

Resources

- [AAP Red Book section on hepatitis B](#)
- [AAP News story "Merck reports HepB vaccine shortage; GSK vaccine can be used instead"](#)

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