



# ANNUAL OSHA TRAINING

BLOODBORNE PATHOGENS  
AND  
UNIVERSAL PRECAUTIONS

# OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

## Bloodborne Pathogen Standard:

Anyone whose job requires exposure to bloodborne pathogens is required to complete annual training

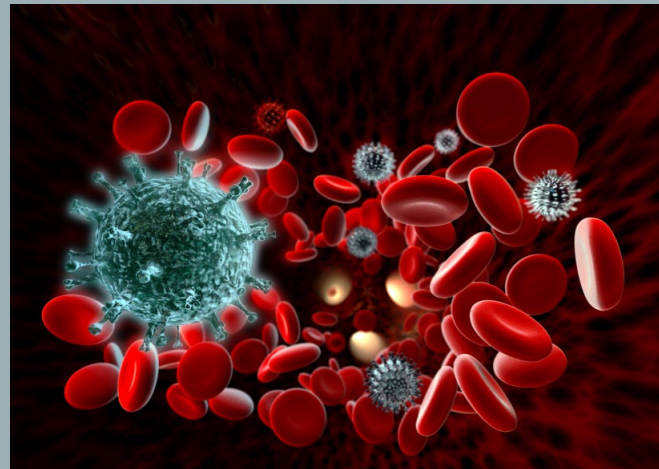


# OBJECTIVES FOR TRAINING

- ❖ What is a bloodborne pathogen?
- ❖ Understanding Major Bloodborne Illnesses (Hepatitis and HIV)
- ❖ How do these organisms enter the body?
- ❖ What you can do to reduce your risk of exposure in the workplace?
- ❖ What are “Universal Precautions”?
- ❖ Types of Personal Protective Equipment (P.P.E.)
- ❖ Engineering controls and preventing needlestick injury
- ❖ What to do if an exposure occurs

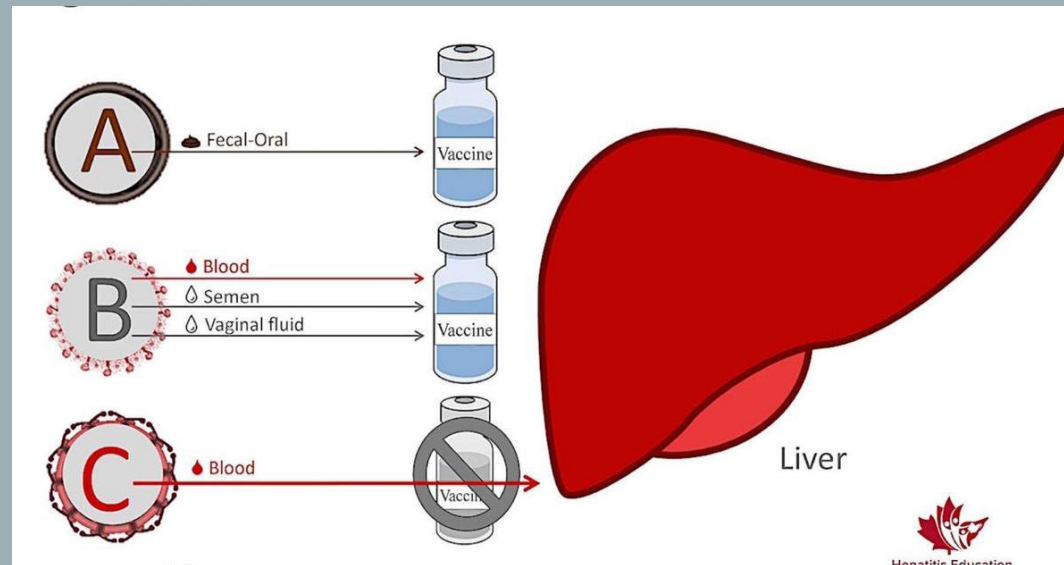
# WHAT ARE BLOODBORNE PATHOGENS?

