

Hepatitis B (HBV)

Hepatitis B is caused by a virus that attacks the liver. The virus, which is called hepatitis B virus (HBV), can cause lifelong infection, cirrhosis (scarring) of the liver, liver cancer, liver failure and death. HBV infection can be prevented with a safe and effective vaccine. In 2007, an estimated 4,500 persons in the United States were newly infected with HBV. Rates are highest among adults, particularly males aged 25-44 years. It is estimated that:

- ◆ Most people will clear the virus and recover, however some may become chronically infected. Chronic infection occurs in 90% of infants infected at birth, 25-50% of children infected at age 1-5 years, and 5% of persons infected after age 5.
- ◆ Overall, an estimated 800,000-1.4 million people in the United States have chronic HBV infection
- ◆ Approximately 25% of those who become chronically infected during childhood and 15% of those who become chronically infected after childhood die prematurely from cirrhosis or liver cancer

Transmission

HBV is transmitted through activities that involve percutaneous (i.e., puncture through the skin) or mucosal contact with infectious blood or body fluids (e.g., semen, saliva). HBV is not spread through food or water, sharing eating utensils, breastfeeding, hugging, kissing, hand holding, coughing or sneezing.

HBV Vaccine

There is a safe and effective vaccine for hepatitis B. It is given as a series of three intramuscular doses. More than 95% of children and adolescents, and more than 90% of young, healthy adults develop adequate antibody protection after the recommended series.

Symptoms

The presence of signs and symptoms varies by age. Most children under age 5 years and newly infected immunosuppressed adults are asymptomatic, whereas 30-50% of persons aged ≥ 5 years have initial signs and symptoms. When present, signs and symptoms can include fever, fatigue, loss of appetite, abdominal pain, nausea, vomiting, dark urine, joint pain and jaundice. Symptoms typically last for several weeks but can persist for up to 6 months. Persons with chronic HBV infection might be asymptomatic, have no evidence of liver disease, or have a spectrum of disease ranging from chronic hepatitis to cirrhosis or hepatocellular carcinoma (a type of liver cancer).

Groups at Risk

Persons at highest risk of becoming infected include persons with multiple sex partners, men who have sex with men, healthcare and public safety workers, injecting drug users, children born to mothers who are carriers of HBV, hemodialysis patients, residents and staff of facilities for developmentally disabled persons, sexual contacts of infected persons and people who live with HBV carriers or those in close contact with HBV carriers.

Risk from a Bloody, Percutaneous Injury

Risk of seroconversion from a bloody, percutaneous injury from an infectious HBV source is approximately 30%.

Seroconversion After Exposure

Hepatitis B antigen will be detected in an infected person's blood on the average of 4 weeks (range 1-9 weeks) after exposure to the virus. About 1 out of 2 patients will no longer be infectious by 7 weeks after onset of symptoms and all patients, who do not remain chronically infected, will be hepatitis B antigen negative by 15 weeks after onset of symptoms.

References

- ◆ <http://www.cdc.gov/hepatitis/HBV.htm>

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