



## **BLOODBORNE PATHOGENS MODULE 3**



This module is the third of three modules for this topic. During the modules you will answer Quick Quizzes to help you review and test your understanding; these are not scored.

There is also a short Final Quiz at the end of this module, which will be scored. It is necessary to pass with a score of 80% or better to receive credit for these modules. This module takes 15 minutes to complete.



Here's what we will cover for Module 3

1. Regulated Waste
2. HBV Vaccination
3. Updated information on Hepatitis B and C
4. New information on Hepatitis D and E
5. Emergency Response
6. Medical Recordkeeping
7. Summary



Now we'll cover **Regulated Waste** items and how they should be handled. Check with local authorities as regulations differ for each state and region. These items include:

- Blood or other potentially infectious materials (OPIM) in a liquid or semi-liquid form.
- Contaminated items that could release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed.
- Contaminated items may include microscope slides, test tubes, used PPE, clean-up materials or contaminated clothing.
- Items with dried blood or other potentially infectious materials.



### Disposing of regulated waste:

Place items in closeable, leak-proof containers. These are:

- Built to contain all contents during handling, storing, transporting or shipping.
- Appropriately labeled or color-coded.
- Closed prior to transport, storage or handling.
- Placed inside a secondary container for shipping, transport or storage, if contamination occurs.





There are a few requirements and rules regarding **Hepatitis B vaccination**.

**The Hepatitis B vaccine must be:**

- Offered free of charge.
- Provided at a reasonable time and in an accessible location.
- Included for all employees at risk of exposure.
- Administered within 10 working days of initial assignment.
- Performed by a licensed professional.

**Employees do not have to be vaccinated if:**

- They have already been vaccinated.
- An antibody testing reveals their immunity.
- They opt out after being offered the immunization



## Hepatitis B vaccinations:

- Employees who are routinely exposed to Bloodborne Pathogens, such as doctors, nurses or first aid responders, must be offered the hepatitis B vaccine series.
- The vaccine series consist of three shots which build immunity to HBV. The three shot series is administered over a period of time.





### **Hepatitis B vaccination requirements (continued):**

- Opting out employees:
  - Employees who decline the vaccination must sign a declination form.
  - The vaccine must be made available if an employee initially declines and later decides to accept the vaccination.
- Employees are not required to participate in antibody prescreening programs to receive the vaccination series.
- Vaccination booster doses must be provided if recommended by the U.S. Public Health Service.





As you learned in Module 1, Hepatitis B is a virus that affects the liver. While initially causing inflammation of the liver, it can potentially lead to more serious conditions such as cirrhosis and liver cancer.

- HBV can survive in dried blood for up to 7 days, making it a **significant concern** for housekeepers, janitors, custodial personnel, laundry personnel whose contact with dried blood may come outside of an emergency or first aid situation.
- Its symptoms are similar to a mild flu, starting with a sense of fatigue and stomach pain. However, it may take up to 9 months before symptoms become noticeable.



- The incubation period of the hepatitis B virus is 75 days on average, but can vary from 30 to 180 days. The virus may be detected 30 to 60 days after infection and persists for variable periods of time.
- Hepatitis B can be chronic and fatal. Even if it is diagnosed and you get help, there's a chance you won't recover.
- About 6-10% of infected adults cannot clear the virus from their livers and develop chronic HBV. That is, they become HBV carriers for life. 25% of these carriers later develop cirrhosis. There is no known cure for chronic HBV.



- Hepatitis B vaccine is **95% effective in preventing infection and its chronic consequences**. This is the first vaccine against a major human cancer
- **Remember:** The Hepatitis B virus vaccine is available to all employees reasonably expected to have exposure to the virus, free of charge upon employment.
- The vaccine is only effective if it is administered **prior to exposure**



- As you have learned in Module 1, Hepatitis C can lead to chronic hepatitis and liver cancer
- There's been a **151.5% increase** in the number of reported cases of acute hepatitis C from 2010-2013
- An estimated 3.2 million persons in the United States have chronic Hepatitis C virus infection. Most people do not know they are infected because they don't look or feel sick.
- The Hepatitis C virus can survive outside the body at room temperature, on environmental surfaces, for at least 16 hours but no longer than 4 days.