- ❖ Viruses or bacteria found in blood that can transmit disease
- ❖ The bloodborne diseases of most concern to healthcare workers are Hepatitis and HIV



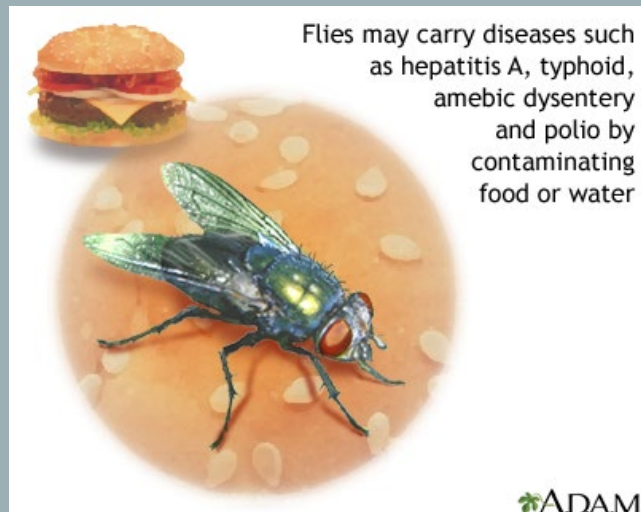
# HEPATITIS : MORE THAN ONE VIRUS

- ❖ Hepatitis is an “inflammation of the liver”
- ❖ May be caused by a virus or by damage to liver tissue by chemicals or toxins
- ❖ Viral forms are classified by letters A through G, with the most common types being Hepatitis A, B and C



# FOOD-BORNE HEPATITIS HEPATITIS **A**

- ❖ Some viruses causing hepatitis are transmitted via the “fecal-oral” route
- ❖ Viruses are found in stool, and the disease is spread when fecal particles of the infected person pass to the mouth of another person. Typically this happens because of inadequate sanitization or poor hygiene.
- ❖ While there is a vaccine to protect us against **Hepatitis A**, handwashing and proper food preparation can also help to prevent the spread of this virus.



# BLOODBORNE HEPATITIS

## HEPATITIS **B** & **C**

- ❖ Virus found in blood and transmitted by contact with contaminated blood and body fluids
- ❖ Bloodborne hepatitis is a serious disease that destroys liver cells and in some cases can result in scarring of the liver (cirrhosis), liver cancer or even liver failure/death.
- ❖ **Hepatitis B** symptoms can occur 1-9 months after exposure. Symptoms include: abdominal pain, dark urine, fever, joint pain, nausea/vomiting and yellowing of the skin and whites of the eyes (jaundice)
- ❖ **Hepatitis C** is the most common bloodborne illness in the United States with more than 3.6 million infections. Symptoms include: easy bruising and bleeding, itchy skin, swelling in the abdomen and legs, dark urine, jaundice, fatigue.

# HOW IS HEPATITIS SPREAD?

## Types of Hepatitis: A-B-C

- **Hepatitis A**

- Transmission: Ingestion of contaminated food or drinks, or fecal matter (microscopic amounts); sexual contact with infected individual

- **Hepatitis B**

- Transmission: Coming in contact with infected fluids: blood, semen, other body fluid- via shared sharps, needles, sexual contact, birth from infected mother

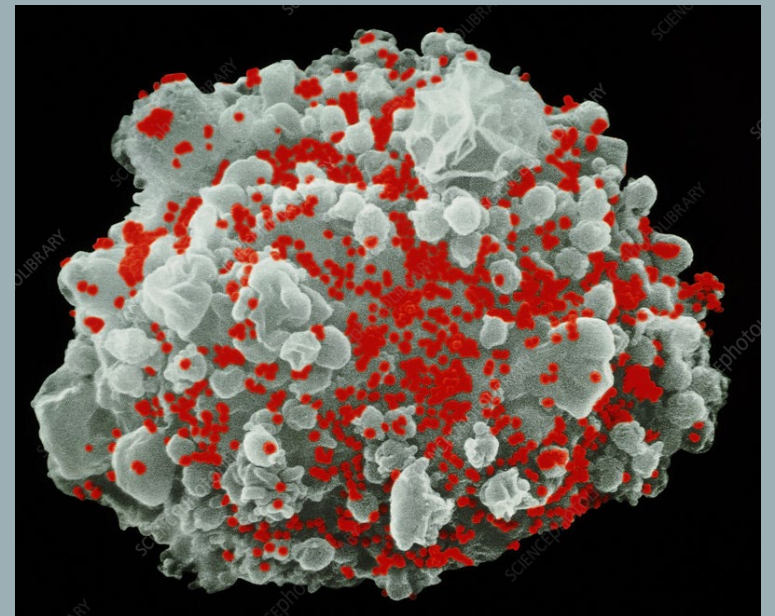
- **Hepatitis C**

- Transmission: Primarily from contact with infected person's blood through contaminated needles/syringes



