RESOURCE CENTER FOR ACCESSIBLE LIVING
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BLOODBORNE PATHOGENS

Bloodborne pathogens are infectious microorganisms in human blood that can cause various diseases in humans. These pathogens include, but are not limited to: Hepatitis B (HBV), Hepatitis C (HCV) and Human Immunodeficiency Virus (HIV). Exposure to bodily fluids, especially in the area of open skin, skin abrasions, cuts and minor scrapes, may result in infection. Needle sticks and other sharps-related injuries may expose workers to bloodborne pathogens. Workers in many occupations, including first responders, housekeeping personnel in some industries, nurses and other healthcare personnel, all may be at risk for exposure to bloodborne pathogens.

HEPATITIS B is caused by the Hepatitis B virus, a liver disease formerly called "serum hepatitis," is a life-threatening bloodborne pathogen and serious risk to employees exposed to blood and other bodily fluids. Hepatitis, meaning "inflammation of the liver," can be caused by many factors including drugs, toxins, infectious agents and viruses and autoimmune disease, to name a few. The symptoms of Hepatitis B are mild flu like symptoms marked by fever, nausea, vomiting and fatigue as well as jaundice (yellowing of the skin) to sometimes fatal liver failure. Some people are infected with Hepatitis B without having any symptoms. Doctors regard Hepatitis B as a serious illness because it is a leading cause of chronic liver diseases, including cirrhosis and cancer. There is a Hepatitis B vaccine available which is 95 – 97% effective. It is typically a series of 3 injections over a period of time.

HEPATITIS C, a liver disease caused by the hepatitis C virus, is known as the most common chronic bloodborne infection in the United States. Hepatitis C is most commonly transmitted through repeated direct exposures to blood. Most chronically-infected people are unaware of their infection because they are not showing symptoms of clinical illness. As of now, there is no vaccine for hepatitis C.

Hepatitis C symptoms: For some it is a serious illness, for others mild. Some symptoms are fever, nausea and vomiting, dark urine. There are medications available which have approximately a 30% effective rate, meaning that percentage could possibly get rid of the virus, 70% are never free of it.

HIV stands for Human Immunodeficiency Virus.

HIV destroys CD4+ T-cells. These are a type of white blood cell that are a part of your immune system and help fight infections. HIV makes more HIV. When the HIV virus enters a CD4+ T-cell, HIV uses the CD4+ cells to make copies of itself, and then destroys the CD4+ cells. Left untreated, CD4+ T-cells are depleted and the body is less able to fight infection. The viral load increases. If left untreated, the amount of HIV in an infected person's blood, also called the "viral load," will go up. As the viral load increases, a patient becomes more infectious to others and his/her immune system further weakens.

AIDS means Acquired Immune Deficiency Syndrome. AIDS is the most advanced stage of HIV infection.

Exposures to blood and other body fluids occur across a wide variety of occupations. Health care workers, emergency response and public safety personnel, and other workers can be exposed to blood through needlestick and other sharps injuries, mucous membrane, and skin exposures. The pathogens of primary concern are the human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV). Workers and employers should take advantage of practices to prevent exposure to blood and other body fluids.

STANDARD PRECAUTIONS THAT SHOULD BE TAKEN WHEN PROVIDING CARE SHOULD INCLUDE:

- Avoiding contact with blood and other bodily fluids
- Properly using personal protective equipment like disposable gloves, eye protection, foot coverings, gowns and breathing barriers
- Being careful to avoid touching your eyes, nose and mouth while or after providing care or when exposure to potentially infectious materials is possible
- Bodily secretions can enter our system through very minor cuts and abrasions, skin allergies and possibly even via a hang nail on the finger

WHAT IS THE BEST WAY TO CLEAN UP A BLOOD SPILL?

- Carefully! Any sized spill of blood can be safely cleaned up by any person as long as they follow the proper procedures and protective measures.
- Start by keeping other people from walking through the area. Put on gloves to protect your hands.
- Cover the spill with paper towels; spray them with disinfectant until they are sopping wet. Allow to sit 5-10 minutes.
- Wipe up the area and repeat if necessary.
- Collect the towels in a trash bag.
- Do not handle pieces of broken glass and other sharp objects with your bare hands; use a small broom and dustpan, tweezers, or other device. After removing gloves, thoroughly wash your hands with soap and water. For small blood spills, the material may be discarded in the regular trash.
- For items dripping with blood, they should be disposed of as infectious waste. They should only be picked up with proper protective gloves on and placed in a bag. If a red label bag is not available, use red tape or red marker, call local healthcare agencies for proper local disposal.

