



# Hepatitis B Case Follow-up

## General Guidance

### What is Hepatitis B?

Hepatitis B (HBV) is a vaccine-preventable viral infection that causes liver inflammation and damage. Acute HBV is a short-term infection that occurs within the first six months after exposure to the virus. Approximately 95% of adults are able to clear the virus without treatment or progressing to a chronic infection. Chronic HBV refers to a lifelong infection with the virus that can cause serious health problems, including cirrhosis, liver cancer, and death. Approximately 90% of infants and 5% of adults infected with HBV will develop a chronic infection.

### Incubation period

The average incubation period for HBV is six weeks to six months from the time of exposure. The first detectable markers of HBV after virus exposure are the hepatitis B surface antigen (HBsAg), which is typically detected within four weeks after exposure (range of one to five weeks), and HBV DNA.

### Signs and Symptoms

In adults, approximately 30-50% of acute HBV infections are symptomatic, with symptoms beginning an average of eight weeks to five months after exposure to the virus. Symptoms may include abdominal pain, nausea, vomiting, dark urine, fatigue, jaundice or loss of appetite. Symptoms usually last several weeks, or up to six months. Many people with chronic HBV don't have symptoms and don't know they are infected.

### Transmission

The Hepatitis B virus is spread from blood, semen, or other body fluids from an infected person. Virus transmission can be spread through:

- Childbirth/ perinatal transmission.
- Sex with an infected person.
- Injection drug use.
- Needle sticks.

### Contact Tracing

HBV is highly infectious and can survive on surfaces for up to a month. Close contacts of the infected person should be identified as far back as six months from onset of symptoms of the HBV positive patient or six months from the patient's exposure to HBV. Unvaccinated household members, needle sharing contacts, and sexual partners of the infected person should be tested for HBsAg, and for total hepatitis B core antibody (total anti-HBc) and/or hepatitis B surface antibody (anti-HBs), and offered HBV vaccination.

### Recommended Testing

In 2023, The Centers for Disease Control and Prevention (CDC) published updated recommendations for HBV screening and testing:

- All adults should be tested at least once in their lifetime.
- All infants born to HBsAg positive mothers should be tested and linked to care.
- Pregnant women should be screened during each pregnancy.
- People with ongoing risk of exposure should be tested periodically while risk for exposure persists (see following page for information on risk).

CDC recommends use of the triple panel test, which includes testing for:

- HBsAg.
- Anti-HBs.
- Total anti-HBc.

Any periodic follow-up testing can use tests as appropriate based on the results of the triple panel.

## Treatment

Currently, there are no available treatments for acute HBV, although supportive care can be offered. There are several medications available for the treatment of chronic HBV; however, not everyone who has HBV will need medication.

## Who to Vaccinate

Hepatitis B vaccine is usually given as two, three, or four shots.

The Advisory Committee on Immunization Practices (ACIP) recommends hepatitis B vaccination should be offered to:

- All infants, with the first dose given at birth. The HBV vaccine birth dose is important for preventing HBV infection in infants.
- Unvaccinated children younger than 19 years old.
- Adults 19-59 years.
- Adults 60 years or older at increased risk of exposure to HBV.
- Anyone traveling to a region of intermediate to high HBV prevalence (>2%).

**Adults 60 years or older who are not at increased risk and were not vaccinated in the past may also be vaccinated.**

Persons at increased risk for HBV infection include:

- People with a history of sexually transmitted infections or multiple sex partners.
- People with history of past or current Hepatitis C (HCV) infection.
- People incarcerated or formerly incarcerated.
- Infants born to HBsAg-positive mothers.
- People born in regions with HBV infection prevalence of 2% or more.
- People who inject drugs or have a history of injection drug use.
- People with human immunodeficiency virus (HIV) infection.
- Men who have sex with men.

- Household contacts or former household contacts of people with known HBV infection.
- People who have shared needles with or engaged in sexual contact with people with HBV.
- People on maintenance dialysis, including in-center or home hemodialysis and peritoneal dialysis.
- People with elevated liver enzymes.

## Resources

Ohio Department of Health Viral Hepatitis Surveillance program.

