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HEPATITIS B VIRUS

What is it?

Hepatitis B is an infectious disease that is responsible for an estimated 4,000 to 5,000 deaths each year in the United States due to chronic liver disease, cirrhosis and liver cancer.

Hepatitis B is caused by the Hepatitis B Virus (HBV), one member of a group of viruses that cause this kind of disease. Hepatitis A Virus (HAV) and Hepatitis C Virus (HCV) are other important members of this virus family.

Hepatitis B is a serious threat to all healthcare providers. Blood infected with the HBV is much more infectious than HIV infected blood. Additionally, HBV is more common in the US than HIV with a greater proportion of the population infected with hepatitis B than with HIV.

How can you get it?

Hepatitis B is transmitted via contact with the blood or body fluids of a person infected with HBV.

You can get HBV by:

- Exposure to blood through a needle stick or cut from sharp instrument
- Direct contact with blood or open sores of an infected patient
- Sharing personal care items with an infected person (ex. razors, toothbrushes)
- Injection Drug Use, Sexual Activity, Mother-to-Child

Several groups are noted to have a high risk of hepatitis B, including parenteral (IV) drug abusers, heterosexuals with multiple partners, homosexual men, clients and staff in institutions for the developmentally disabled, prisoners, and hemodialysis center patients.

What are the symptoms?

The majority (>70%) of adults with acute HBV will have symptoms. Small children, under age 5, may have no symptoms at all. Signs and symptoms of acute HBV may include:

- jaundice, dark urine, light colored bowel movements
- fatigue
- abdominal pain, loss of appetite, nausea, vomiting

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- joint Pain
- fever

Symptoms of acute hepatitis B usually develop within 90 days after exposure. Symptoms typically last a few weeks, but can last as long as 6 months. Hepatitis B (HBV) can cause long term health problems such as chronic infection or chronic liver disease.

Persons infected with the hepatitis B virus run the risk of developing severe health complications, including cirrhosis, liver cancer, liver failure, and death. They can also become a hepatitis B carrier and transmit infection to their partner and children.

How do you prevent it?

Hepatitis B is a vaccine preventable disease. For an unvaccinated person, the risk of contracting hepatitis B from a single exposure ranges from 6-30%. People who have received the hepatitis B vaccine and have developed immunity to the virus are at virtually no risk for infection. Hepatitis B vaccine provides greater than 90% protection to infants, children, and adults who receive a complete series of 3 doses.

The HBV vaccine is recommended for all firefighters in NFPA 1581, Fire Department Infection Control Programs. The 1991 OSHA Bloodborne Pathogen Standard requires employers to make the hepatitis B vaccine available free of charge to all workers at risk.

Hepatitis B vaccine is usually given as a series of 3-4 shots over a six month time period. A combined Hepatitis A and Hepatitis B vaccine is also available and requires given a series of three injections, given with 0, 1, and 6 month intervals.

You can help prevent the spread of HBV by:

- Getting vaccinated
- Sharps Safety
 - Training and consistent use of safer needle techniques and devices
 - Proper sharp disposal
- Using Universal Precautions
 - Hand hygiene (wash with soap and water or using an alcohol based hand rub)
 - Personal protective equipment (PPE) (gloves, gowns, masks and goggles that offer mouth, nose and eye protection)

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- Proper handling and disposal of instruments/devices and clothing contaminated with blood or body fluids

What should you do if you are exposed to the HBV infected blood or body fluid? Immediately following an exposure:

- Wash needlesticks and cuts with soap and water
- Flush splashes to the nose, mouth, or skin with water
- Irrigate eyes with clean water, saline, or sterile irrigants

As soon as possible, report the exposure and seek medical care

- If you are exposed to hepatitis B, it is an OSHA requirement to have blood drawn as soon as possible to determine your **baseline serologic status**. This test determines if you have protective antibodies.
- If you do not have protective antibodies, your healthcare provider may decide to give you the vaccine and/or hepatitis B Immune Globulin (HBIG) for immediate protection.

While there is no cure for Hepatitis B, there are a number of medications that may be used to treat symptoms. Persons infected with hepatitis B should protect their liver from further damage, by getting immunized for hepatitis A, avoiding alcohol and having continuing medical care.

For More Information and Frequently Asked Questions(FAQs), Check Out :

- Centers for Disease Control and Prevention (CDC):
<http://www.cdc.gov/hepatitis/HBV/index.htm>
 - CDC, Exposure to Blood: What Healthcare Personnel Need to Know:
http://www.cdc.gov/HAI/pdfs/bbp/Exp_to_Blood.pdf
 - CDC, Immunization of Health-Care Workers:
<http://www.cdc.gov/mmwr/preview/mmwrhtml/00050577.htm>
- National Digestive Diseases Information Clearinghouse (NDDIC):
http://digestive.niddk.nih.gov/ddiseases/pubs/hepb_ez/
- Canadian Centre for Occupational Health and Safety (CCOHS):
http://www.ccohs.ca/oshanswers/diseases/hepatitis_b.html
- Public Health Agency of Canada (PHAC): http://www.phac-aspc.gc.ca/hcai-iamss/bbp-pts/hepatitis/hep_b-eng.php