Hepatitis B Virus (HBV) Fact Sheet

(adapted from materials developed by the Centers for Disease Control and Prevention)

Report to Iowa Dept. of Public Health	• Acute HAV infection • Chronic HBV infection • Hepatitis B surface antigen (HBsAg)-positive women of childbearing age
Report to Local Health Department	HBsAg-positive pregnant women (include vaccination dates, serology dates and test results for infants born to HBsAg-positive mothers).
Etiology	HBV is a DNA-containing virus classified as a hepadnavirus. Important components include HBsAg, hepatitis B core antigen (HBcAg), and hepatitis B e antigen (HBeAg).
Signs and Syptoms	• May be asymptomatic. • Older person are more likely to have symptoms; however, 50% of adults with acute infection are asymptomatic. Onset of symptoms is insidious and may include fever, tiredness, loss of appetite, nausea, abdominal discomfort, dark urine, or jaundice. • Average incubation period is 90 days (range: 45-160 days).
Long-Term Effects	• Cirrhosis and hepatocellular carcinoma due to chronic infection. A person is considered to have chronic HBV infection if HBsAg-positive for 6 months or longer or IgM anti-HBc-negative and HBsAg-positive. Chronic infection occurs in: - 90% of infants at birth, - 30% of children infected at 1-5 years of age, - 6% of persons infected after 5 years of age. • Death from chronic liver disease occurs in 15-25% of chronically infected persons.
Transmission	• Transmitted in blood or body fluids (e.g., wound exudates, semen, cervical secretions, or saliva of HBsAg-positive persons) via: - unprotected sex with an infected person - sharing needles or "works" when "shooting" drugs - needlesticks or sharps exposure on the job - sharing personal care items that could be contaminated with blood (e.g., razor, toothbrush) - infected mother to bay during birth • Blood and serum contain the highest concentrations of virus. • The risk of transmission via saliva is unknown and not common.
Communicability	Anyone who is HBsAg-positive can transmit the virus. Persons with chronic HBV infection are considered infectious and are the primary reservoirs of infection.
Risk Groups	• Persons with multiple sex partners or sexually transmitted disease(s) • Men who have sex with men • Sex contacts of infected persons • Injection drug users • Infants born to HBV-infected mothers • Infants/children born to women from areas with high rates of HBV infection • Health care and public safety workers • Hemodialysis patients
Prevention	• HBV vaccine us the best protection. • Latex condoms are recommended for sexually active individuals, especially those who have sex with more than one partner. The efficacy of latex condoms in preventing HBV infection is unknown, but their proper use may reduce transmission. • Pregnant women should be tested for HBV. Infants born to HBV-infected mothers should receive HBIG (hepatitis B immune globulin) and vaccine within 12 hours of birth. • Injection drug users should be encouraged: to discontinue injection drug use and to enroll in a treatment program; to never share needles, syringes, water, or "works," and to receive HAV and HBV vaccines. • Do not share personal care items that may be contaminated with blood (e.g., razor, toothbrush). • Persons should be encouraged to consider risks associated with tattoos and body piercings before receiving either. • Persons who have had HBV infection should not donate blood, organs, or tissue. • Health care or public safety workers should receive HBV vaccine, follow routine barrier precautions, and handle needles and other sharps safely.
Vaccine Recommendations	• HBV vaccination for persons 0-18 years of age. • Vaccination of high-risk persons of all ages.
Medical Management	• HBV-infected persons should be evaluated for liver disease and received HAV vaccine, if indicated. • Alpha interferon and lamivudine are licensed for the treatment of persons with chronic HBV infection; these drugs are effective in up to 40% of patients. Alpha interferon and lamivudine should not be used by pregnant women. • Advise against alcohol consumption and, if necessary, provide counseling for alcohol abuse.

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Post-Exposure Management	• See Tables on pages 48 and 49
Trends and Statistics	• Number of new infections per year in the U.S. has declined from an average of 450,000 in the 1980's to approximately 80,000 in 1999. • Highest rate of disease occurs in persons 20-49 years of age. • Greatest decline in incidence has occurred among children and adolescents, due to routine HBV vaccination. • An estimated 1.25 million persons in the U.S. are chronically infected; 20-30% acquired their infection in childhood.