- [Hepatitis B Case Definition Guidance.](#)
- [Hepatitis B Flow Chart.](#)

## References:

Centers for Disease Control and Prevention.  
[Clinical Overview of Hepatitis B.](#)

Centers for Disease Control and Prevention.  
[Hepatitis B Surveillance Guidance.](#)

Centers for Disease Control and Prevention.  
[Clinical Testing and Diagnosis for Hepatitis B.](#)

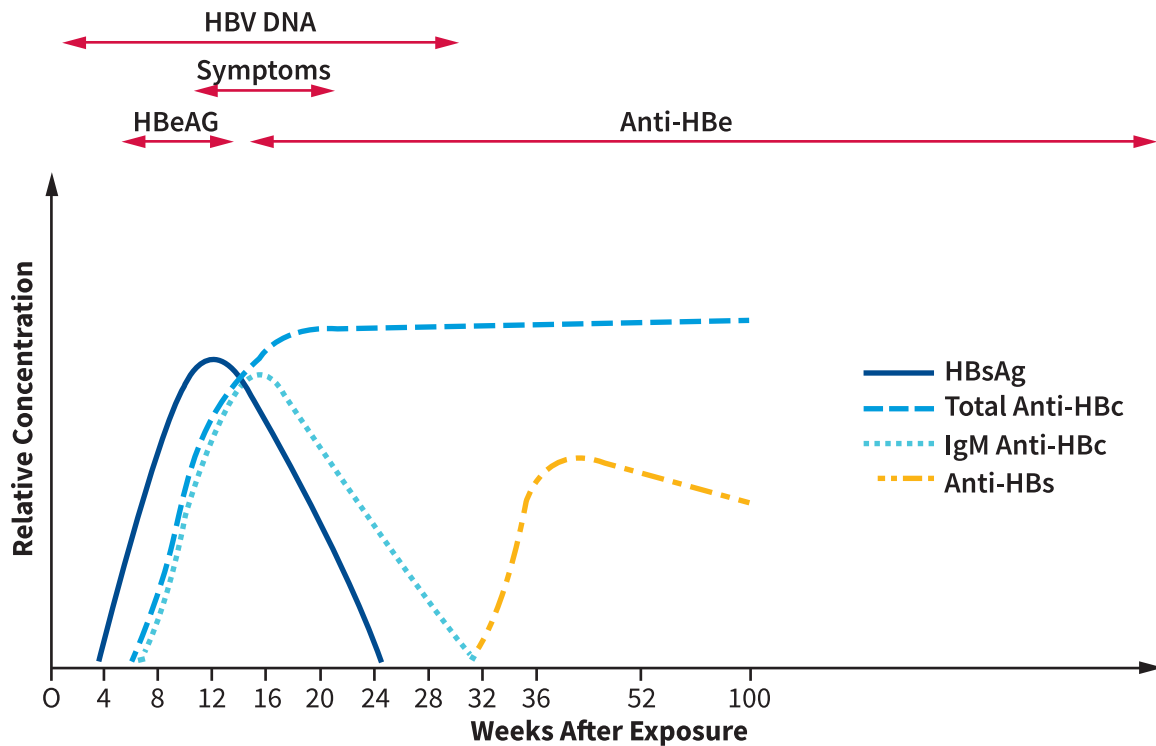
Centers for Disease Control and Prevention.  
[Hepatitis B Virus \(HBV\) Infection.](#)

Connors EE, Panagiotakopoulos L, Hofmeister MG, et al.  
[Screening and Testing for Hepatitis B Virus Infection: CDC Recommendations](#) — United States, 2023.  
MMWR Recomm Rep 2023;72(No. RR-1):1–25. DOI:

