

# e-Compliance Training

## Bloodborne Pathogens - January 2022

THIS TRAINING SESSION IS RECOMMENDED FOR:

All employees who have the potential for occupational exposure to bloodborne pathogens

### Training Objectives

This training module will provide annual retraining on working safely when you experience exposure to bloodborne pathogens during the course of your job duties. The following topics will be addressed:

- Occupational exposure and transmission of bloodborne pathogens;
- Pathogens common to the health and dental care settings;
- The hepatitis B vaccine;
- Engineering, work practice and administrative controls;
- PPE to be used for bloodborne pathogen exposure;
- Managing spills;
- Biohazardous waste (also known as regulated waste);
- Exposure incidents.

**New Hire and Annual Retraining**

The Bloodborne Pathogens Standard (at paragraph 29 CFR 1910.1030(g)(2)) requires that employers provide training upon hire and annually thereafter. This month's training module is designed to include the content required by the Standard.

**Terms and Definitions**

*Occupational Exposure:* The Bloodborne Pathogens Standard defines occupational exposure as reasonably anticipated skin, eye, mucous membrane, or parenteral (i.e., puncture wound) contact with blood or other potentially infectious materials that may result from the performance of an employee's duties. Many dental and healthcare workers experience the risk of exposure to and/or transmission of bloodborne pathogens as part of their jobs. Examples of tasks that involve occupational exposure include, but are not limited to: performing injections, handling biohazardous waste, performing or assisting in minor surgical procedures, wound care, oral exams, hygiene appointments, fillings and extractions, processing/sterilizing instruments, etc.

*Other potentially infectious materials* (OPIM) include: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; any unfixed tissue or organ (other than intact skin) from a human (living or dead); and HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

*Contaminated* means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

**Transmission**

Bloodborne pathogens are transmitted when contaminated blood or OPIM enter the body of another person. In the health and dental care settings, transmission commonly occurs through: a puncture wound by a sharp object, such as a needle, sharp instrument, broken glass, etc. that is contaminated with blood or

## Interactive Training Reminder

Compliance Training is an interactive training program in which you can address questions with other staff members or supervisors to obtain clarification for situations in your work setting.

Write down any questions that you have about the training topic and address them with your Training Coordinator or supervisor.

other potentially infectious materials; contact between broken or damaged skin and infected body fluids; or contact between mucous membranes and infected body fluids.

Unbroken/intact skin forms a protective barrier against bloodborne pathogens. However, infected blood or body fluids can enter your system through puncture wounds, open sores, cuts, abrasions, acne, and damaged or broken skin, including blisters. A splash of blood or OPIM to your eye, nose, or mouth is another source of exposure, and could result in a bloodborne infection.

**Common Bloodborne Pathogens**

The following three pathogens present the greatest exposure risk to workers in the medical and dental office environments in the United States. Signs and symptoms of these three viruses are described below.

***Hepatitis B Virus (HBV)*** - HBV can survive outside the body at least 7 days and still be capable of causing infection. Symptoms begin an average of 90 days after exposure, but can appear any time between 8 weeks and 5 months after exposure. Symptoms may include: fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, clay-colored bowel movements, joint pain, and jaundice. There are several antiviral medications for persons with chronic infection.

***Hepatitis C Virus (HCV)*** - Symptoms of HCV include: fever, fatigue, dark urine, clay-colored stool, abdominal pain, loss of appetite, nausea, vomiting, joint pain, jaundice. The average time from exposure to symptoms ranges from 2 to 12 weeks. For some people, hepatitis C is a short-term illness but for 70%–85% of people who become infected with hepatitis C, it becomes a long-term, chronic infection. Chronic hepatitis C is a serious disease than can result in long-term health problems, even death. Most people with chronic HCV infection are asymptomatic or have non-specific symptoms such as chronic fatigue and depression. Many eventually develop chronic liver disease, which can include cirrhosis and liver cancer. There is no vaccine for hepatitis C, although research is underway for development of one. The CDC recommends that health and dental care workers be tested for hepatitis C infection after needle sticks, sharps, or mucosal exposure. There are several approved therapies for hepatitis C infection.

