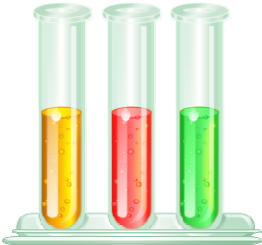


## Bloodborne Pathogens



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## Bloodborne Pathogens

OSHA defines bloodborne pathogens as microorganisms in:

- Human blood, blood products, or blood components.
- Saliva, semen, vaginal secretions, cerebrospinal, synovial, pleural, pericardial, peritoneal and amniotic fluids.
- Body fluids visibly contaminated with blood.
- Unfixed human tissue or organs.
- HIV-containing cell or tissue cultures; and HIV or Hepatitis B-containing culture mediums or other solutions.

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## Bloodborne Pathogens

The most common of the bloodborne pathogens are:

- Hepatitis B (HBV)
- Hepatitis C (HCV)
- Human Immunodeficiency Virus (HIV)

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### Bloodborne Pathogens

An 'Exposure' is contact with blood or fluids that have the potential to be infectious.

The following are the various ways a person might become exposed to a pathogen:

- Needle stick
- Broken or non-intact skin\*
- Mucous membranes of the nose, mouth or eyes
- Saliva injected through a human bite
- Unprotected sexual contact

\*non-intact skin is skin that is chapped, abraded, weeping or has rashes or eruptions.




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### Bloodborne Pathogens

Universal precautions are defined as treating all blood and bodily fluids as potentially infectious.




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### Bloodborne Pathogens

How are HBV and HIV similar? Different?

Mode of Transmission	HBV	HIV
Blood	Yes	Yes
Semen	Yes	Yes
Vaginal Secretions	Yes	Yes
Saliva (from a bite)	Yes	No
Target in the Body	Liver	Immune System
Risk of Infection After needlestick to infected blood	6% to 30%	0.5%
High Number of Viruses in Blood	Yes	No
Vaccine Available	Yes	No




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### Bloodborne Pathogens

Summary of the clinical and epidemiological features of viral hepatitis agents.

Features	Hepatitis A	Hepatitis B	Hepatitis C	Hepatitis D	Hepatitis E
<b>Incubation Period</b>	2-6 weeks	8-24 weeks	2-52 weeks	3-13 weeks	3-6 weeks
<b>Onset</b>	Abrupt	Insidious	Insidious	Abrupt	Abrupt
<b>Symptoms</b>					
Jaundice	Children: 10%	25%	25%	Varies	Unknown
Asymptomatic Patients	Adults: 70-80%	Most Children	About 75%	Rare	Rare
	Most Children	Adults: 50%			
<b>Routes of Transmission</b>					
Fecal/oral	Yes	No	No	No	Yes
Parenteral	Rare	Yes	Yes	Yes	No
Sexual	No	Yes	Possible	Yes	No
Perinatal	No	Yes	Possible	Possible	No
Water/food	Yes	No	No	No	Yes
<b>Chronic State</b>	No	Adults: 6-10%	50%	10-15%	No
		Children: 25-50%			
		Infants: 70-90%			
<b>Case-Fatality Rate</b>	0.6%	1.4%	1-2%	30%	1-2%
					Pregnant Women: 20%

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### Bloodborne Pathogens

- HIV cannot live in a dry environment for more than a few seconds.
- HBV can live in a dry environment for at least seven days.
- Once a virus is dead - - it's dead.

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### Bloodborne Pathogens

OSHA requires employers to determine which employees may incur occupational exposure to blood or other potentially infectious materials.

- Category I- High Risk – An employee who performs procedures/tasks with potential for mucous membrane/skin contact with blood, body fluids or tissues.
- Category II- Moderate Risk - An employee whose normal work routine involves no exposure to blood, body fluids or tissues, but potential exposure may be required as a condition of employment. (handling and preparing blood tubes for mailing)
- Category III- Low Risk - An employee whose normal work routine involves no exposure to blood, body fluids or tissues.

The following are the Johnson County Health Department job classifications and the corresponding exposure categories:

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### Bloodborne Pathogens

Who needs bloodborne pathogen training?

All new employees and current employees of Johnson County Health Department who are at risk of an occupational exposure to bloodborne pathogens. Training sessions will be held within 10 days of initial hire and annually thereafter.

Who is offered the Hepatitis B vaccine?

All Johnson County Health Department employees in Risk Category I or II are offered the Hepatitis B vaccine at no cost, within 10 working days of initial assignment. Employees who decline the Hepatitis B vaccine will sign a waiver. Employees may choose to be vaccinated at any time by contacting the immediate supervisor .

The vaccine is a series of three shots administered at initial, one month and six month intervals.



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### Bloodborne Pathogens Personal Protective Equipment

**PPE includes:**

- Gloves
- Masks
- Eyewear
- Gowns
- Shoes
- Pocket mouth-to-mouth resuscitation masks

PPE should be worn if the chance of exposure to blood or possibly infectious body fluids is high.

Universal Precautions will be observed at all sites. All blood or potentially infectious materials will be considered infectious.



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### Bloodborne Pathogens-Personal Protective Equipment

**Glove Information:**

- Disposable gloves protect against blood and fluids.
- Heavy gloves protect against sharp objects.
- Change if torn or soiled.
- Change between handling different people.
- Gloves are not required at JCHD when giving injections. They are available for use if desired.

