

# BLOODBORNE PATHOGENS



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**Non-Healthcare Responders**



# BLOODBORNE PATHOGENS

## OSHA Standard (29 CFR 1910.1030)

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- Provides requirements to employer
- Requires identifying at-risk employees
- Requires training for at-risk employees
- Requires retraining annually
- Requires Hep B Virus vaccination opportunity



# BLOODBORNE PATHOGENS

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- Bloodborne: carried by and lives in human blood (or other body fluids or substances)
- Pathogen: A micro-organism (virus, fungus, or bacteria) that can cause disease



# TYPES OF PATHOGENS

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- Virus: parasitic microscopic protein material (DNA or RNA)
- Bacteria: one-celled living organism
- Fungi: single and multi-celled plants
- Yeast: one celled, oval shaped fungus
- Mold: fungi

# ILLNESSES PATHOGENS

## CAUSE

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- Virus: Measles, Colds, Mumps, Influenza, Polio, Hepatitis A, B, & C, AIDS, Measles, Herpes
- Bacteria: Pneumonia, Tuberculosis, Typhoid, Tetanus
- Yeasts & Molds: Meningitis, Asthma, Allergies

# HOW PATHOGENS ENTER THE BODY



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- Ingestion
- Punctures, cuts, abrasions and other and non-intact skin
- Mucous membranes
  - Mouth, nose, and eyes
  - Sexual contact



# HEPATITIS A VIRUS

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- Acquired primarily through the fecal-oral route - NOT A BLOODBORNE PATHOGEN
- The “restaurant” kind of hepatitis
- Causes an infection of the liver



# HEPATITIS A VIRUS

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- Can be stable for up to 18 months
- Heating foods above 180° F. for 1 minute will kill
- Good hygiene (washing hands) can prevent infection
- A 1:10 solution of household bleach is a good and inexpensive disinfectant





# SYMPTOMS OF Hep A Virus

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- Flu-like, fatigue, appetite loss
- Colon ulcers and inflammation
- Lung disease, anemia increase
- Jaundice, liver problems
- Fever, acne, and joint pain



# HEPATITIS B VIRUS

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- Very contagious, dangerous infection
- 100 times more contagious than HIV (human immunodeficiency virus)
- This is a Bloodborne Pathogen



# HEPATITIS B VIRUS

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- Contracted from contact with blood, blood products, and other body substances
- Some people are carriers and never get sick, but can infect others



# HEPATITIS B VIRUS

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- Affects different individuals differently
- No cure, but there are preventive vaccines
- Cannot be identified from other forms without testing



# HEPATITIS C VIRUS

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- A viral infection of the liver
- Spread by contact with blood (or other potentially infectious materials) of an infected person
- Current risk rate is 1:10,000
- This is a bloodborne pathogen



# HEPATITIS C VIRUS

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- Once contracted, over 70% cases become chronic
- Cannot be identified from other forms of hepatitis without testing
- Some limited Vaccine available



# SYMPTOMS OF HCV

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- Flu-like, fatigue, appetite loss
- Colon ulcers & inflammation
- Lung disease, anemia increase
- Jaundice, liver problems
- Fever, acne, and joint pain



# HUMAN IMMUNODEFICIENCY VIRUS (HIV)

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- Spread by exchange of human blood, human blood products, or other potentially infectious materials (OPIM)
- Attacks the body's immune system
- May take years to show positive signs





# HUMAN IMMUNODEFICIENCY VIRUS (HIV)

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- Usually develops into AIDS
- AIDS never kills
- Death is caused by other infections
- Far less contagious than HBV



# PREVENTION TECHNIQUES

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- Universal precautions or body substance isolation
- Hepatitis B vaccine
- Engineering controls
- Work practice controls
- Personal protective equipment

# UNIVERSAL PRECAUTIONS

- Treat all human blood and other potentially infectious materials (OPIM) as a possible source of contamination and infection





# UNIVERSAL PRECAUTIONS BODY FLUIDS

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- Human blood or products made from human blood
- Saliva in dental procedures
- Sexually Transmitted Fluids



# UNIVERSAL PRECAUTIONS

## BODY FLUIDS

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- Fluids surrounding body organs
- Any fluid containing human blood
- Any unidentifiable body fluid



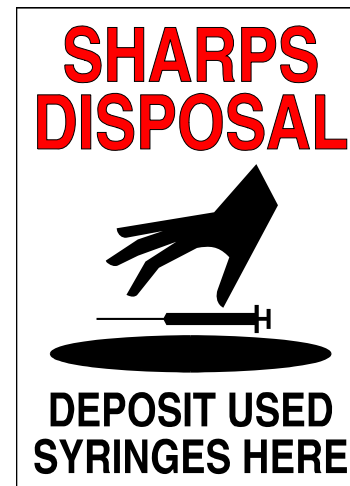
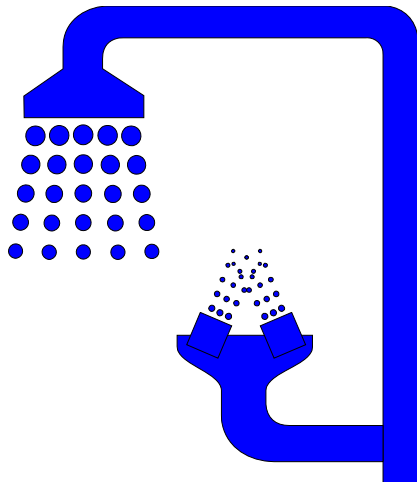
# Hepatitis B VACCINE

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- Employer must always provide at-risk employees with the opportunity
- Employee must take shots or sign a declination form
- Normally three shots given over six months
- 95% effective and few after-effects

# ENGINEERING CONTROLS

- Any physical device or equipment used or installed to prevent occupational hazard exposure, illness, or injury
- Examples: gloves, eye wash stations, sharps containers, broom and dust pan





# WORK PRACTICE CONTROLS

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- No eating, drinking, smoking, applying cosmetics or lip balm, or handling contact lenses where there is a risk of contamination (especially when working in and around sewage"
- Proper and timely handwashing (the single greatest deterrent to any infection)



# PERSONAL PROTECTIVE EQUIPMENT



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- Latex gloves
- Face shields
- Masks
- Goggles
- Rubber coats
- Rubber boots
- CPR micro shield
- Respirators



# POST-EXPOSURE PROCESS

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- Seek Medical Treatment
- Report exposure or suspected exposure to your supervisor
- Utilize OSHA Accident / Incident reporting procedures
- To minimize exposure of others, isolate affected area



# POST-EXPOSURE PROCESS

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- If giving assistance, don appropriate PPE (Safety glasses, gloves, mask)
- Disinfect yourself immediately
- Clean and disinfect accident area
  - 1 part bleach to 10 parts water or 10%
  - Other approved disinfectant agent
- Properly dispose of regulated waste



# REPORT INCIDENT IMMEDIATELY

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- Report how, when, where, who, etc.
- Determine and include the source of blood or fluid if possible
- Describe events in as much detail as possible
- Submit report to your supervisor immediately. If your Supervisor is not available seek the next level of Mgt.



# POST-EXPOSURE MEDICAL CARE

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- If work related, care must be provided by the employer
- Only the victim's medical records pertaining to the incident may be viewed as part of the follow-up
- Written report due to the employer from the health professional within 15 days



# CAUTIONS AND REMINDERS

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- Do not attempt to help beyond skill or expertise
- If the victim is conscious, let them control their own blood flow
- Never touch another persons blood or Fluids