***Human Immunodeficiency Virus (HIV)***

1. *Acute HIV Infection*-Within 2 to 4 weeks after infection with HIV, about 40-90% of people experience a flu-like illness, which may last for a few weeks. When people have acute HIV infection, they have a large amount of virus in their blood and are very contagious. But people with acute infection are often unaware that they're infected because they may not feel sick right away or at all. If present, the flu-like symptoms may include: fever, chills, rash, night sweats, muscle aches, sore throat, fatigue, swollen lymph nodes, and mouth ulcers.

2. *Clinical Latency* (HIV inactivity/dormancy) This period is sometimes called asymptomatic HIV infection or chronic HIV infection. During this phase, HIV is still active but reproduces at very low levels. People may not have any symptoms during this time. For people who aren't taking medicine to treat HIV, this period may last a decade or longer. People who are taking

medicine to treat HIV as prescribed may be in this stage for several decades. It's important to remember that people can still transmit HIV to others during this phase. However, people who take HIV medicine as prescribed and get to and maintain an undetectable viral load (the amount of HIV in your blood is so low that a test can't detect it) have effectively no risk of transmitting HIV.

3. *Acquired immunodeficiency syndrome* (AIDS)- AIDS is the most severe phase of HIV infection. Without treatment, people with AIDS typically survive about 3 years. People with AIDS can have a high viral load and be very infectious. Symptoms of AIDS include: rapid weight loss, recurring fever or night sweats, extreme tiredness, prolonged swelling of lymph glands in the armpits, groin or neck, diarrhea lasting more than a week, sores of the mouth, anus or genitals, pneumonia.

No effective cure currently exists for HIV. But with proper medical care, HIV can be controlled. Treatment for HIV is called antiretroviral therapy or ART. If taken the right way, every day, ART can dramatically prolong lives, keep people healthy, and greatly lower their chance of infecting others.

**Prevention**

Your employer is required by the Bloodborne Pathogens Standard to implement specific protective measures as outlined below, and it is your responsibility to follow them. You can be disciplined for failing to follow safety measures that have been identified.

***Universal Precautions*** – Under universal precautions, every patient is treated as if they are infected with a bloodborne pathogen. You will use the same measures (PPE, work practice and engineering controls) with every patient, and without regard to known infectious status. Universal precautions will ensure that you are protected at all times.

***Hepatitis B Vaccination (HBV)*** - Your employer must make the hepatitis B vaccine available at no cost to all employees who have occupational exposure. You are permitted to accept or decline the vaccination series (unless the employer has made receipt of the vaccine a condition of employment prior to you accepting a position with the practice). If you decline the vaccine, you will be asked to sign a "Hepatitis B Vaccination Declination Statement," which will be maintained as part of your employee medical record. Even if you initially decline, you may change your mind at any time, and your employer must provide the vaccine at no cost to you at that time.

HBV is provided in a series of three intramuscular doses; with the second dose administered at least 1 month after the first dose, and the third dose administered 6 months following the first dose (or at least 8 weeks after the second dose). Employees must be tested for antibody to hepatitis surface antigen one to two months after completion of the vaccination series.

Since the vaccine became available in 1982, more than 100 million people have received HBV in the United States. The most common side effects from HBV are pain at the injection site and mild to moderate fever. Studies indicate that these side effects are reported no more frequently among persons vaccinated than among those receiving placebo.



HBV will protect you from infection that could lead to cirrhosis and liver cancer. Protection remains intact for at least 20 years among healthy vaccinated individuals who received the hepatitis B vaccination >6 months of age. The vaccine confers long-term protection against clinical illness and chronic hepatitis B infection. The CDC indicates that immunity appears to continue even when antibody levels become low or decline below detectable levels.

***Engineering Controls*** – Engineering controls help to reduce bloodborne pathogen hazards by isolating or removing them. Common engineering controls include placing sharps disposal containers at the point of use, using self-sheathing needles, using needleless IV systems, etc.

Any contaminated sharp can cause a puncture injury and result in transmission of a bloodborne pathogen. Disposable syringes with needles, scalpels, dental instruments, suture needles, winged steel needles, IV catheter stylets, and phlebotomy needles are responsible for nearly 80% of sharps injuries in health and dental care. The Standard requires your employer to evaluate the use of sharps and implement use of "safer devices" designed to limit the potential for sharps injury. Although safer devices might be less convenient, they help to protect you against bloodborne pathogens.