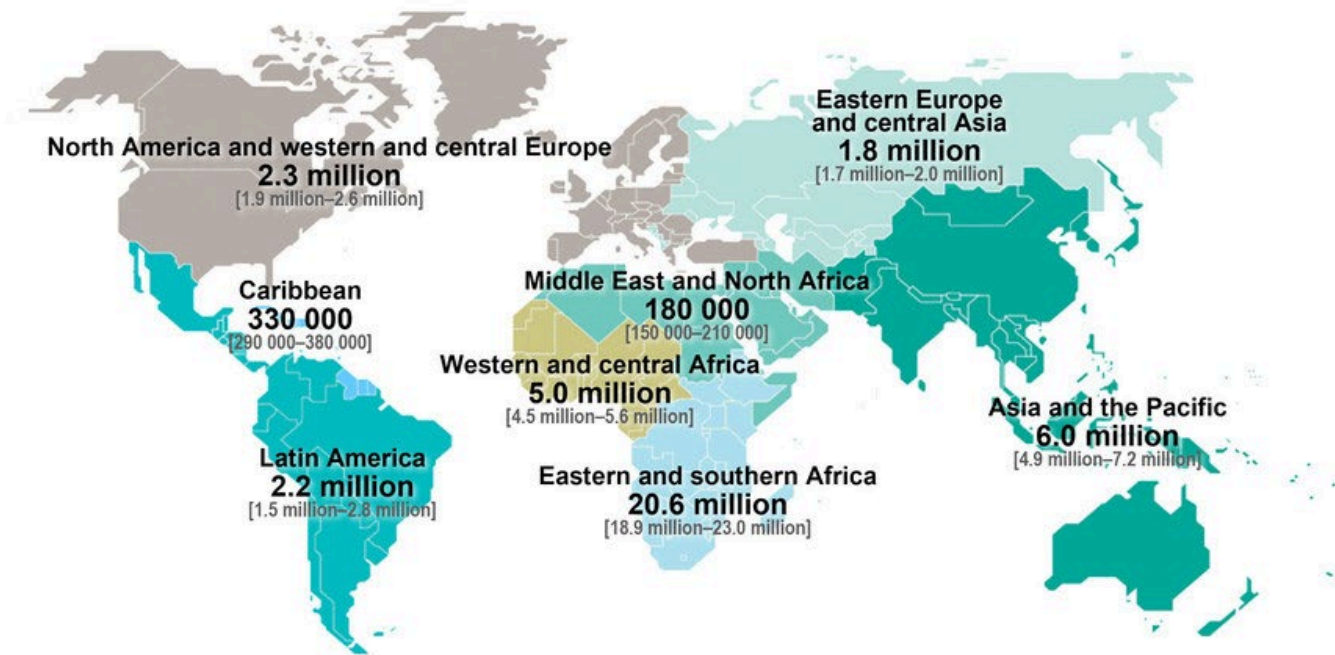
# HUMAN IMMUNODEFICIENCY VIRUS (HIV)

- ❖ HIV is the virus that leads to AIDS
- ❖ HIV attacks the immune system making it harder for the body to fight off infections
- ❖ The virus enters the body through direct contact with:
  - ❖ open sores/wounds,
  - ❖ sexual contact,
  - ❖ contaminated needles/syringes,
  - ❖ mucous membranes (eyes, nose, mouth)



# GLOBAL CASES OF HIV

Adults and children estimated to be living with HIV | 2021



**Total: 38.4 million** [33.9 million–43.8 million]

There are nearly 4,000 new HIV infections every day. The highest rate of infection remains in southern Africa.