Of every 100 people infected with the Hepatitis C virus, approximately:

- 75–85 people will develop chronic Hepatitis C virus infection; of those:
- 60–70 people will go on to develop chronic liver disease
- 5–20 people will go on to develop cirrhosis over a period of 20–30 years



- Hepatitis D, also known as "delta hepatitis," is a liver infection caused by the Hepatitis D virus (HDV).
- Hepatitis D is uncommon in the United States.
- Hepatitis D only occurs among people who are infected with the Hepatitis B virus because HDV is an incomplete virus that requires the helper function of HBV to replicate.
- HDV can be an acute, short-term, infection or a long-term, chronic infection.



- Hepatitis D is transmitted through percutaneous (skin) or mucosal (nose, mouth) contact with infectious blood and can be acquired either as a coinfection with HBV or as superinfection in people with HBV infection.
- There is no vaccine for Hepatitis D, but it can be prevented in persons who are not already HBV-infected by Hepatitis B vaccination.



- Hepatitis E is a liver infection caused by the Hepatitis E virus (HEV).
- Hepatitis E is a self-limited disease that does not result in chronic infection.
- While rare in the United States, Hepatitis E is common in many parts of the world. It is transmitted from ingestion of fecal matter, even in microscopic amounts, and is usually associated with contaminated water supply in countries with poor sanitation.
- There is currently no FDA-approved vaccine for Hepatitis E.





### Here's what to do if an exposure occurs:

- Wash the exposed area thoroughly with soap and running water.
- Use non-abrasive, antimicrobial soap.
- Flush the nose, mouth or skin with splashes of water.
- Irrigate eyes with water or saline.
- Report the exposure.
- Seek medical attention.





### **When First Aid procedures are necessary:**

- Always use universal precautions.
- It is important to put an impermeable barrier between you and potentially infectious material. Minimize your exposure by wearing the following:
  - Gloves
  - Splash goggles
  - Pocket mouth-to-mouth resuscitation masks
  - Other barrier devices

Remember only those trained in performing first aid should do so.



### First Aid (continued):

- When performing first aid, always use a mouth barrier to protect yourself from coming into contact with bodily fluids.
- Mouth barriers should have one-way valves to keep fluids from coming up.
- Commercially available products can be small enough to fit on a key chain and include latex gloves.





Choose the most correct answer.

For an Emergency Response , you should:

- A. Wash the exposed area thoroughly with soap and running water.
- B. Use universal precautions when giving first aid.
- C. Report any exposure.
- D. All of the above.



Choose the most correct answer.

For an Emergency Response , you should:

- A. Wash the exposed area thoroughly with soap and running water.
- B. Use universal precautions when giving first aid.
- C. Report any exposure.
- D. **All of the above.**



### **For every incident, the following must be recorded:**

- The name and social security number of the employee.
- The employee's hepatitis B vaccination status.
- The results of examinations, medical testing and post-exposure evaluation.
- Follow-up procedures.
- Information provided to the health care professional.
- The health care professional's written opinion.



### Maintaining Records

Employee medical records must be kept confidential and not disclosed or reported without the employee's written consent (unless required by law).

Medical records must be maintained for the employee's duration of employment plus 30 years, according to OSHA's rule governing access to employee exposure and medical records.





### Sharps injury log:

Employers must maintain a sharps injury log for the recording of injuries from contaminated sharps.

The log must be maintained in a way that assures employee privacy and must contain, at a minimum:

- The type and brand of device involved in the incident.
- The location of the incident.
- A description of the incident.





Choose the correct answer.  
Employee medical records must:

- A. Be kept for the length of employee's employment plus 30 years
- B. Include a sharps injury log
- C. Include results of examinations, medical testing and post-exposure evaluation.
- D. All of the above



Choose the correct answer.  
Employee medical records must:

- A. Be kept for the length of employee's employment plus 30 years
- B. Include a sharps injury log
- C. Include results of examinations, medical testing and post-exposure evaluation.
- D. All of the above**



- All employees who could reasonably expect to come in contact with human blood or OPIM must follow universal precautions and be trained on Bloodborne Pathogens.
- Implementation of a Bloodborne Pathogen program will not only prevent hepatitis B cases, but also will significantly reduce the risk of employees contracting HIV, hepatitis C or other Bloodborne diseases.
- A written exposure control plan and a training program must be in place to assure that employees are aware of hazards and work practices for Bloodborne Pathogens.

