

Hepatitis B Immune Globulin (HBIG)

Indication:

HBIG is recommended for post-exposure prophylaxis (PEP) to hepatitis B virus (HBV) by percutaneous, mucosal, sexual, household or perinatal exposure). HBIG should be given as soon as possible, preferably within 12 hours for perinatal exposure and within 24 hours for percutaneous or mucosal exposure. PEP is unlikely to be beneficial if initiated 7 days after percutaneous exposure or 14 days after sexual exposure.

Table 1: Recommended for hepatitis B virus (HBV) prophylaxis after occupational percutaneous or mucosal exposure to blood or body Fluids

Treatment When Source Is:				
Vaccination and anti-body status of HCP		HBsAg Positive	HBsAg Negative	Unknown or not available for testing
Unvaccinated/incompletely vaccinated or vaccine refusers		HBIG x1 and 1 dose of HB vaccine. ➤ Complete vaccine series ➤ Anti – HBs testing 1 – 2 months after the last dose. May defer testing until anti – HBs from HBIG are no longer detectable (6 months).	Complete HB vaccine series	HBIG x1 and 1 dose of HB vaccine. ➤ Complete vaccine series ➤ Anti – HBs testing 1 – 2 months after the last dose. May defer testing until anti – HBs from HBIG are no longer detectable (6 months).
Previously Vaccinated	Documented responder	No treatment	No treatment	No treatment
	Documented nonresponder	HBIG x2 separated by 1 month.	No treatment	HBIG x2 separated by 1 month
	Antibody response unknown	Test exposed person for anti-HBs ➤ If adequate (≥ 10 mIU/mL), no treatment necessary ➤ If inadequate (< 10 mIU/mL), administer HBIG x1 and 1 dose of hepatitis B vaccine. Administer 2 nd and 3 rd dose according to schedule. ➤ Re – test for anti – HBs 1 – 2 months after the 3 rd dose.	Test exposed person for anti-HBs ➤ If adequate (≥ 10 mIU/mL), no treatment necessary ➤ If inadequate (< 10 mIU/mL), administer a single dose of hepatitis B vaccine and re – test for anti – HBs in 1 – 2 months.	Test exposed person for anti-HBs ➤ If adequate (≥ 10 mIU/mL), no treatment necessary ➤ If inadequate (< 10 mIU/mL), administer HBIG x1 and 1 dose of hepatitis B vaccine. Administer 2 nd and 3 rd dose according to schedule. ➤ Re – test for anti – HBs 1 – 2 months after the 3 rd dose.

Abbreviations: HBsAg=Hepatitis B surface antigen; anti-HBs =antibody to hepatitis B surface antigen; HBIG=hepatitis B immune globulin; HCP=health care personnel

Table 2: Postexposure management after distinct Nonoccupational percutaneous or mucosal exposure to blood or body fluids.

Exposure*	Treatment	
	Unvaccinated Person	Vaccinated Person
HBsAg positive source	Administer hepatitis B vaccine series and HBIG	Administer hepatitis B vaccine dose
HBsAg status unknown for source	Administer hepatitis B vaccine series	No treatment

*Exposures include percutaneous (e.g., bite or needlestick) or mucosal exposure to blood or body fluids, sex or needle – sharing contact, or victim of sexual assault/abuse.

Table 3: HBIG recommendations for infants by birthweight and maternal HBsAg status.

<i>Mother's HBsAg Status</i>			
	Positive	Negative	Unknown
Birth weight ≥ 2000 grams	Administer HBIG and hepatitis B vaccine within 12 hours of birth.##	No HBIG required. Administer hepatitis B vaccine within 24 hours of birth.	Administer hepatitis B vaccine within 12 hours of birth. Do not give HBIG unless mother is confirmed to be HBsAg+. [§]
Birth weight < 2000 grams	Administer HBIG and hepatitis B vaccine within 12 hours of birth.##	No HBIG required. Administer hepatitis B vaccine at discharge or age 1 month.	Administer hepatitis B vaccine and HBIG within 12 hours of birth. ^{§§}

Infants (≥2000 grams) of HBsAg-positive mother or unknown HBsAg status[§]: Administer HBIG along with the first dose of hepatitis B vaccine within 12 hours of birth (use two different sites). The second dose of hepatitis B vaccine should be administered 1-2 months after the first dose and the third dose at 6 – 18 months of age.

Preterm infants (< 2,000 grams at birth) born to HBsAg-positive mother^{##}: Give HBIG along with first dose of hepatitis B vaccine within 12 hours of birth. Do not count the birth dose in the 3-dose schedule. Administer next dose of hepatitis B vaccine in the series when the infant reaches a chronologic age of 1 month, the third dose 1-2 months after the second, and the fourth dose at 6 – 18 months of age.

Infants whose mother's HBsAg status is unknown at birth[§]: Mothers should have blood draw and tested for HBsAg as soon as possible after admission for delivery. If mother is found to HBsAg positive, the infant should receive HBIG as soon as possible, but no later than 7 days after birth. If other evidence suggestive of maternal HBV infection exists (e.g. presence of HBV DNA, HBeAg positive, or mother known to be chronically infected with hepatitis B) administer HBIG and hepatitis

B vaccine within 12 hours of birth. Continue with the recommended schedule for hepatitis B vaccine with the second dose at 1-2 months, and the third dose at 6 – 18 months of age.

Preterm infants (< 2,000 grams at birth) whose mother's HBsAg status is unknown⁸⁸: Administer HBIG and hepatitis B vaccine within 12 hours of birth. The birth dose of hepatitis B vaccine is not counted as part of the series and therefore the infant should receive three additional doses beginning at 1 month of age.

Combination vaccines: Combination vaccines (Pediarix) should **not** be used for the birth dose of hepatitis B vaccine, but may be used to complete the 3 – dose series. For more information on the recommendations for use of hepatitis B combination vaccines, go to www.publichealth.lacounty.gov/ip/providers_resources.htm

Tables adapted from the Prevention of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices.

References:

1. Shille, S., Bellozzi, C., Reingold, A, et. al. Prevention of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices. MMWR Recomm Rep 2018;67(1):1 – 31. DOI: www.cdc.gov/mmwr/volumes/67/rr/rr6701a1.htm. Accessed on March 21, 2018.
2. American Academy of Pediatrics. Hepatitis B Chapter In: Kimberlin, DW, Brady, MT, Jackson, MA, Long, SS, eds. Red Book: 2015 Report of the Committee on Infectious Diseases. 30 ed. Elk Grove, IL: American Academy of Pediatrics; 2015: 400 – 423.