Source: <https://news.un.org/en/story/2022/07/1123332>

# HEALTHCARE WORKER RISK

- ❖ Risk of exposure to any bloodborne disease depends on several factors:
  - Type of job you perform
  - Your degree of contact with patients and/or their body fluids
  - The number of patients in your facility likely to have a bloodborne disease
  
- ❖ Potentially Infectious Fluids:
  - Skin Tissue or cell cultures
  - Saliva
  - Vomit
  - Urine
  - Semen or vaginal secretions

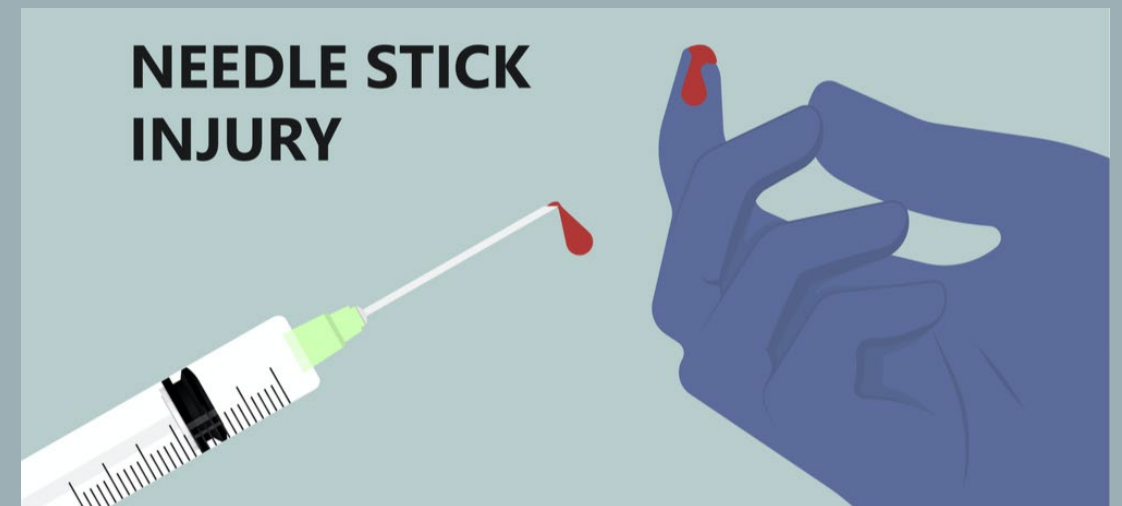
# NEEDLESTICK INJURIES

## Needlesticks:

- ❖ Accidental needlestick injuries occur more than 2 million times each year to healthcare workers around the world.
- ❖ **Needlesticks are the most common transmission of bloodborne pathogens.**

## Other Exposure Potentials include:

- ❖ Administering First Aid,
- ❖ Janitorial or Maintenance work,
- ❖ Post accident clean up
- ❖ Handling waste products



# HOW TO PREVENT NEEDLESTICK INJURIES



Follow a few simple rules to **reduce the risk** of Needlestick Injury:

- ❖ Use safe-needle or needle-free systems whenever available
- ❖ NEVER bend, break or cut needles
- ❖ DO NOT recap needles
- ❖ Consider all needles as potentially contaminated
- ❖ Dispose of needles in proper biohazard sharps container



# SAFE DISPOSAL OF NEEDLES AND WASTE



Needles should be placed in designated **sharps containers**

- Needle/sharp containers must be made of a rigid material
- Should NEVER be left more than 2/3 full
- NEVER reach into a contaminated sharps container

Biohazard waste should also be disposed of in designated red bags or bins. Hazardous waste includes things such as:

- Saturated wound dressings
- Drains, catheters or other contaminated articles
- Body tissue
- Body fluids removed during procedures



# HOW TO PROTECT YOURSELF

- ❖ You can protect yourself from the spread of disease at work by practicing standard **UNIVERSAL PRECAUTIONS**
- ❖ Follow this simple rule: If it is wet and it comes from a patient, protect yourself from contact
- ❖ Universal Precautions include:
  - Handwashing – before and after patient contact
  - Using barriers or personal protective equipment (PPE)
  - Treating all blood and bodily fluids as if they are contaminated
  - Engineering controls and work practices that reduce the risk of exposure-disposal of all contaminated material in the proper manner



# PERSONAL PROTECTIVE EQUIPMENT (PPE)

- ❖ Personal Protective Equipment is used as a barrier to prevent exposure to hazardous or infectious materials.
- ❖ Common types of PPE in the clinic are : gloves, gowns, face shields and face masks





# GLOVES

Wear gloves if:

- ❖ You are performing a task that includes contact with blood or body fluids
- ❖ Cover your own skin breaks-bandage cuts, scrapes or other breaks in your skin before putting on gloves
- ❖ Expect to contact contaminated objects, such as
  - Surgical instruments
  - Removing bandages
  - Sorting or collecting soiled linens, waste, etc.



