



Hepatitis B and Health Care Providers What You Need To Know



What is hepatitis B? Hepatitis B is the world's most common serious liver infection. It is caused by the hepatitis B virus (HBV) that attacks liver cells and can lead to liver failure, cirrhosis (scarring) or cancer of the liver later in life. Hepatitis B is transmitted through blood, unprotected sex, use of unsterile needles, and from an infected mother to her newborn during the delivery process. It is not transmitted casually through the air or superficial social contact. Approximately 90% of healthy adults who are exposed to the hepatitis B virus (HBV) recover on their own and develop protective antibodies. However, 10% of infected adults, 50% of infected children, and 90% of infected babies are unable to get rid of the virus and develop chronic infection. These people need further evaluation by a liver specialist or doctor knowledgeable about hepatitis B.

Am I at risk for a hepatitis B infection? Health care workers who come into contact with human blood, blood products, or potentially infectious bodily fluids are at an increased risk for exposure to the hepatitis B virus.

How can I protect myself as a health care worker? The Centers for Disease Control and Prevention (CDC) recommends that all health care workers, emergency personnel, and other individuals who are exposed to blood or body fluids on the job, should be vaccinated against hepatitis B. The vaccine is safe and effective and can protect you for a lifetime. The vaccine is given in three doses over a 6 month period (0, 1, and 6 months). It is recommended that health care workers have their hepatitis B surface antibody (HBsAb) level tested 4-6 weeks after completion of the series, to make sure that they have built up protection against HBV. Once a blood test shows that a health care worker is protected, the CDC does not recommend routine antibody testing or vaccine boosters. However, each health care institution may have its own hepatitis B vaccine protocol. If a person does not develop the protective antibodies after completion of the vaccine series, then the entire series should be repeated (with antibody testing 4-6 weeks after completion of the additional second series).



What if I am exposed to the virus? For unvaccinated individuals who think they have been exposed to hepatitis B, it is recommended that they speak to their doctor about "post-exposure prophylaxis" as soon as possible. If the source of the exposure is known to be positive for hepatitis B, then the exposed person should receive the first dose of the vaccine and one dose of HBIG as soon as possible (within 24 hours if possible). After that, the remaining 2 doses of the vaccine can be given 1 and 6 months after the first dose. About one-two months after the vaccine series is completed, it is a good idea to get tested to determine whether the person developed protective antibodies. If the hepatitis B status of the source is unknown and the exposed person is unvaccinated, it is recommended that they begin the hepatitis B vaccine series as soon as possible.

How can I find out my hepatitis B status? The test that is used to help you understand your hepatitis B status is called the 3-part hepatitis B blood panel. This is a simple 3-part blood test that your doctor can order. Only one sample of blood is needed. The 3-part panel contains the following information:

- 1) Hepatitis B surface Antigen (HBsAg) - this tests directly for the presence of hepatitis B virus. It should be negative if there is NO virus present.
- 2) Hepatitis B surface Antibody (HBsAb or anti-HBs) - this tests for the production of protective antibodies against the hepatitis B virus. This blood test should be positive if the protective antibodies are produced in response to either vaccination or recovery from a natural infection.
- 3) Hepatitis B core Antibody (HBcAb or anti-HBc) - this antibody does not provide any protection, but only refers to a part of the virus itself. A positive test result may indicate whether a person has been exposed to the hepatitis B virus or not. This test must be interpreted in relation to the above 2 test results.

Tests	Results	Interpretation	Recommendation
HBsAg HBsAb HBcAb	Negative (-) Negative (-) Negative (-)	NOT IMMUNE– has not been infected but is still at risk for possible future infection – needs vaccine	Get the vaccine
HBsAg HBsAb HBcAb	Negative (-) Positive (+) Negative or positive (-/+)	IMMUNE – has been vaccinated or recovered from previous infection – cannot infect others	Vaccine is not needed
HBsAg HBsAb HBcAb	Positive (+) Negative (-) Negative or Positive (-/+)	ACUTE or CHRONIC INFECTION – Hepatitis B virus is present – can spread the virus to others	Find a knowledgeable doctor for further evaluation
HBsAg HBsAb HBcAb	Negative (-) Negative (-) Positive (+)	UNCLEAR – several interpretations are possible – all 3 tests should be repeated	Find a knowledgeable doctor for further evaluation

When you get your test results, request a written copy so that you fully understand what tests were ordered and the actual results of each. Be sure to have your doctor clearly explain the results so that you fully understand your situation. Visit our website at www.hepb.org/bloodtests for more information.

For additional information, please visit the following resources:

Vaccination procedures:

“*Immunization of Health Care Workers,*” MMWR, 1997, volume 46, No. RR-18
www.cdc.gov/mmwr/preview/mmwrhtml/00050577.htm

“*Guidelines for infection control in health care personnel,*” CDC, 1998
www.cdc.gov/ncidod/hip/guide/InfectControl98.pdf

“*Immunization and Health Care Workers,*” Immunization Action Coalition (IAC)
www.immunize.org/hcw/index.htm

Exposure procedures:

“*US Public Health Service Guidelines for the Management of Occupational Exposure to HBV, HCV, and HIV,*” MMWR, June 2001, volume 50(RR11)
www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm

HBV-Infected Health Care Workers - “*Recommendations for Preventing Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Patients During Exposure-Prone Invasive Procedures,*” MMWR, July 12, 1991 / 40(RR08);1-9 www.cdc.gov/mmwr/preview/mmwrhtml/00014845.htm

