



Hepatitis B is an infectious liver disease caused by the hepatitis B virus (HBV). Approximately 350 to 400 million people have been infected with hepatitis B worldwide that contributes to 620,000 deaths worldwide each year. . There are an estimated 1.25- 2.0 million chronically infected Americans, of whom 20% to 30% acquired their infection in childhood. More than 95% of adults recover spontaneously within 6 months; however, 90% of young children who get infected with HBV never clear the virus, remaining chronically infected with an increased risk of scarring of the liver (cirrhosis) and liver cancer. An estimated 38,000 new cases occur each year and about 3000-5000 deaths annually are related to HBV infections and resultant cirrhosis and liver cancer. *Safe and effective vaccines can prevent hepatitis B.*

TRANSMISSION

Transmission of HBV can occur when blood or body fluids from an infected person enter the body of a person who is not immune, in the same way as HIV, the virus that causes AIDS. HBV is 100 times more infectious than HIV. The highest concentrations of HBV are found in blood, semen, and vaginal secretions. HBV is not spread through food or water, sharing eating utensils, breastfeeding, hugging, kissing, coughing, sneezing, or by casual contact. The virus is infrequently transmitted by blood transfusions because blood for transfusion is tested for HBV contamination. The majority of reported acute HBV infections in the United States are among adolescents and young adults. Sexual contact is the most common means of transmission. Examples of possible transmission modes include:

- Sexual contact including foreplay with an infected person without using a latex condom;
- Sharing drugs, needles, syringes, water, or “works” when “shooting” drugs;
- Getting an injury through needle sticks or sharps that may be contaminated;
- Infected mother to her baby during birth;
- Tattooing, body piercing, and acupuncture by virus-contaminated instruments;
- Sharing of toothbrushes, razors or other personal care items that may have blood on them.

The following groups are at risk:

- Asian-Americans
- Persons with multiple sex partners or with a diagnosis of a sexually transmitted disease;
- Men who have sex with men;
- Sexual contacts of infected persons;
- Injecting drug users;
- Household contacts of chronically infected persons;
- Infants born to infected mothers;
- Infants and children of immigrants from areas with high rates of HBV infection;
- Health care and public safety workers;
- Hemodialysis patients;
- Adults between 20-49 years of age have the highest rate of HBV infection.

SYMPTOMS

During early infection, about 70% of adults will have no symptoms or few symptoms. Significant symptoms develop in the remaining 30% of acute cases of hepatitis B several months later including jaundice (yellowing of the skin and eyes), light colored stools, and dark urine. Other possible symptoms include fatigue, abdominal pain, loss of appetite, nausea, vomiting, and joint pain.

DIAGNOSIS

The only way to know if you are currently infected with HBV, have had the infection and recovered, or if you are chronically infected, is to ask your doctor to test you for hepatitis B. Testing might include:

- **HBsAg (hepatitis B surface antigen):** When this is positive, it means you are currently infected with HBV and are able to pass the infection on to others.
- **Anti-HBc (antibody to hepatitis B core antigen):** When this is positive or reactive, it means that you have HBV infection or had it at some time in the past.

- **Anti-HBs (antibody to hepatitis B surface antigen):** When this is positive, it means that you are *immune* to HBV infection, either from vaccination or from past infection and cannot pass the disease on to others.
- **IgM anti-HBc:** When this is positive or reactive, it indicates recent infection with HBV.

Note: Each state department of health has experts that can interpret laboratory reports.

TREATMENT

Treatment is not warranted during the acute phase of hepatitis B as the disease will resolve in most people within a six month period. However, it has been used in severe acute hepatitis B with conflicting results. If you are chronically infected you should be evaluated by your doctor for treatment options. Several drugs are available to treat those who are chronically HBV infected and more are being developed to control the virus. Currently, there is no cure for HBV. These drugs should not be used by pregnant women. Drinking alcohol can worsen your liver disease and should be avoided.

PREVENTION

- Hepatitis B vaccine is the best protection.
- Safe and effective Hepatitis B vaccines have been available since 1982.
- A combined vaccine for hepatitis A and B is available for those over 18 years of age.
- Routine vaccination is recommended for young people aged 0 to 18 years.
- Vaccination is also recommended for risk groups of all ages (see risk groups above).
- The usual dosage is three injections given over a 6 months period.
- If you are having sex with more than one steady partner use latex condoms correctly and every time to reduce the potential for infection.
- If you are pregnant, you should get a blood test for hepatitis B. Infants born to HBV-infected mothers should be given hepatitis B immune globulin and vaccine within 12 hours after birth.
- Do not shoot drugs. If you can't stop, never share drugs, needles, syringes, water, or "works," and get vaccinated against hepatitis A and hepatitis B (if not already infected), and get into a treatment program.
- Get vaccinated against hepatitis A and hepatitis B (if not already infected).
- Do not share personal-care items that might have blood on them (e.g., razors, toothbrushes).
- Assess the risk you are taking when getting a tattoo or body piercing. The tools being used may have someone else's infected blood on them.
- If you have or had hepatitis B, do not donate blood, organs, or tissue.
- If you are injecting drugs, make sure the tools you are using are sterile and don't share with others.

If you are a health care or public safety worker, get vaccinated against hepatitis B, always follow routine barrier precautions, and handle needles and other sharps safely.