

HBV/HCV Post Exposure Testing

Test	Source	Exposed Persons			
	Baseline	Baseline	4-6 weeks post exposure	3 months post exposure	6 months post exposure
Hepatitis B- HBsAg anti-HBc anti-HBs	☒	☒	☒ ¹		☒ ¹ If HBIG or vaccine series is completed
Hepatitis C: anti-HCV HCV RNA	☒	☒	☒ ² If HCV RNA is being ordered	☒ ² If anti-HCV is being ordered	

*All individuals that have a potential exposure to HBV should be given the HBV vaccine after baseline testing is complete.

*Source: <https://www.cdc.gov/hiv/pdf/programresources/cdc-hiv-npep-guidelines.pdf>

1. Retest 1 month after receiving HBV vaccine. If the individual receives HBIG retesting will need to occur 6 months post exposure as HBIG provides passive immunity for 3-6 months.

- HBsAg (-) and anti-HBs (+)-stop vaccinating patient is considered immune no further action
- HBsAg (-) and anti-HBs (-)-complete vaccine series (3 does) retest 1 month after final dose
- HBsAg (+) and anti-HBs (-)-stop vaccinating patient is infected with HBV
- HBsAg (+) and anti-HBs (+)-stop vaccinating and retest patient at 6-month mark (possible self-clearance versus acute infection)

2. HCV: anti-HCV versus HCV RNA

- Since HCV RNA is detectable 2 weeks after exposure testing the exposed patient at 4-6 weeks can be performed.
- Anti-HCV can take up to 12 weeks to become detectable and retesting should be completed at 3 months post exposure.

Needlestick/cut exposure	
Source	Risk
HBV	
HBsAg+	22.0% - 30.0%
HBeAg+	1.0% - 6.0%
HBeAg-	
HCV+	1.8%
HIV+	0.3%

Employers are required to establish exposure control plans that include postexposure follow-up for their employees and to comply with incident reporting requirements mandated by the 1992 OSHA bloodborne pathogen standard.

Recommended Post-Exposure Prophylaxis

1. Scenario 1: *Exposed patient is unvaccinated/non-immune*
 - a. **If source patient is:**
 - i. **HBsAg positive:** HBIG x 1; initiate HBV vaccine series in exposed patient
 1. HBIG dose is 0.06 mL/kg intramuscularly
 - ii. **HBsAg negative:** Initiate HBV vaccine series in exposed patient
 - iii. **Unknown or not available for testing:** Initiate HBV vaccine series in exposed patient
2. Scenario 2: *Exposed patient is previously vaccinated and a known responder*
 - a. **If source patient is:**
 - i. **HBsAg positive:** No treatment for exposed patient
 - ii. **HBsAg negative:** No treatment for exposed patient
 - iii. **Unknown or not available for testing:** No treatment
 - iv. **Comments:**
 1. Exposed patient was vaccinated with full three-dose series; “known responder” is based on information available at presentation.
 2. Responder is defined as person with previously documented adequate levels of serum antibody to HBsAg (serum anti-HBs >10 mIU/mL); non-responder is a person with previously documented inadequate response to vaccination (serum anti-HBs <10 mIU/mL).
 3. It is not recommended that decision-making be delayed while testing for anti-HBs at presentation.
3. Scenario 3: *Exposed patient is previously vaccinated and a known non-responder*
 - a. **If source patient is:**
 - i. **HBsAg positive:** HBIG x 1 and initiate revaccination *or* HBIG x 2 in exposed patient
 1. HBIG dose is 0.06 mL/kg intramuscularly
 - ii. **HBsAg negative:** No treatment for exposed patient
 - iii. **Unknown or not available for testing:** No treatment unless source is known to be high-risk source; if high-risk source, then treat as if source were HBsAg positive
 - iv. **Comments:**
 1. Patient was vaccinated with full three-dose series; “known nonresponder” is based on information available at presentation.
 2. Responder is defined as person with previously documented adequate levels of serum antibody to HBsAg (serum anti-HBs >10 mIU/mL); non-responder is a person with previously documented inadequate response to vaccination (serum anti-HBs <10 mIU/mL).

3. It is not recommended that decision-making be delayed while testing for anti-HBs at presentation.
 4. The option of giving one dose of HBIG and re-initiating the vaccine series is preferred for non-responders who have not completed a second three-dose vaccine series.
 5. For persons who previously completed a second vaccine series but failed to respond, two doses of HBIG are preferred
 6. High-risk is defined as sources who engage in needle-sharing or high-risk sexual behaviors, and those born in geographic areas with HBsAg prevalence of >2% [Weinbaum et al. 2008].
4. Scenario 4: *Exposed patient is previously vaccinated, with unknown antibody response*
- a. **If source patient is:**
 - i. **HBsAg positive:** Administer single vaccine booster dose to exposed patient
 - ii. **HBsAg negative:** No treatment for exposed patient
 - iii. **Unknown or not available for testing:** No treatment for exposed patients unless the source is known to be high-risk; if high-risk source, then treat as if source were HBsAg
 - iv. **Comments:**
 1. Exposed patient was vaccinated with full three-dose series.
 2. High-risk is defined as sources who engage in needle-sharing or high-risk sexual behaviors, and those born in geographic areas with HBsAg prevalence of >2% [Weinbaum et al. 2008].
5. Scenario 5: *Exposed patient is still undergoing vaccination*
- a. **If source patient is:**
 - i. **HBsAg positive:** Administer HBIG x 1; complete series to exposed patient
 - ii. **HBsAg negative:** Administer HBIG x 1; complete series to exposed patient
 - iii. **Unknown or not available for testing:** Administer HBIG x 1; complete series to exposed patient
 - iv. **Comments:** HBIG dose is 0.06 mL/kg intramuscularly

Abbreviation key: hepatitis B surface antigen (HBsAg); hepatitis B immune globulin (HBIG); antibody to hepatitis B surface antigen (anti-HBs)

*This information was taken from: The New York State Department of Health Aids Institute; https://www.hivguidelines.org/pep-for-hiv-prevention/non-occupational/#tab_9