

What is hepatitis B?

Hepatitis B is a serious disease caused by a virus that attacks the liver. It can range in severity from a mild illness lasting a few weeks to a serious, lifelong infection potentially resulting in cirrhosis (scarring) of the liver, liver cancer, liver failure, and death.

Who is at risk?

Hepatitis B can affect anyone. Each year in the United States, thousands of people of all ages get hepatitis B and an estimated 2,000-4,000 die because of hepatitis B. If you have had other forms of hepatitis, you can still get hepatitis B.

Get vaccinated!

Hepatitis B is preventable.

How great is your risk for hepatitis B?

In 2020, there were an estimated 14,000 new acute hepatitis B virus infections in the United States. However, the official number of reported hepatitis B cases is much lower. Many people don't know they are infected or may not have symptoms and therefore never seek the attention of medical or public health officials.

CDC recommends testing susceptible people periodically, regardless of age with ongoing risk for exposures, while risk for exposures persists, including:

- People with a history of sexually transmitted infections or multiple sex partners.
- People with hepatitis C infection or a history of hepatitis C virus infection.
- People incarcerated or formerly incarcerated in a jail, prison, or other detention setting.
- Infants born to HBsAg-positive people.
- People born in [regions](#) with HBV infection prevalence of $\geq 2\%$.
- US born people not vaccinated as infants whose parents were born in [geographic regions](#) with HBsAg prevalence of $>8\%$.
- People who inject drugs or have a history of injection drug use.
- People with HIV infection.
- Men who have sex with men.
- Household contact or former household contacts of people with known HBV infection.
- Needle-sharing or sexual contacts of people with known HBV infection.
- People on maintenance dialysis, including in-center or home hemodialysis and peritoneal dialysis.
- People with elevated liver enzymes.

Susceptible people include those who have never been infected with HBV and either did not complete an HBV vaccine series per ACIP recommendations or who are known to be vaccine non-responders.

If you are at risk for hepatitis B virus infection, ask your healthcare provider about hepatitis B vaccine.

How do you get hepatitis B?

You get hepatitis B by direct contact with the blood or body fluids of an infected person; for example, you can become infected by having sex or sharing needles with an infected person. A baby can get hepatitis B from an infected mother during childbirth. Hepatitis B is not spread through food or water or by casual contact.

Who is a carrier of hepatitis B virus?

Sometimes, people who are infected with hepatitis B virus never recover fully from the infection; they carry the virus and can infect others for the rest of their lives. An estimated 580,000 to 1.17 million persons in the United States have chronic HBV infection.

How do you know if you have hepatitis B?

You may have hepatitis B (and be spreading the disease) and not know it; sometimes a person with hepatitis B virus infection has no symptoms at all. Your doctor can do a test to determine if you are infected.

If you have symptoms:

- Your eyes or skin may turn yellow (jaundice).
- You may lose your appetite.
- You may have nausea, vomiting, fever, and/or stomach or joint pain.
- You may feel extremely tired and not be able to work for weeks or months.
- You may have clay-colored bowel movements.

How is hepatitis B treated?

For acute infection, no medication is available; treatment is supportive. For chronic infection, several antiviral drugs are available. Persons with chronic HBV infection require medical evaluation and regular monitoring to determine whether disease is progressing and to identify liver damage or hepatocellular carcinoma.

If you are pregnant, should you worry about hepatitis B?

If you have hepatitis B virus in your blood, you can give hepatitis B to your baby, which poses a serious risk to the infant at birth. Without postexposure immunoprophylaxis, approximately 40% of infants born to HBV-infected mothers in the United States will develop chronic HBV infection, with approximately one out of every four dying from chronic liver disease.

All pregnant women should be tested for hepatitis B virus early in their pregnancy. If the blood test is positive, the baby should receive vaccine along with another shot, hepatitis B immune globulin (HBIG), within 12 hours of birth. The vaccine series should be completed during the first 6 months of life.

Who should be vaccinated?

The [Advisory Committee on Immunization Practices \(ACIP\)](#) recommends that the following persons be vaccinated against hepatitis B:

- All infants.
- Persons aged <19 years.
- Adults aged 19-59 years.
- Adults aged ≥60 years with risk factors for hepatitis B:
 - Persons at risk for infection by sexual exposure.
 - Sex partners of persons testing positive for HBsAg.
 - Sexually active persons who are not in a long-term, mutually monogamous relationship (e.g., persons with more than one sex partner during the previous 6 months).
 - Persons seeking evaluation or treatment for a sexually transmitted infection.
 - Men who have sex with men.
- Persons at risk for infection by percutaneous or mucosal exposure to blood.
 - Persons with current or recent injection drug use.
 - Household contacts of persons testing positive for HBsAg.

