



NationalCPRFoundation™

Standard – Bloodborne Pathogens Certification Course

In this Bloodborne Pathogens Certification Course you'll learn about Pathogens, Viruses, Bacteria and Parasites as well as Prevention, Practices and Universal Cautions.





Introduction

Welcome. If for whatever reason, you don't understand any portion of this course or if you're interested in learning more contact your local infection control agency or your employee health & safety department.

Bloodborne Pathogens and Other Potentially Infectious Materials (OPIM)

The Occupational Safety and Health Administration (OSHA) is a regulatory agency of the U.S. who issues regulations for employees' safety and preparedness.

In this course, you'll learn what Bloodborne Pathogens are, protection from exposure, treatment, risks, and best practices. All employees who handle blood or OPIM's are required by law to take a course in Bloodborne Pathogens and OPIM's.

For an Informational **OSHA** guide, please visit www.osha.gov.





Pathogens

Bloodborne Pathogens:

Hepatitis A, B, C Virus

Human Immunodeficiency Virus (HIV)

Acquired Immunodeficiency Syndrome (AIDS)

Other Disease Pathogens

Transmission: Cuts, abrasions, burns, needle sticks, punctures, rashes, bites and mucous membranes.

Fluids: Semen, pleural fluid, synovial fluid, vaginal fluid, cerebrospinal fluid.

No-Risk Fluids: Vomit, nasal, sweat, tears, saliva, sputum, urine.

Risk Factors: Intravenous drug users, sexual contact, birth, hemodialysis patients, any contact with blood or body fluids.

Hepatitis: Causation through a virus/toxin, liver inflammation (swelling, soreness).

Hepatitis A: Not persistent in blood, a minor form of Hepatitis, caused by RNA virus.

Symptom: Fatigue, nausea, vomit, abdominal pain/discomfort, loss of appetite, fever, dark urine, muscle pain, jaundice.

Treatment: Vaccine

Hepatitis B: Persistent in blood, transmitted through indigestion of blood or body fluids, sexual contact and injection.

Symptoms: Fatigue, nausea, vomit, abdominal pain/discomfort, loss of appetite, fever, dark urine, muscle pain, jaundice, joint pain.

Treatment: Vaccine, transplant

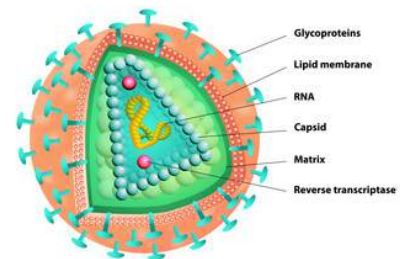
Hepatitis C: Persistent in blood, transmitted through contact with blood, sexual contact, drug use, contaminated needle stick about 1.8%.

Symptoms: Fatigue, nausea, vomit, abdominal pain/discomfort, loss of appetite, fever, dark urine, muscle pain, jaundice, joint pain.

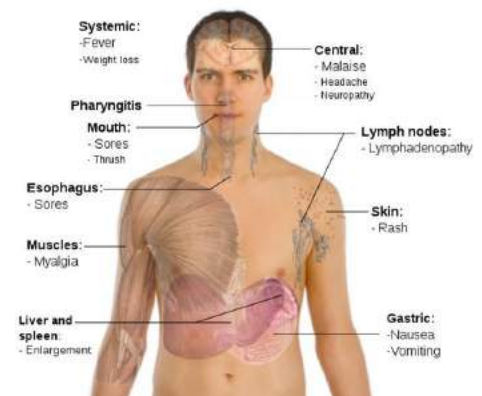
Treatment: No vaccine available



STRUCTURE OF THE HUMAN IMMUNODEFICIENCY VIRUS (HIV)



Main symptoms of Acute HIV infection





Pathogens

Difference between Acute and Chronic

Acute: First-time infected, 15-20% cleared without treatment.

Chronic: Second or more infected, 75-85% will carry virus long-term with 60-70% chronic liver disease, 1-5% death of complications.

Human Immunodeficiency Virus (HIV)

Persistent in blood, semen, vaginal fluids, pre-ejaculation, breast milk, is a free particle virus and within cells, the cause of Acquired Immunodeficiency Syndrome (AIDS) spread through needles, mother-to-infant, sexual contact & drug users.

Symptoms: Fever, headache, sore throat, swollen lymph glands, rash.

Treatment: No vaccine, hormones for women, Hepatitis C drugs, antiviral medicines.

Acquired Immunodeficiency Syndrome (AIDS)

The final stage of HIV, caused by damaged immune system.

Symptoms: Sweating, fatigue, shortness of breath, dry coughing, chronic diarrhea, white lesions on the tongue and in the mouth, headache, and weight loss.

Treatment: No vaccine, hormones for women, Hepatitis C drugs, antiviral medicines.