***Work Practice Controls*** reduce bloodborne pathogens hazards by changing the way a task is performed to make it safer. For example, recapping of needles is generally prohibited, unless required by a procedure. If you do need to recap a needle, never use two hands. Use either a one-handed scoop technique, or use tongs or forceps to recap, thereby reducing the risk of getting stuck by a contaminated sharp. Another important work practice control is that food and drink, cosmetics, lip balm, etc. may not be present or applied in areas where blood or OPIM are present, or in contaminated areas.

Hand washing is another critical work practice control for preventing transmission of infections. Hand hygiene should be performed at the following key points in time: before patient contact; after contact with blood, body fluids, or contaminated surfaces (even if gloves are worn); before invasive procedures; after removing gloves (removing contaminated gloves can deposit pathogens on your hands); and after each patient encounter.

Washing hands with soap and water is the best way to remove overt contamination. If soap and water are not available, use an alcohol-based hand sanitizer that contains between 60 - 95% alcohol. Alcohol-based hand sanitizers can quickly reduce the number of germs on hands, but do not eliminate heavy contamination, and are not as effective when hands are visibly dirty or greasy. The Bloodborne Pathogens Standard still indicates handwashing using soap and water whenever feasible.

### *Soap and Water Technique*

Wet your hands with clean running water (warm or cold) and apply soap, rub your hands together to make a lather and scrub the backs of your hands, between your fingers, and under your nails for at least 20 seconds and then rinse your hands well under running water. Dry your hands using a clean towel or air dry.



***Hand sanitizer Technique***

Follow the directions on the bottle for the manufacturer's recommended use. Pay particular attention to the amount of product to be used - it should take at least 15 seconds of rubbing your hands together before they feel dry.

**Personal Protective Equipment**

When engineering and work practice controls do not fully remove a hazard, PPE must be selected. Your practice's Safety Officer and/or management will examine procedures performed, determine the expected exposure, and designate personal protective equipment (PPE) to be used during such procedures. Your supervisor or safety officer will then inform all staff of the PPE to be used when performing various procedures, along with how to put it on, take it off, care for and dispose of it.

***Gloves*** – Gloves must be worn when it is reasonable to anticipate hand contact with blood, OPIM, mucous membranes, non-intact skin, when performing vascular access procedures, and when handling or touching contaminated items and surfaces. Gloves should be removed after contact with each patient, and hand hygiene should be performed. Use of gloves is not a substitute for hand hygiene.

***Masks and Protective Eyewear*** - Masks must be worn in combination with eye protection devices such as goggles or glasses with solid side shields, or chin-length face shields. They should be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated, and eye, nose, or mouth contamination can be reasonably anticipated.

For example, workers in the dental setting will always wear masks and eye protection because the splash, spray, and spatter of saliva is expected (saliva is considered infectious in the dental setting, because blood is often present during dental procedures). Giving an injection to a patient rarely produces splash, spatter, or spray of blood or OPIM, so the use of a mask and eye protection may not be needed, but might be used when there is an uncooperative patient, or other circumstance that presents additional risk.

***Gowns and Other Protective Garments*** - Appropriate protective clothing, such as gowns, aprons, lab coats, clinic jackets, or other similar outer garments must be worn in occupational exposure situations where there is the potential for splash, spatter, or spray of blood or other potentially infectious materials. General work clothes are not intended to function as protection against a hazard, and are not considered to be PPE. All PPE must be removed before leaving the workplace, and may NOT be laundered by employees at their homes, due to the potential for migration of contaminants.

***Housekeeping*** – Your employer will have a written schedule or protocol for decontamination based on the location within the facility, type of surface to be cleaned, type of soil or contaminant present, and tasks or procedures being performed in the work area. All equipment and environmental and working surfaces must be cleaned and decontaminated with an appropriate disinfectant after completion of procedures, immediately or as soon as feasible when surfaces are overtly contaminated with blood or other potentially infectious materials, or after any spill of blood or other potentially infectious materials.