# GOWNS

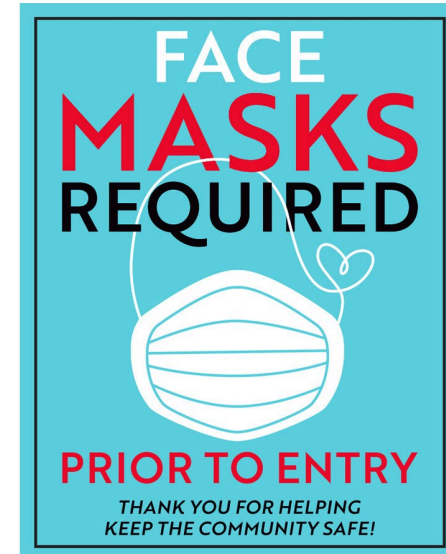
Wear a protective gown if:

- ❖ You are involved in procedures that would expose you to blood, bodily fluids or splashes
- ❖ You are working with large volumes of high-risk fluids



# MASKS AND EYE PROTECTION

- ❖ Of course during COVID, we have all become very familiar with masks to protect us from airborne illnesses.
- ❖ Mask and goggles are also important PPE items in preventing exposure from blood splashing or spraying
- ❖ Use before doing any procedure which might cause the formation of droplets, mist or splashing from body fluids



# HANDWASHING

- ❖ **HANDWASHING** is still the most important tool in preventing the spread of infection
- ❖ Use soap and water when hands are visibly soiled
- ❖ Use an alcohol-based hand rub (ex. Purell) for routine decontamination, except when hands are visibly soiled
- ❖ Do NOT wear artificial nails or nail extenders when caring for high-risk patients



# HOW TO WASH YOUR HANDS



With soap, thoroughly rub the palms of your hand together



Rub each palm over the back of the opposing hand with fingers interlaced



Interlace your hands and rub palm to palm



Interlock your hands and rub the backs of your fingers onto the opposing palm



Grasp your thumb with the opposing palm and rub while rotating



With clasped fingers, rotationally rub each hand onto the opposing palm

Wash your hands for at least 20 seconds.

Avoid using hot water as it can dry and crack your skin.

Sometimes it's helpful to sing a song (i.e., Happy Birthday or Yankee Doodle) to yourself to make sure you're washing for at least 20 seconds.

Use a towel to turn off the water faucet when finished.

Source: <https://www.cdc.gov/handhygiene/providers/index.html>

# PPE RULES TO REMEMBER

- ❖ PPE is your first line of defense against pathogens
- ❖ Always check PPE for defects or tears before use
- ❖ Replace your PPE if it becomes torn or defective
- ❖ Remove PPE before leaving a contaminated area
- ❖ Do not reuse disposable equipment



# EXPOSURE INCIDENT

- ❖ Even when you follow all recommended precautions an unprotected exposure might still occur
- ❖ If you believe you have been exposed to a bloodborne disease
  - Wash the exposed area immediately
  - Flush mucous membranes with copious amounts of water
  - Notify your supervisor immediately
- ❖ You may be referred to the infection control or employee health representative for follow-up



# QUIZ

## Question 1

Hepatitis A, B and C are bloodborne viruses.

True or False?

Answer: False- Hepatitis A is a food-borne virus spread through the “fecal-oral” route.



# QUIZ

## Question 2

Contaminated needlestick injuries pose the greatest risk of exposure to HIV and Hepatitis B for healthcare workers

Answer: True

# QUIZ

## Question 3

Healthcare workers should wash their hands:

- A. After removing gloves
- B. Before eating
- C. Before handling contact lenses
- D. After using the restroom
- E. All of the above

Answer: E. All of the Above

# QUIZ

## Question 4

Both a mask and eye protection should be worn to protect mucous membranes of the eyes, nose and mouth.

True or False?

Answer: True

# QUIZ

## Question 5

Handwashing is the best way to prevent the spread of infection. How long should you wash your hands?

- A. 5 seconds
- B. 10 seconds
- C. 20 seconds
- D. 30 seconds
- E. 2 minutes

Answer: 20 seconds

THANK YOU!



**Protect** yourself.  
**Protect** your family.  
**Protect** the public.

