



Hepatitis B



§1910.1030; CPL 2-2.69; CPL 2-2.36;

Introduction

Hepatitis B (HBV) is an infection of the liver caused by a virus. The hepatitis B virus is a unique, coated DNA virus belonging to the Hepadnaviridae family. It is not related to either the hepatitis A or hepatitis C viruses.

Hepatitis B is spread by direct contact with the blood or other body fluids of an infected person. Contaminated needles or medical instruments, some drug paraphernalia, and needles used for piercing or tattooing can all be sources of contamination. HBV can be passed by vaginal, oral, or anal intercourse. Hepatitis B is not spread through sneezing, coughing, kissing, hugging, food or water, or by casual contact.

HBV is 100 times more infectious than HIV. In 1999, an estimated 80,000 persons in the U.S. were infected with HBV. People of all ages get hepatitis B and about 5,000 die each year from chronic liver problems caused by HBV. Even if a person has or has had hepatitis A or hepatitis C, they can still get hepatitis B.

For an acute hepatitis B infection, there is generally no treatment besides rest and managing any symptoms – the body will fight off the virus on its own. For chronic hepatitis B, there is still no complete cure. That is why prevention is so important.

Infection

When a person is first infected with the hepatitis B virus, this is called an "acute infection". Most adults will fight off the virus, and recover without any problems. If the virus remains in the blood for more than six months, a person is then diagnosed as having a "chronic infection," or "chronic hepatitis B". Fortunately, 90% of healthy adults will recover and develop antibodies against the hepatitis B virus.

Symptoms

Symptoms of acute HBV infection usually appear within 2 to 6 weeks after exposure, if they appear at all. Many adults never develop symptoms at all; however the virus can damage the liver and be spread to others even if the infected person has no signs or symptoms. Sometimes a blood test is the only way to find out for sure.

Symptoms can include:

- Nausea,
- Vomiting,
- Headaches
- Lack of appetite,
- General malaise,
- Jaundice,



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- Joint pain,
- Dark, tea-colored urine.

Less than 10% of those infected with acute hepatitis B develop the chronic, life-long infection. But nearly 50% of those with chronic hepatitis B virus will die of liver cirrhosis and its complications, including liver cancer.

Treatment of hepatitis focuses on treating the symptoms, inflammation, and infectivity. Acute hepatitis requires careful monitoring of liver function, as liver functioning can be degraded in some cases to the point of requiring a liver transplant.

Even if no symptoms are evident, those infected with hepatitis B can pass the virus to others. Chronic carriers carry the virus for the rest of their lives. Those with chronic infection but who do not exhibit any symptoms are referred to as carriers.

Post-Exposure Treatment

Post-exposure treatments for hepatitis B include an injection of hepatitis B immune globulin within the first 24 hours of contact. There is also a series of three post-exposure inoculations available.

Provisions Of The Bloodborne Pathogens Standard

Hepatitis B falls under OSHA's 29 CFR 1910.1030 Bloodborne Pathogens standard. The following sections provide an overview of the information contained in the standard. For more specific information about how to comply with the standard, click on the regulatory links.

Coverage §1910.1030(a)The standard applies to every employer with one or more employees who can reasonably be expected to come into contact with blood and other specified body fluids in carrying out or in performing their duties.

Occupational exposure means a "reasonably anticipated skin, eye, mucous membrane, or peritoneal contact with blood or other potentially infectious materials that may result from the performance of the employee's duties."

Exposure Control Plan §1910.1030(c)A written exposure control plan is necessary for the safety and health of workers. Employers must develop a plan that identifies and documents the tasks, procedures, and job classifications covering instances where there is exposure to blood or other potentially infectious materials.



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Communicating Hazards To Employees §1910.1030(g) All persons with a potential for exposure must be provided with adequate training and information including general explanations of the modes of transmission, symptoms, epidemiology, and warning signals relating to possible exposure, and procedures to follow if exposure occurs.

Preventive measures

Hepatitis B Vaccination §1910.1030(f)

Employers must make available, free of charge and at a reasonable time and place, the hepatitis B vaccine and vaccination series to all employees who are at risk of occupational exposure. The employee cannot be required to participate in an antibody prescreening program to receive the hepatitis B vaccination series. Vaccinations also must be provided even if the employee initially declines but later accepts treatment while covered by the standard. Employees who decline the vaccination must sign the declination form (found in the standard).

Universal precautions

Universal precautions is a method of infection control in which all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens. Universal precautions are to be observed in all situations where there is a potential for contact with blood or other potentially infectious material. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids are to be considered potentially infectious.

Methods Of Control §1910.1030(d) Engineering and Work Practice Controls §1910.1030(d)(2) Engineering and work practice controls are the primary methods used to control the transmission of HBV and HIV. To the extent feasible, the employer must institute these controls to eliminate or minimize employee exposure to bloodborne diseases.

Personal Protective Equipment §1910.1030(d)(3) In addition to instituting engineering and work practice controls, the standard requires that appropriate personal protective equipment also be used to reduce work risk of exposure. Personal protective equipment is specialized clothing or equipment worn by employees for protection from exposure to blood or other potentially infectious materials. Employers must make readily available, at no cost to employees, appropriate personal protective equipment in the appropriate sizes to provide protection from blood or other potentially infectious materials.

Housekeeping §1910.1030(d)(4) Employers must ensure that emergency response vehicles and work sites are maintained in a clean and sanitary condition. Employers shall determine and implement an appropriate written



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schedule for cleaning and methods of decontamination based upon the location within the facility, type of surface, types of contamination, if any, and tasks or procedures being performed.

Labeling §1910.1030(g)(1)(i) Containers of regulated waste, refrigerators and freezers containing blood and other potentially infectious materials, and other containers used to store, transport, or ship blood or other potentially infectious materials must be labeled with fluorescent orange or orange-red biohazard warning labels.

What To Do If An Exposure Incident Occurs §1910.1030(f) An exposure incident is specific eye, mouth, other mucous membrane, non-contact skin, or peritoneal contact with blood or other potentially infectious materials that results from the performance of an employee's duties. An example of an exposure incident would be a puncture from a contaminated sharp. Employees should immediately report exposure incidents. This allows for timely medical evaluation and follow-up by a health care professional as well as for timely testing of the source individual's blood for HIV and HBV. Employers must treat reports in the strictest confidence.

Recordkeeping §1910.1030(h) There are two types of employee-related records required by the bloodborne pathogens standard: medical and training.

Medical Records A confidential medical record for each employee with potential for exposure must be preserved and maintained by employers according to OSHA's rule governing access to employee exposure and medical records, Title 29 CFR, Part 1910.1020(e).

Training Records The bloodborne pathogens standard also requires employers to maintain and keep accurate training records for three years.

Declination Statement Appendix A to §1910.1030 Any employee who chooses not to accept the vaccine must sign the statement of declination of hepatitis B vaccination. The statement can only be signed by the employee following appropriate training regarding hepatitis B, hepatitis B vaccination, the efficacy, safety, method of administration, benefits of vaccination, the availability of the vaccine and that the vaccination is free of charge to the employee. The statement is not a waiver; employees can request and receive the hepatitis B vaccination at a later date if they remain occupationally at risk for hepatitis B.