- Residents and staff members of facilities for persons with developmental disabilities.
- Healthcare and public safety personnel with reasonably anticipated risk for exposure to blood or blood-contaminated body fluids.
- Persons on maintenance dialysis, including incenter or home hemodialysis and peritoneal dialysis, and persons who are predialysis.
- Persons with diabetes at the discretion of the treating clinician.
- Others.
 - International travelers to countries with high or intermediate levels of endemic hepatitis B virus infection (HBsAg prevalence of $\geq 2\%$).
 - Persons with hepatitis C virus infection.
 - Persons with chronic liver disease (including, but not limited to, persons with cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, and an alanine aminotransferase or aspartate aminotransferase level greater than twice the upper limit of normal).
 - Persons with HIV infection.
 - Persons who are incarcerated.
- Adults aged ≥ 60 years without known risk factors for hepatitis B may receive hepatitis B vaccines.

For more information, please visit these websites:

- CDC Hepatitis B: www.cdc.gov/hepatitis-b
- CDC Hepatitis B Vaccination: www.cdc.gov/hepatitis-b/vaccination
- ACIP: Hepatitis B Vaccine Recommendations: www.cdc.gov/acip-recs/hcp/vaccine-specific/hepatitis-b.html

Healthcare Settings and Hepatitis B

The delivery of healthcare has the potential to transmit hepatitis B virus (HBV) to both healthcare workers (HCWs) and patients. Outbreaks of HBV have occurred in outpatient settings, hemodialysis units, long-term care facilities, and hospitals, primarily because of unsafe injection practices; reuse of needles, fingerstick devices, and syringes; or lapses in infection control. To prevent transmission of bloodborne pathogens, HCWs should adhere to recommended standard precautions and fundamental infection control principles, including safe injection practices and appropriate aseptic techniques.

For continued protection, the Advisory Committee on Immunization Practices (ACIP) recommends that healthcare and public safety workers with reasonably anticipated risk for exposures to blood or infectious body fluids receive the complete hepatitis B vaccine series and have their immunity documented through post-vaccination testing. For additional information, visit the CDC's website: www.cdc.gov/hepatitis/hcp/populations-settings/health-care-providers.html.

Is hepatitis B vaccination recommended in certain settings?

Yes, in certain healthcare, evaluation, or treatment settings, a high proportion of clients have known risk factors for HBV infection. The Advisory Committee on Immunization Practices (ACIP) recommends universal vaccination of adults who receive care in those settings, including:

- Sexually transmitted disease treatment facilities.
- HIV testing and treatment facilities.
- Facilities providing drug-abuse treatment and prevention services.
- Healthcare settings targeting services to injection drug users.
- Correctional facilities.
- Healthcare settings targeting services to men who have sex with men.
- Chronic hemodialysis facilities and end-stage renal disease programs.
- Institutions and non-residential day care facilities for developmentally disabled persons.

Is there an increased risk of hepatitis B transmission in long-term care facilities?

Yes, and it is primarily related to glucose monitoring. Any time blood glucose monitoring equipment is shared between individuals, there is a risk of transmitting hepatitis and other bloodborne pathogens. When possible, equipment such as glucometers should be assigned to individual patients. Standard Precautions should always be followed.

What is the risk for hepatitis B virus infection from a needle stick exposure to HBV contaminated blood?

The risk of clinical hepatitis from a needle stick from an HBeAg-positive source is 22-31%, while the risk from an HBsAg-positive source is 1-6%.

Other than needle sticks, do other exposures, such as mucous membrane exposure, pose a risk to healthcare personnel for hepatitis B transmission?

Transmission of HBV infection among hospital-based workers has been linked to percutaneous and mucous membrane exposures, and HBV infection has been primarily associated with percutaneous exposure. Transmission of HBV has not been associated with intact skin exposures. Avoiding occupational exposure to blood by following Standard Precautions is the primary way to prevent transmission of bloodborne infections among healthcare personnel. Depending on the medical procedure involved, Standard Precautions may include the appropriate use of personal protective equipment such as gloves, masks, gowns, and protective eyewear.

Can hepatitis B vaccine be given after exposure to HBV?

Yes, after an unvaccinated person has been exposed to HBV, appropriate prophylaxis, given as soon as possible, but preferably within 24 hours can effectively prevent infection. The mainstay of postexposure immunoprophylaxis is hepatitis B vaccine, but in certain circumstances the addition of hepatitis B immune globulin (HBIG) will provide increased protection. Postexposure prophylaxis including hepatitis B immune globulin (HBIG) and HBV vaccine is believed to be 85-95% effective, while either one alone is thought to be 70-75% effective.

Should hepatitis B virus-infected healthcare workers be restricted in their work?

No, as currently available data provide no basis for restricting the practice of HCWs infected with HBV who perform invasive procedures not identified as exposure prone. Exposure-prone procedures should be identified by medical/surgical/dental organizations and by institutions at which such procedures are performed. HCWs infected with hepatitis B virus

should not perform exposure-prone procedures unless they have been advised and counseled by an expert review panel concerning under what circumstances, if any, they may continue to do so. CDC updated guidelines for the management of hepatitis B virus-infected healthcare workers and students in July 2012 which can be accessed at www.cdc.gov/mmwr/PDF/rr/rr6103.pdf.