

Hepatitis B Fact Sheet

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a series of fact sheets written by experts in the field of liver disease

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What Are the Occupational Risks of Hepatitis B?

Many people infected with the hepatitis B virus (HBV) wonder if their bloodborne infection poses a health risk to others in workplace settings, such as offices, factories, health care facilities, schools or daycare centers. They wonder if it is necessary to disclose their infection to protect coworkers, students or patients.

Federal and state laws in the United States have examined this topic in-depth and have overwhelmingly concluded that any workers who might conceivably come into contact with blood or body fluids in the course of their jobs be immunized against hepatitis B and trained in universal precautions.

Hepatitis B is 50- to 100-times more infectious than HIV because of the high volume of hepatitis B viruses in the blood of infected people, compared to the lower viral load in people infected with HIV.

Universal precautions, mandated by the Occupational Safety and Health Administration (OSHA), require every worker to keep a barrier between them and anyone's blood or body fluids. This practice must be applied to everyone, not just to those who have a diagnosed bloodborne infection such as hepatitis B or C or HIV.

Why must they be used with everyone?

Because there are many people who are unaware of their bloodborne infections. According to national health experts:

- 25 percent of people with HIV don't know they're infected
- 75 percent of those with hepatitis C don't know they're infected,
- **And 65 percent of those with hepatitis B don't know they're infected.**

With so many undiagnosed infections around, health officials require universal precautions to be used with everyone at all times. Employers must also design blood and body fluid exposure policies as if everyone was infected with HIV or viral hepatitis.

Because all employers, supervisors, police, teachers and daycare providers must practice universal precautions, the U.S. Centers for Disease Control and Prevention (CDC) and other agencies have stated that neither adults nor



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students have to disclose their infections in most workplaces, schools or daycare centers.

Universal precautions have been very successful in safeguarding everyone's health. For example, one CDC study of police, firefighters and prison guards found their HBV infection rates were no higher than the general population, despite their increased chances of exposure to blood through accidents, fights and bites.

But what about medical settings, where accidental needle sticks, surgery, and other procedures involving sharp instruments increase the odds that a patient might be exposed to the blood of an infected doctor or nurse? Does this mean HBV-infected people can't become doctors or nurses?

Can hepatitis B sideline a health care career?

The U.S. Department of Justice and various health organizations have made clear that a hepatitis B infection cannot prevent individuals from attending medical school and becoming doctors, dentists, or nurses. (For more information, read the Department of Justice's opinion on this issue at <http://www.hhs.gov/ocr/office/hep-b-letter.pdf>) There is a safe and effective vaccine that protects patients against infection,

and health care providers use universal precautions to prevent transmission of HBV and other bloodborne infections between providers and patients.

However, even when health care workers practice universal precautions and are as careful as possible, there is still a chance that a doctor or nurse could cut him or herself during an "exposure-prone" medical procedure, such as surgery, and infect a patient who has not been vaccinated.

How long do the hepatitis viruses live outside of the body?

- **Hepatitis A (HAV)** can live for months
- **Hepatitis B (HBV)** can live for greater than or equal to 7 days
- **Hepatitis C (HCV)** can live for at least 16 hours, but no longer than 4 days

Source: Centers for Disease Control

Medical organizations and hospitals require health care workers who perform exposure-prone procedures to be tested for bloodborne infections and vaccinated against hepatitis B. The

National Institutes for Health and the Society for Healthcare Epidemiology of America (SHEA) have issued the following guidelines for doctors, nurses, and other practitioners infected with HBV:

- **Providers with HBV DNA levels less than 10,000 genome equivalents per millimeter of blood (GE/mL):** SHEA recommends that no restrictions be placed on a provider's practice—this includes surgery—as long as the provider has not infected a patient in the past, receives advice/guidance from his/her hospital's Expert Review Panel, and is tested twice a year to monitor his/her viral load. The provider must also be treated by a physician with expertise in hepatitis B who is authorized to communicate the provider's results to the Expert Review Panel.

The infected practitioner must also strictly follow recommended safeguards, including wearing double-gloves for more high-risk procedures and frequently changing gloves during high-risk procedures.

- **Providers with HBV DNA levels greater than 10,000 GE/mL:** SHEA recommends that providers who have circulating HBV DNA levels greater than or equal to 10,000 GE/mL routinely use double-gloving for

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all procedures where gloves are required. Additionally, these providers are prohibited from performing Category III procedures that carry a risk for provider-to-patient HBV transmission despite use of double-gloves. These procedures include surgery, open resuscitation efforts, obstetrical or gynecological surgery, orthopedic procedures, plastic surgery, transplantation surgery, trauma surgery, and lengthy open surgical procedures. SHEA also cautioned infected practitioners against interacting with violent or seizure-prone patients who might bite providers.

To avoid discrimination and invasion of providers' privacy, a number of medical ethicists have made additional recommendations that are now under consideration. They propose that:

- Hospitals should provide hepatitis B vaccination to patients undergoing elective procedures to reduce HBV transmission risk.
- HBV-infected health care workers should practice with-

out restrictions on patients who have already been infected with, or have been vaccinated against hepatitis B.

Ironically, similar problems confront providers who fail to respond to a hepatitis B immunization. A small percentage of people fail to create sufficient antibodies to protect them against hepatitis B, even after two rounds of vaccination. These people remain vulnerable to infection from HBV-infected patients. In some cases, these people are discouraged from practicing medicine because of their risk.



More articles about this topic are available at:

- **Society for Healthcare Epidemiology of America:** SHEA Guideline for Management of Healthcare Workers Who Are Infected with Hepatitis B Virus, Hepatitis C Virus, and/or Human Immunodeficiency Virus. Published in the March 2010 issue of the journal *Infection Control and Hospital Epidemiology*, www.shea-online.org/Assets/files/guidelines/BBPathogen_GL.pdf
- Letter to medical, dentistry, nursing and other health care schools barring discrimination

against applicants and students infected with hepatitis B. <http://www.hhs.gov/ocr/office/hep-b-letter.pdf>

- CDC Recommendations for the Management of Hepatitis B Virus-Infected Health-Care Providers and Students. July 6, 2012. <http://www.cdc.gov/mmwr/pdf/rr/rr6103.pdf>
- Hepatitis B Virus-Infected Physicians and Disclosure of Transmission Risks to Patients: A Critical Analysis, published in the *BMC Medical Ethics Journal* www.biomedcentral.com/1472-6939/2/4
- CDC Report: *Recommendations for Preventing Transmission of Immunodeficiency Virus and Hepatitis B Virus to Patients During Exposure-Prone Invasive Procedures* <http://wonder.cdc.gov/wonder/prevguid/p0000286/p0000286.asp>

For more information about hepatitis B, contact the following organizations:

- **Hepatitis B Foundation**
1-215-489-4900
www.hepb.org
- **Hepatitis B Support List**
www.hblist.net
- **Hepatitis Foundation International**
1-800-891-0707
www.hepfi.org

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The information in this fact sheet is designed to help you understand and manage HBV and is not intended as medical advice. All persons with HBV should consult a medical practitioner for diagnosis and treatment of HBV.

For more information about hepatitis B, visit the following websites.
Hepatitis B Foundation: www.hepb.org • HIVandHepatitis.com

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