TEXAS Health and Human Services | Texas Department of State Health Services

A Pediatric Guide: Caring for Infants Born to Hepatitis B-Infected Mothers

Adapted from the Georgia Department of Public Health

Immunize and Test On Time

AGE	Single-antigen hepatitis B vaccine (Engerix-B® or Recombivax HB®)	Combination hepatitis B vaccine (Pediarix®)
Birth[1] (Within 12 hours)	Single-antigen hepatitis B vaccine (Energix-B or Recomivax HB)	Combination vaccine is not approved for the birth dose. See single-antigen guidance.
One to two Months[2]	Hepatitis B vaccine dose two	Hepatitis B vaccine dose two
Four Months	No vaccine needed	Hepatitis B vaccine dose three
Six Months	Hepatitis B vaccine dose three	Hepatitis B vaccine dose four
Nine to Twelve Months[3]	Postvaccination serologic testing Hepatitis B Surface Antigen (HBsAg) and Hepatitis B Surface Antibody (anti-HBs)	Postvaccination serologic testing Hepatitis B Surface Antigen (HBsAg) and Hepatitis B Surface Antibody (anti-HBs)

[1] HBIG should be administered within 12 hours of birth; however it can be administered up to seven days after birth if the mother's HBsAg laboratory result is unavailable at delivery.

[2] Low birth weight infants (less than 2,000 grams or 4.4 lbs.) should receive four doses of hepatitis B vaccine. The schedule is: HBIG and hepatitis B vaccine within 12 hours of birth, hepatitis B vaccine at one month, two months and six months of age. The Pediarix® schedule is HBIG and single-antigen hepatitis B vaccine within 12 hours of birth, followed by Pediarix® doses at two, four and six months of age.

[3] Blood for the PVST should not be collected before nine months of age and must be drawn a minimum of 30 days after final hepatitis B vaccine dose, if infant is completing the hepatitis B series after the recommended intervals.

Postvaccination Serologic Testing (PVST) Laboratory Interpretations

	Immune to HBV No additional HepB doses needed		Susceptible to HBV Additional HepB doses needed		Infected with HBV Report results to Public Health	
Test	HBsAg[4]	anti-HBs[5]	HBsAg[4]	anti-HBs[5]	HBsAg[4]	anti-HBs[5]
Result	Negative	Positive	Negative	Negative	Positive	Negative

[4] CPT Code - 87340

[5] CPT Code - 86317

Phone: 512-761-2905 **Fax:** 512-776-7544 **Website:** TexasPerinatalHepB.org

Reporting Portal: txhhs.force.com/DSHSPeriHepBPreventionPortal/s/

Common Questions about Peri Hep B

What is hepatitis B and how is it transmitted?

Hepatitis B is an infectious liver disease caused by the Hepatitis B Virus (HBV). HBV attacks the liver and can lead to cirrhosis, liver cancer and premature death. HBV is transmitted through contact with infectious blood or body fluids. HBV can be transmitted from an infected mother to her newborn during delivery.

How can an infant exposed to hepatitis B at birth be protected?

Immunoprophylaxis with both hepatitis B immune globulin (HBIG) and the first dose of hepatitis B (HepB) vaccine should be administered within the first 12 hours of birth. This, when followed by completion of the hepatitis B vaccine series according to the recommended schedule, is 85-95% effective in preventing perinatal hepatitis B infection.

What if my patient's HBsAg and anti-HBs results are negative after completing the HepB series?

HBsAg-negative infants with anti-HBs <10 mIU/mL should be revaccinated with a single dose of HepB vaccine and receive postvaccination serologic testing one to two months later (2018 recommendation). Infants whose anti-HBs remains <10 mIU/mL following single dose revaccination should receive two additional doses of HepB vaccine to complete the second series followed by postvaccination serologic testing one to two months after the final dose. Alternatively, based on clinical circumstances or family preference, these infants may instead be revaccinated with a second, complete three dose series, followed by postvaccination serologic testing performed one to two months after the final dose of vaccine. If immunity is still not present after six doses, counsel the child's parents or guardian on risk reduction strategies for vaccine non-responders.

My patient was born to an HBV-infected mother and weighed less than 2,000 grams (4.4 lbs.) at birth. Why does this infant need four doses of HepB?

The immune response to HepB vaccine is less reliable in newborns weighing less than 2,000 grams so they will need an additional HepB vaccine at one month of age, while still receiving doses at birth, two months of age and six months of age.

Is there a specific immunization schedule that needs to be followed for HBV-exposed infants?

Yes. Hepatitis B immune globulin (HBIG) and HepB vaccine (birth dose) should be administered within 12 hours of birth. HepB vaccine dose two should be administered at one to two months of age and the third dose should be administered at six months of age. After the birth dose, infants receiving Pediarix® should receive doses at two, four, and six months of age.

What is PVST and why is it necessary?

Postvaccination serologic testing is recommended for infants and children born to hepatitis B-infected mothers. Serologic testing confirms whether the child has developed immunity or has been infected with HBV. The PVST should include hepatitis B surface antigen (HBsAg) and hepatitis B surface antibody (anti-HBs) only. Testing should occur one to two months after completion of the HepB vaccine series and between nine and 12 months of age.

Why must providers wait until the infant is nine months of age to collect the PVST?

Labs collected before nine months of age can provide inaccurate anti-HBs results by detecting the antibody from HBIG administered at birth and not actual response to the hepatitis B vaccine. Also, for infants who receive HBIG at birth but still develop HBV infection, there can be a prolonged incubation period. Waiting until nine months of age can maximize detection of late HBV infection.

My HBV-exposed patient has other siblings that I care for in my practice. Do they need follow-up?

Yes. Household contacts including other siblings should be tested and vaccinated against HBV, if found to be susceptible.

What if my practice identifies a HBV-exposed newborn that did not receive HBIG before hospital discharge?

Administering HBIG within 12 hours of birth is recommended; however, it can be administered up to seven days after birth. The infant should be referred urgently to the Labor and Delivery Unit of the delivery hospital for immediate administration of HBIG.

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