To Our Health...

Information for Improving Our Health / Prepared by Jill Peterson, RN, BSN, Nurse Consultant

Universal Precautions

"Universal Precautions", as defined by CDC (Centers for Disease Control), are a set of precautions designed to prevent transmission of bloodborne pathogens when providing first aid or health care. Universal Precautions assumes that all human blood and all human body fluids are infectious and should be handled with appropriate protective measures. Universal Precautions apply to blood and body fluids containing blood.

What are blood pathogens?

Bloodborne pathogens are microorganisms such as viruses and bacteria, which may cause diseases if transmitted via exposure to blood and other body fluids. The bloodborne pathogens hepatitis B (HBV), hepatitis C (HCV) and Human Immunodeficiency virus (HIV) pose the greatest threat.

How are they transmitted?

HBC, HCV and HIV are most commonly transmitted through:

~ sexual contact

~ sharing needles

~ from mothers to babies at birth/before birth

~ contact with broken or damaged skin or mucous membranes and infected body fluids

~ accidental puncture from contaminated needles, broken glass or other sharp objects

Bloodborne pathogens are not, transmitted through casual contact, such as shaking hands or sharing equipment.

Hepatitis B Virus – HBV

~ HBV is a serious public health problem that affects people of all ages in the United States and around the world.

~ HBV is transmitted through "blood to blood" contact.

~ The hepatitis virus is very hardy and can survive in dried blood for up to 7 days. Because of this it is critical that materials contaminated with blood be properly handled and promptly disposed of.

~ After exposure it may take a few weeks to 6 months for symptoms to become noticeable.

~ Symptoms may include: loss of appetite, fatigue, diarrhea, vomiting, abdominal pain, joint pain and jaundice (yellow cast to the skin).

~ 30% of people have no symptoms.

~ Diagnosis is made by specific blood tests.

~ There is a vaccine to prevent infection with Hepatitis B.

~ In addition to getting vaccinated, using Universal Precautions is your best prevention of disease transmission.

Region V Services' Vaccination Program

To protect employees as much as possible from the possibility of a Hepatitis B infection, Region V Services has implemented a vaccination program. The program is available, at no cost to the employee, to all individuals who have been identified as having the possibility of occupational exposure to blood. The vaccination will be made available within ten working days of that job assignment or not more than ten days after exposure.

Employees who decline the Hepatitis B vaccine will sign a waiver indicating their decision. Employees who initially decline the vaccine, but who later wish to have it, may request and receive it within ten days at no cost to that employee.

The vaccine series consist of 3 doses over a 6 month period (initial dose, 2nd dose one month later, final dose 6 months after the first dose). If you began the series and missed a dose, you DO NOT need to begin the series over. Schedule the next dose as soon as possible. Many of you may have received the vaccination as a part of your routine child immunizations; you do not need the series if you have previously received the vaccination.

Hepatitis C Virus – HCV

~ HCV is transmitted through "blood to blood" contact.

~ The hepatitis virus is very hardy and can survive in dried blood for up to 7 days. Because of this it is critical that materials contaminated with blood be properly handled and promptly disposed of.

~ It is the most common chronic bloodborne infection.

~ Chronic infection with HCV is the single most common reason for liver transplant.

~ Symptoms are similar to HBV however, more than 90% may have mild or no symptoms.

~ Diagnosis is made by specific blood tests.

~ A high percentage (50% - 60%) will develop a chronic infection even years later which may ultimately lead to cirrhosis or cancer of the liver.

~ There is no vaccination for the prevention of HCV.

~ Using Universal Precautions is your best prevention of disease transmission.

Human Immunodeficiency Virus – HIV

~ HIV is the virus that causes acquired immune deficiency syndrome AIDS.

~ HIV is transmitted by unprotected penetrative sex with someone who is infected, injection or transfusion of contaminated blood or blood products, sharing unsterilized injection equipment that has previously been used by someone who is infected and from a mother who is infected to her baby.

~ The HIV virus is very fragile and will not survive very long (seconds to minutes) outside the body.

~ Since it is so fragile the concern is exposure to fresh blood.

~ Symptoms of initial infection are flu-like, with fever, weakness, sore throat, headache, nausea and diarrhea. Eventually the individual develops swollen glands.

