

## Bloodborne Pathogens Review #3239

Bloodborne pathogens are infectious microorganisms and viruses in human blood that can cause disease. Hepatitis B (HBV), hepatitis C (HCV), and human immunodeficiency virus (HIV) are the main concerns in healthcare today, but there are many more. At least twenty types of bloodborne pathogens have been identified as being capable of infecting others via needlestick injuries, mucus membrane contact, or openings in the skin.



The Occupational Safety and Health Administration (OSHA) states in the Bloodborne Pathogen Standard that bloodborne pathogen training must be provided to all healthcare workers with venipuncture responsibilities before they stick the first needle into a patient. Students training in a healthcare career should receive education in bloodborne pathogens prior to any patient exposure. OSHA does not excuse anyone from adhering to the Bloodborne Pathogen Standard, so healthcare workers may not

make a personal choice to violate any of the OSHA regulations. Facilities are required to enforce all OSHA requirements.

According to the Centers for Disease Control and Prevention (CDC), about 385,000 sharps injuries occur annually to hospital employees. Considering the engineering controls available, and work-practice controls that should be in use, this is an unacceptable number. Engineering controls are safety devices that prevent accidental exposure. Work-practice controls are behaviors that prevent exposure. These include activating the safety device properly every time a needle or lancet is used, keeping fingers below the needle at all times, and wearing gloves every time there is a potential for exposure. Standard precautions are a type of work-practice control that seeks to minimize the spread of disease by maintaining a minimum level of precautions for all patients. This means that every patient must be treated as if he or she is infected with a pathogen that can be passed to another through any body fluid.

Healthcare workers usually don't know if a patient has a bloodborne pathogen in his or her body, so all blood and other body fluids must be considered to be potentially infectious. People of any age, even babies, could harbor pathogens. Besides blood, saliva, urine, semen, vaginal secretions, cerebrospinal fluid, and amniotic fluid can all transfer disease if pathogens are present.

Work practices that minimize exposure to bloodborne pathogens and incorporates standard precautions include:

1. Performing proper hand hygiene before and after patient contact
2. Covering open areas in the skin such as cuts or abrasions with bandages
3. Removing jewelry and avoiding lotions that can compromise glove integrity
4. Wearing disposable gloves with fingertips intact
5. Donning PPE such as a gown or mask if there is a potential for fluids to splash
6. Activating safety devices on all sharps immediately upon removal from patient (if not activated during procedure) and disposing of them in a sharps container
7. Closing and disposing of sharps containers when no greater than 75% full
8. Carefully removing soiled gloves
9. Performing proper hand hygiene after removing gloves

Studies have shown that many accidental needlesticks are not reported. Needlesticks must be reported for several reasons including medical follow-up of the worker involved, investigation of malfunctioning devices, and addressing work-practice controls that are not being implemented. Immediate follow-up for the healthcare worker who has an exposure is very important. Workers who receive a needlestick should always follow facility policy for post-exposure management. Do you know what to do in the event of an accidental needlestick? If not, the time to find out is before you have one.

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### Test Yourself

1. What is the name of the government agency(s) that enforces the Bloodborne Pathogen Standard?
  - a. CLSI
  - b. CDC
  - c. OSHA
  - d. all of the above
2. What pathogens can transfer disease via a blood or body fluid exposure?
  - a. HIV, HBV, and HCV
  - b. at least twenty have been identified
  - c. both a and B
  - d. none of the above
3. With regards to needlestick prevention, which of the selections below is an example of an engineering control?
  - a. needle with a safety device attached to a tube holder
  - b. needle without a safety device attached to a tube holder
  - c. a sharps container
  - d. both a and c
4. Which of the selections below is an example of a work-practice control?
  - a. asking the patient to hold pressure on the puncture site
  - b. activating the safety device on a needle after completing a venipuncture
  - c. closing and disposing of a sharps container when it is 75% full
  - d. both b and c
5. What are some of the body fluids through which pathogens can be spread?
  - a. semen
  - b. blood
  - c. urine
  - d. all of the above
6. If a healthcare worker does not want to wear gloves to perform venipuncture, or prefers to tear fingertips off the glove, it is not a violation of the OSHA Bloodborne Pathogen Standard.
  - a. True
  - b. False
7. What should a worker do if he/she experiences an accidental needlestick?
  - a. report it to the appropriate person according to facility policy
  - b. follow facility policy for post-exposure management
  - c. ask the patient if he/she has HIV, HBV or HCV
  - d. both a and b

Name \_\_\_\_\_ Date \_\_\_\_\_ Dept \_\_\_\_\_