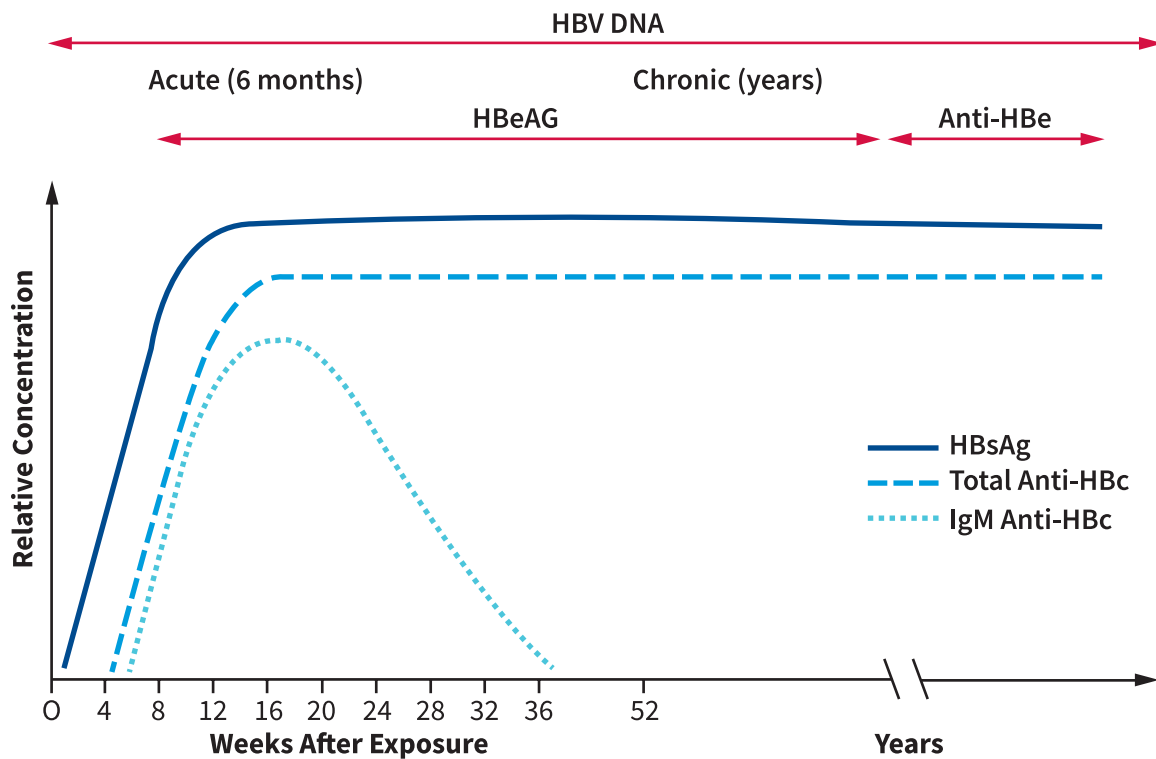
U.S. Department of Veterans Affairs.  
[Viral Hepatitis and Liver Disease.](#)

Weinbaum, Cindy M. et al. (2008).  
[Recommendations for identification and public health management of persons with chronic hepatitis B virus infection.](#)

## A. Typical Serologic Course of Acute HBV Infection to Recovery



## B. Typical Serologic Course of Progression to Chronic HBV Infection



## Interpretation of Hepatitis B Laboratory Results

HBsAg	Total Anti-HBc	Anti-HBc IgM	Anti-HBs	HBV DNA	Possible Interpretation*
-	-	-	-	-	Never infected; susceptible if never vaccinated or vaccine failure.
+	-	-	-	<b>+ or -</b>	Early acute infection (if HBV DNA is positive); transiently positive for HBsAg after vaccination (if HBV DNA is negative). †
+	+	+	-	+	Acute infection.
-	+	+	<b>+ or -</b>	<b>+ or -</b>	Acute resolving infection; “window period” if anti-HBs is negative.
-	+	-	+	-	Recovered from past infection and immune.
+	+	-	-	+	Chronic HBV infection.
-	-	-	+	-	Immune from vaccination; passive anti-HBs transfer after hepatitis B immune globulin administration.
-	+	-	-	<b>+ or -</b>	Isolated total anti-HBc positive. ‡
-	<b>+ or -</b>	-	<b>+ or -</b>	+	Occult HBV infection. §
<b>+ or -</b> §	+	<b>+ or -</b>	<b>+ or -</b>	+	Possible HBsAg mutant infection.

Centers for Disease Control and Prevention. Hepatitis B Surveillance Guidance.

<https://www.cdc.gov/hepatitis/statistics/surveillanceguidance/HepatitisB.htm#:~:text=Approximately%2050%E2%80%93370%25%20of%20people,many%20undiagnosed%20and%20unreported%20infections>