HIV / AIDS in the US: 16.5 per 100,00 population

HIV / AIDS in the U.S. risk to Health Workers: Less than 100 Health Workers infected

Risk: Needle stick/cut 0.3%





Prevention

OSHA Required Prevention:

[Engineering Controls](#)

[Work Practices](#)

[Personal Protective Equipment \(PPE\)](#)

[Universal Precautions](#)

[Body Substance Isolation \(BSI\)](#)

Engineering Controls

- Labeling of infectious materials (biohazard labeling)
- Cleaning facilities (eye, hands, showers, etc.)
- Containment of infectious materials (containers, refrigerators, freezers, bags, etc.)
- Proper waste control (transportation, etc.)
- Label reusable tools in appropriate storage

Sharp with Engineered Sharps Injury Protections (SESIP)

- Retractable needles
- Retractable finger-prick lancet
- Needleless systems (needle guards, blunted needles, retractable scalpels, etc.)

Proper recapping of needles

- One-handed motion
- Mechanical device

Injury

- Document injury
- Testing—successions
- Safe sexual contact
- Therapy/Counseling
- Stop breastfeeding
- Immediate evaluation of presumed illnesses





Prevention

Work Practices

Personal Protective Equipment (PPE) - dispose in appropriate places and thorough cleaning of hands before/during & after, usage of gloves and all reusable tools. Usage of sharp objects must be adequately disposed of or cleaned. Workstation and environment (must be cleaned regularly) with proper towels, tools, etc. for later use and disposal. Proper usage of instruments to pick up contaminated objects and fluids.

Personal Protective Equipment (PPE)

Used for Prevention of: Bloodborne Pathogens and OPIM's

Protecting: Head, torso, arms, hands, feet, etc...

All PPE - properly dispose of after usage of such equipment, in proper disposal units.

Equipment: gloves, aprons, gowns, face protectors, masks, safety eye glasses, coats, linen.

Bleach solutions usage:

For medical equipment 1:10

For work stations 1:100

Universal Precautions

All blood and other body fluids are to be considered infected besides Vomit, nasal, sweat, tears, saliva, sputum, urine

Body Substance Isolation (BSI)

BSI practices are used to lessen the chances of transmissions of any disease or infection. When dealing/working with Bloodborne Pathogens and other OPIM's all OSHA's guidelines should be followed. These guidelines are for the protection of all workers and bystanders who come in contact with any Bloodborne Pathogens and OPIM's.

For more information regarding OSHA's guidelines, please visit www.osha.gov





Review

Bloodborne Pathogens

Viruses, Bacteria, Parasites

Pathogens:

- Hepatitis A, B, C Virus
- Human Immunodeficiency Virus (HIV)
- Other disease pathogens
- Acquired Immunodeficiency Syndrome (AIDS)
AIDS is the final stage of HIV, caused by damage to the immune system.

Difference between Acute and Chronic

Acute: First time infected.

Chronic: Second time infected, or more.

OSHA required Prevention:

- Engineering Controls
- Work Practices
- Personal Protective Equipment (PPE)
- Universal Precautions
- Body Substance Isolation (BSI)

Engineering Controls

- Labeling of Infectious materials, cleaning, disposing of, documenting, containment.

Sharp with Engineered Sharps Injury Protections (SESIP)

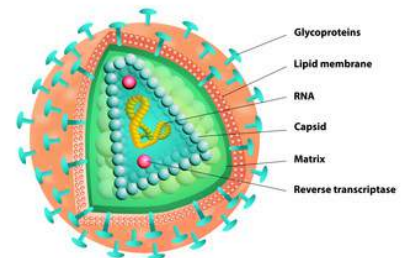
- Retractable needles, retractable finger-prick, needleless systems.

Proper recapping of needles

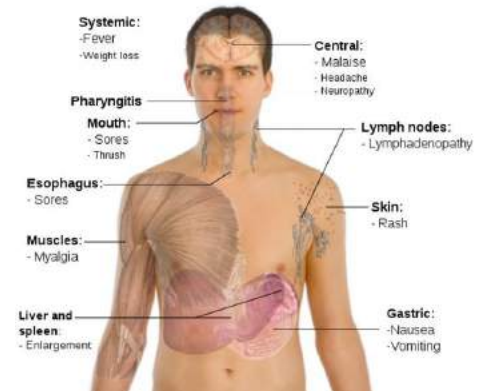
- One-handed motion
- Mechanical device



STRUCTURE OF THE HUMAN IMMUNODEFICIENCY VIRUS (HIV)



Main symptoms of Acute HIV infection





Review

Injury

- Document injury
- Testing—successions
- Safe sexual contact
- Therapy/Counseling
- Stop breastfeeding
- Immediate evaluation of presumed illnesses

Work Practices

- Proper usage of tools
- Workstation and environment
- Personal Protective Equipment

Personal Protective Equipment (PPE)

- Equipment used for prevention of Bloodborne Pathogens and OPIM's.

Universal Precautions

Consider all blood and other body fluids infected besides:

- Vomit, Nasal Fluids, Sweat, Tears, Saliva, Sputum, Urine

Body Substance Isolation (BSI)

BSI practices are used to lessen the chances of transmissions of any disease or infection. Suspect all fluids as having an infectious disease.

Congratulations! You've just finished the Course. Now you can take the Exam.





NationalCPRFoundation™

TAKE EXAM ONLINE →

www.nationalcprfoundation.com