

## **CHAPTER 7**

### **SECTION 11 HEPATITIS B**

#### **7.11.1 PURPOSE**

This section provides employees and supervisors with information on the occupational risks of exposure to the Hepatitis B virus, and on requirements for administration and recordkeeping, when vaccinations are received by employees.

#### **7.11.2 AUTHORITIES**

- A. APHIS Safety and Health Manual, Chapter 7, Section 8
- B. Occupational Safety and Health Administration (OSHA) Bloodborne Pathogen Standard, 29 Code of Federal Regulations (CFR) Part 1910.1030

#### **7.11.3 BACKGROUND**

Hepatitis B is a disease of the liver, which is caused by a viral infection. The virus (HBV) can enter the body through breaks in the skin, or across the human body's mucosal membranes. The virus in infected humans can be found in all body fluids, and secretions.

Disease transmission is usually a result of sexual contact, exposure to blood, or other contaminated fluids, or as a result of puncture wounds from contaminated instruments such as needles. HBV can live outside of the human body for a considerable period of time, and transmission may occur in instances where skin puncture contact was made with dried blood.

Symptoms may range from very mild to severe, and include fatigue, fever, chills, nausea, vomiting, loss of appetite, muscle aches, tenderness to the area of the liver, and jaundice (a general yellowish discoloration of the skin).

A vaccine has been developed and is available which can effectively reduce the risk of infection. Guidelines for procedures which must be followed to comply with OSHA requirements are found in paragraph 7.11.6 of this section.

#### **7.11.4 RISK EXPOSURE DETERMINATION**

APHIS employees, in general, are considered to be at a minimal risk to HBV infection while performing normal workplace duties. Employees may subject themselves to some exposure risk when performing manual baggage inspections, or when performing first aid procedures. Employees traveling to less developed countries should be aware that they are at a higher risk than the general APHIS employee.

#### **7.11.5 PERSONAL SAFETY AND UNIVERSAL PRECAUTIONS**

Employees can significantly reduce the potential for exposure, and the resultant risk of infection, by following good, sound safety practices such as:

- A. When performing first aid treatment in the field, or office, the provider must use barrier precautions such as disposable gloves and Cardiopulmonary Resuscitation (CPR) face masks. These items, designed to reduce the risk of exposure to Human Immunodeficiency Virus (HIV), also are effective in the prevention of HBV infection. Materials contaminated with blood, or fluids, such as gloves, bandages, and CPR face masks should be handled as infectious waste.
- B. Areas of the body which have come into contact with blood, secretions, tissue, or personal articles belonging to potentially infected persons, should be washed immediately with soap and water.
- C. When inspecting baggage, employees should direct the traveler to remove the contents for visual inspection before handling items. Employees should wear protective gloves when performing manual inspections, and gloves must be worn when inspecting items which may be considered contaminated, such as soiled clothing and personal medical items which accompany individuals. Employees should consider the use of items such as tongs, spatulas, chop sticks, etc., which will reduce the need to handle personal items during inspections where the traveler is not available.
- D. Inspections which yield potentially contaminated articles, such as needles, syringes, sharp objects (such as razor blades), or garments soiled with blood, or mucous, should be stopped, and allowed to continue only after the employee has either donned protective gloves, or begins using tongs, etc.
- E. In the rare event that an employee is bitten by another human, or is injured by a needle stick, it must be assumed that HBV transmission could occur. The wound should be cleansed immediately with soap and water, or other appropriate disinfectant, and bandaged. Medical treatment for the employee using APHIS Form 29, Supervisor's Request for Health Monitoring, is authorized.
- F. Uniform clothing can be disinfected by normal laundry and dry cleaning practices. As an added precaution, employees may wish to use a color safe bleaching agent, and hot water for washable items. Items for dry cleaning should be in separate leak proof bags, and the cleaner advised that they are soiled with human body fluids.
- G. Areas where human blood or secretions are present, such as floors, furniture, and work surfaces must be disinfected. Not all household cleaners may be effective as disinfectants; however, a simple and effective cleaning solution can be prepared by mixing one part of sodium hypochlorite bleach with ten parts of water. Commercially produced "spill" kits for use in the protection of employees from HBV and HIV are available. Employees performing this duty will wear appropriate protective clothing, to include disposable gloves, aprons, and footwear covers as necessary.

#### 7.11.6 HEPATITIS B VACCINATIONS

A. Responsibility.

Section 8, Chapter 7, of the APHIS Safety and Health Manual delegates authority to field program management officials to determine needed immunizations, and for the management of employee immunization programs. The individuals outlined in the authority will identify employees thought to be at an occupational risk for HBV, and direct that they be vaccinated at Agency expense. Employees may elect to decline HBV vaccination.

B. Applicability.

Employees who should be given priority consideration for vaccination are those:

1. Performing manual baggage inspections;
2. In an official travel status to foreign nations where vaccination against Hepatitis B is suggested by the World Health Organization or the Department of State;
3. Assigned duties as a First Aid/CPR First Responder in the workplace.

C. Training.

Employees who are offered, and choose to accept an Agency sponsored HBV vaccination must receive information on its effects, safety, administration, benefits, and that the costs will be borne by the Agency. This information should be available from the health care provider administering the vaccine initially, and thereafter, refresher training on the hazards of the bloodborne illness must occur annually. Records of training will be prepared and kept locally. APHIS is authorized to negotiate agreements with local health providers such as military and Veterans' Affairs hospitals, U.S. Public Health Service, State and local public health officials, and private clinics, for immunization services.

D. Procedures.

The vaccine is given in three doses. Management, work units, and individuals must be aware that serological testing is normally performed to determine if the vaccine is inadvisable for certain employees. The scheduling of the series of three vaccinations must be followed. Employees will receive negligible benefit if schedules are not kept.

Every employee who elects to receive the vaccination series will be required to sign a consent form to be prepared locally (following the format of Exhibit 7.5). This consent form, as with all other records pertaining to HBV programs, must be kept on file at the local work office, and retained permanently.

Employees may elect to decline vaccination. This declination must be documented, and a declination form completed and filed.

#### 7.11.7 HBV EXPOSURE MANAGEMENT

An employee must report episodes of possible exposure (direct contact with human blood, needle sticks, human bites) to his/her supervisor immediately. The supervisor and employee must

document the time, date, location, route or mechanism of HBV entry into the body, and status of antibody activity for HBV and HIV for the source (e.g. the person whose blood you came into contact) if known. The source will be tested if this status is unknown, and consent is obtained. The employee also will be tested for HIV and HBV activity at that time.

A baseline blood sample should be collected immediately after exposure, and tested at a later date (a current sample would have to be tested at that time) to determine if there is any measurable increase in titer levels. This is normally performed within 90 days of the incident. The employee's baseline sample must be kept frozen at the laboratory.

The employee will be provided medical treatment to evaluate the wound. Documentation of the occurrence of possible exposure, and treatment is necessary. Documentation of HBV vaccination must be provided to the medical treatment provider. Follow-up care and treatment, if necessary, will be handled under the Office of Workers' Compensation Programs.