~ Diagnosis is made by specific blood tests.

~ There is no vaccination for the prevention of HIV.

~ Using Universal Precautions is your best prevention of disease transmission.

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How To Protect Yourself

Protective Measures

Always wear personal protective equipment (e.g. gloves, eye protection) when there is potential for exposure to blood or body fluids. This is proven to be the single most effective precaution to avoid exposure.

GLOVES

Always wear gloves when there is the potential for exposure to blood and body fluids. If you have sores or cuts on your hands, cover them with bandages as additional protection before putting on gloves. Make sure you wash your hands before putting gloves on and after using. Remove and replace gloves if they become torn or punctured.

To safely remove used gloves:

1. Pinch the palm of the first glove and pull toward the fingertips and off the hand.
2. Continue to hold the first glove while removing the second glove. Place fingertip of the first hand between the skin of the wrist and the glove. Pull second glove toward the fingertips, turning the glove inside out. The first glove will be inside the second glove.
3. Dispose of gloves. Wash your hands.

GOGGLES

Protect your eyes with safety goggles if there is a risk of exposure to blood or body fluids during the course of your work. Oral suctioning may be an example of when goggles would be a good protective measure.

FACE SHIELDS

A face shield may be worn to provide protection against splashing to the nose and mouth.

Hand Washing

Hand washing is one of the simplest and effective practices to prevent the transmission of bloodborne pathogens.

Wash hands and other exposed skin thoroughly:

~ Immediately after being contaminated

~ After removing gloves

~ Before leaving the work environment.

Proper hand washing technique:

1. Using warm water, wet your hands and apply soap.
2. Rub soapy hands together for about 20 seconds.
3. Rinse hands thoroughly.
4. Turn water off with a paper towel.
5. Dry hands with a clean paper towel.

Needles and Sharps

Needle sticks are the most common way for infection with bloodborne pathogens to occur on the job. To prevent injury with needles and other sharps, never recap needles and always dispose needles and sharps in an appropriate sharps container.

To safely dispose of needles in the home, the Lincoln Lancaster County Health Departme*nt recommends:*

~ Place used needles and syringes in a heavy plastic bottle or metal can with a lid. An empty laundry soap bottle or coffee can works well.

~ Fill the bottle or can two-thirds full.

~ Put the lid on and seal with masking or duct tape.

~ Label the bottle or can "bio-hazard waste".

~ Put the bottle or can in the trash.

Decontamination

All surfaces and equipment that comes in contact with blood or body fluids must be decontaminated as soon as possible. Decontamination can be done by cleaning the surface with a mixture of 1:10 bleach to water (1 Tablespoon bleach to 1 quart of water).

When cleaning up blood or blood products:

~ Wear gloves and goggles if appropriate.

~ Lay paper towel on the spill to absorb as much as possible.

~ Clean with disinfectant (bleach/water mixture) wiping from outer edge inward. Remember to wipe from clean to dirty

~ Allow disinfectant to stay in place for 20 minutes.

~ Place in trash bag and then place inside a second trash bag and dispose in regular trash.

~ Reapply disinfectant with a clean paper towel for a final cleaning.

~ Remove gloves and wash your hands.

Contaminated Clothing

Personal clothing that becomes contaminated with blood should be removed as quickly as possible to avoid it seeping through and coming in contact with the skin. The contaminated clothes should be placed in a plastic bag until it can be taken care of. Machine washing with hot water and detergent is sufficient to clean. Bleach may be added as an additional disinfectant measure.

If in the course of your job you are exposed to blood or body fluids via the eye, mouth, mucous membrane or an open area on the skin, please contact your supervisor so the appropriate steps can be taken.

To protect yourself:

~ Get the hepatitis B vaccination.

~ Treat all human blood and body fluids as if it is infected.

~ Follow the principles of Universal Precautions.

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SOURCES:

Centers for Disease Control and Prevention
www.cdc.gov/ncidod/dhqp/bp_universalprecautions.html

James Madison University
www.jmu.edu/bbp/indez.shtml

Region V Services' Blood Borne Pathogen Program

Lincoln Lancaster Health Department