- **Always wear protective equipment as needed**
- **Any time body fluids splash in your nose eyes or face flush with water for several minutes and seek medical attention immediately**
- **Cleaning spills properly while wearing gloves and washing hands afterward are your best defense**
- **If you have to apply a bandaid or other form of first aid to another always wear disposable gloves**

TRANSMISSION OF HBV, HCV, AND HIV IN HEALTHCARE SETTINGS

HIV, HBV and HCV are spread by contact with the blood of an infected person. The spread of these viruses from one person to another in healthcare settings is rare, but can occur. This contact is primarily through contaminated needles, syringes, or other sharp instruments. Medical experts emphasize that the careful practice of infection control procedures, including standard precautions i.e., using protective practices and personal protective equipment to prevent transmission of these viral infections and other blood borne infections, protects patients as well as healthcare providers from possible transmission in medical and dental settings and all settings where contact may occur.

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QUICK REVIEW OF BLOODBORNE PATHOGENS

According to the Occupational Safety and Health Administration (OSHA), "Bloodborne pathogens are infectious microorganisms in human blood that can cause disease in humans. These pathogens include, but are not limited to, hepatitis B (HBV), hepatitis C (HCV), and human immunodeficiency virus (HIV)." Any body fluid with blood is potentially infectious. Also, semen, vaginal secretions and saliva in dental procedures are considered potentially infected body fluids."

DISCUSSION QUESTIONS:

1. Bloodborne pathogens may enter your system through:

a) Skin abrasions
b) Open cuts
c) Mucous membranes
d) All of the above

2. If you are exposed to potentially infectious materials (PIM) while working, you may request a vaccine for which bloodborne disease?

a) Syphilis
b) Hepatitis B
c) Influenza
d) HIV

3. When discussing the Bloodborne Pathogen Standard, what are the main diseases of concern?

a) HIV, HBV, HCV
b) PVC, HAV, HDV
c) CDC, PCP, HEV
d) HIV, HEV, BVD

4. Human immunodeficiency virus (HIV) is:

a) A virus that does not currently have a cure, but can be controlled with medication
b) A bacterial illness that can be treated with antibiotics
c) The virus that causes acquired immune deficiency syndrome (AIDS)
d) Both a and c

5. The term universal precautions refers to:

a) Wearing sunblock before sun exposure
b) Locking the doors of your house before leaving
c) Treating all body fluids as if they are infectious
d) Using hand sanitizer before eating

6. If you wear gloves while handling PIMs, it is not necessary to wash your hands afterwards.

a) True
b) False

7. Which of the following may contain bloodborne pathogens?

a) Vaginal secretions
b) Semen
c) Saliva that contains traces of blood
d) All of the above

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EMPLOYEE NAME

DATE

BLOODBORNE PATHOGENS TEST

1. Which is an example of a bloodborne exposure precaution?

- ☐ a) Disposable (single use) gloves
- ☐ b) a cloth sock
- ☐ c) a handkerchief
- ☐ d) a roll of paper towels

2. Which is an example of a blood borne pathogen exposure incident?

- ☐ a) Unanticipated contact with blood
- ☐ b) Slipping on a wet floor
- ☐ c) An allergic reaction to latex gloves
- ☐ d) A patient falling out of bed

3. To reduce the risk of bloodborne pathogen exposures, employees should:

- ☐ a) Attend training sessions
- ☐ b) Provide his/her own PPE (personal protective equipment)
- ☐ c) Avoid the rooms of patients who are known to have a blood borne pathogen
- ☐ d) All of the above

4. What are the three main bloodborne diseases of concern:

_____

_____

_____

5. Transmission of bloodborne pathogens in the workplace is most likely to occur due to:

- ☐ a) Accidental puncture—a sharp, contaminated object punctures your skin
- ☐ b) Broken skin—infected blood or body fluids come into contact with your already broken or damaged skin
- ☐ c) Body openings—infected material comes into contact with your eyes, nose or mouth
- ☐ d) All of the above

6. What actions can you take at work to help keep yourself safe from bloodborne pathogens?

- ☐ a) Attend annual training on bloodborne pathogens
- ☐ b) Use appropriate personal protective equipment (PPE)
- ☐ c) Follow universal precautions any time you might be exposed to a bloodborne pathogen
- ☐ d) All of the above

7. Bloodborne pathogens are disease-causing microorganisms that are present in:

- ☐ a) Human blood and body fluids that may contain blood
- ☐ b) Sweat, tears and saliva
- ☐ c) River water and certain kinds of soil
- ☐ d) None of the above

8. If you wear gloves while cleaning up body fluids, you should still wash your hands afterwards.

☐ True ☐ False

9. Bloodborne pathogens can be transmitted by sharing equipment, toilets and water fountains.

☐ True ☐ False

10. What is the most chronic form of bloodborne infection in the United States?

- ☐ a) Hepatitis C
- ☐ b) Hepatitis B
- ☐ c) HIV
- ☐ d) Other

11. Which bloodborne illness can be vaccinated against?

- ☐ a) Hepatitis C
- ☐ b) Hepatitis B
- ☐ c) HIV
- ☐ d) Other