\*Note- Employers are required to provide latex-free gloves for employees who are allergic to latex.



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 **Bloodborne Pathogens**

**Personal Protective Equipment**

Mask, Eyewear, Gown and Shoe Information:

- Not needed unless blood or potentially infectious fluids are present.
- Masks and eyewear are worn together if you anticipate splashes.
- Gowns or lab coats are worn to avoid soaking clothes.
- Close-toed shoes are worn at all clinic sites.

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**Bloodborne Pathogens-Engineering/Work Practice Controls**

**Labeling Requirements**

Labels must be affixed to:

- Containers of regulated waste.
- Refrigerators and freezers containing blood or other potentially infectious materials.
- Containers used to store or transport other potentially infectious materials.
- Labels should be fluorescent orange or orange-red, with lettering and symbols in a contrasting color.

Example  
Photo Courtesy of OSHA



Labels are not required:

- On red bags or containers that are used for regulated waste.
- Regulated waste that has been decontaminated.

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**Bloodborne Pathogens-Engineering/Work Practice Controls**

**Handwashing:**

- Wash before and after each patient contact, after glove removal and after contact with potentially infectious object or equipment.
- Use a utility or restroom sink for hand washing, not one in the food preparation area.
- Use an alcohol based hand sanitizer or appropriate antiseptic wipes as a temporary measure until hand washing facilities are available.
- Wash hands with soap and warm, running water for 20 seconds, including, back of hands – wrists - between fingers - under fingernails. Rinse and dry your hands well. Use towel to turn off water faucet.

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### Bloodborne Pathogens-Exposure Incident Procedures

**Exposure procedure:**

Any employee who sustains an exposure shall

1. Notify their supervisor immediately and follow the guidelines as specified by Risk Management.
2. The employee and supervisor shall complete the appropriate forms and send them to the Division Director.
3. Employee shall be treated at the current facility designated by Risk Management.
4. All written records received from the health care professional at the treating facility office will be shared with the employee and copies maintained in Risk Management files.
5. The original forms will be sent to the County's Risk Management office.

\*Note-the source's right to confidentiality shall be adhered to at all times and in all cases.

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### Bloodborne Pathogens

How soon after exposure to HIV should a person get tested?

- ASAP to establish a baseline
- Then 6 weeks after
- At 12 weeks after
- At 6 months after



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### Bloodborne Pathogens-Housekeeping

Clinic housekeeping regulations:

Proper cleaning involves two steps:

1. Washing-the physical removal of visible surface debris.
2. Disinfecting- the use of chemicals to kill infectious pathogens and reduce the possibility of cross-contamination. Disinfecting cannot be accomplished unless washing has occurred.

•Gloves should be worn for all cleaning/disinfecting procedures.

•Counter tops in all Clinic areas will be cleaned daily (and when contaminated) with a freshly made 1:10 bleach solution or a commercial cleaning product.

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### Bloodborne Pathogens-Housekeeping

**Clinic housekeeping regulations (continued):**

- Exam rooms, tables and counter tops will be wiped down weekly.
- Contaminated reusable instruments must be placed in puncture-resistant, leak-proof containers that have a biohazard label, until properly reprocessed.
- Speculums/instruments that require sterilization or disinfection should be thoroughly cleaned before being exposed to germicide, and the manufacturers instruction for use of germicide should be followed.



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### Bloodborne Pathogens-Housekeeping

Procedure for cleaning and decontaminating blood and blood-contaminated fluid spills:

1. Put on gloves. If splashing is anticipated, protective face wear should be worn along with an impervious gown or apron. Wear impervious shoe covers if the amount of blood is great.
2. Wipe-up visible material with disposable towels. (Avoid direct contact with blood.) Put soiled towels in a biohazard bag.
3. Decontaminate area with an appropriate germicide, an approved EPA-approved germicide or a 1:10 solution of household bleach. Leave bleach solution covering area for 15 minutes.
4. Gloves should be worn to remove contaminated shoe coverings. The gloves and shoe coverings should be disposed of in a leak-proof biohazard plastic bag.
5. Hands should be washed following removal of gloves.



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### Bloodborne Pathogens

#### Bloodborne Pathogens Standard Requirements

- Require that hands be washed after each patient contact, after glove removal and after contact with any potentially infectious equipment.
- Needles shall not be recapped, purposely bent or broken by hand, removed from disposable syringes or otherwise manipulated by hand.
- Sharp containers, which are liquid tight and puncture-resistant, shall be available and used to discard needles, broken glass, scalpels and other contaminated sharp objects.
- Mouth pipetting must not be done.
- Scrubs, laboratory coats and clinical jackets are to be worn in all clinics (on & off site). Before leaving the building, lab or while eating, lab coats must be removed.



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## Bloodborne Pathogens

### Bloodborne Pathogens Standard Requirements

•Gloves must be worn whenever performing any vascular access procedure, and when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious material, mucous membranes or non-intact skin.

•Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

•Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on counter tops or bench tops where blood or other potentially infectious materials are present.



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## Topics Covered:

- ✓ Fire Emergency Response Plan
- ✓ Bomb Threats
- ✓ Severe Weather Emergency Response Plan
- ✓ Home and Community Safety
- ✓ Workplace Violence
- ✓ Hazards
- ✓ Electrical Safety
- ✓ Bloodborne Pathogens



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## Thank You

### The training is now complete!



Revised December 2011



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