International Biohazard Symbol

***Spill Control*** – Your practice will have a spill kit, and your Safety Officer will inform you of its location. When a spill or leak is discovered, you should:

1. Use absorbent material to contain the spill (i.e., paper or cloth toweling, or other absorbent material).
2. Use recommended PPE to prevent exposure to the blood or other potentially infectious material.
3. Clean up the materials and dispose of them as recommended in your Exposure Control Plan.
4. Decontaminate the site in accordance with procedures outlined in your Exposure Control Plan.
5. An incident report should be completed and turned in to your safety officer or supervisor to allow for corrective actions, which will help to prevent recurrence.

***Waste Disposal*** – "Regulated waste" is the term for biohazardous or medical waste in the Standard, and has two major categories: contaminated sharps and other regulated waste. To be classified as regulated waste, an item must be both be contaminated wlith blood or OPIM, and be capable of releasing those materials during handling. Contaminated sharps must be discarded immediately or as soon as feasible into containers that are closable, puncture resistant, leak-proof on the sides and bottom, and color-coded (red or orange-red) or labeled with the international biohazard symbol (see side bar). Other regulated waste (non-sharp items contaminated with blood or other potentially infectious materials) must be placed into containers that are closable, constructed to contain contents and prevent leakage, and color-coded or labeled.

***Labeling/Color Coding*** - Items contaminated with blood or other potentially infectious materials must be identified by the international biohazard symbol and/ or the color red/ orange-red. Containers (i.e., sharps containers, trash containers for non-sharps medical waste, contaminated laundry hampers, etc.) must be labeled or appropriately color-coded.



**Exposure Incidents**

An exposure incident is identified within the Standard as a specific eye, mouth, or mucous membrane, non-intact skin, or parenteral (puncture wound) contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

After experiencing an exposure incident, you should immediately notify your supervisor and/or Safety Training Coordinator. Immediate notification is extremely important, because the patient or source individual may still be in the facility, and can be asked to provide a blood sample and consent to testing of his/her blood sample for HIV and hepatitis B and C. The Standard requires that the results of the patient testing be provided to you if you are the exposed employee. This information will assist you in your decision to have follow-up treatment.

You are also entitled to a confidential medical examination after an exposure incident. Your employer may send you to an occupational health clinic, another provider with which they've made an arrangement, or may allow you to see your own primary care physician. The health care provider you see will counsel you on the treatment and testing recommendations, based on the nature of the exposure incident you experienced. Your employer will not be told the results of your testing.

# e-Compliance Training Test

## Bloodborne Pathogens - January 2022



NAME: _____ DATE: _____

SIGNATURE: _____ STAFF POSITION: _____

*Return your test to your supervisor or Compliance Coordinator upon completion. Individual tests will be maintained to document participation and understanding of the information. Review the training information to find the correct answers to any questions that may have been missed.*

**1** To be classified as regulated waste, an item must be both be contaminated with blood or OPIM, and be capable of releasing those materials during handling.

**Select One** **T** **F**

**2** One common method of transmission for bloodborne pathogens is through a puncture wound by a sharp object, such as a needle, sharp instrument, broken glass, etc. that is contaminated with blood or other potentially infectious materials.

**Select One** **T** **F**

**3** Hand washing with soap and water alone is not effective: it must be immediately followed up with use of hand sanitizer.

**Select One** **T** **F**

**4** Work practice controls help to reduce bloodborne pathogens hazards by removing employees from hazardous areas.

**Select One** **T** **F**

**5** Engineering controls help to reduce bloodborne pathogen hazards by isolating or removing them. Common engineering controls include placing sharps disposal containers at the point of use, using self-sheathing needles, using needleless IV systems, etc.

**Select One** **T** **F**

**6** Most people with chronic HCV infection are asymptomatic or have non-specific symptoms such as chronic fatigue and depression. Many eventually develop chronic liver disease, which can range from mild to severe, including cirrhosis and liver cancer.

**Select One** **T** **F**

**7** Under the concept known as Universal Precautions, it is important to clearly identify any patient infected with a bloodborne pathogen so that extra safety measures can be taken.

**Select One** **T** **F**

**8** The most common side effects from hepatitis B vaccination are pain at the injection site and mild to moderate fever.

**Select One** **T** **F**

**9** Protective eyewear is always required as personal protective equipment (PPE) when you perform an injection.

**Select One** **T** **F**

**10** You are entitled to a confidential medical examination after an exposure incident.

**Select One** **T** **F**

**Click Here to Take Your Quiz**