Reed College Occupational Health and Safety Committee Presents

Your Health

Your Safety

Our Concern

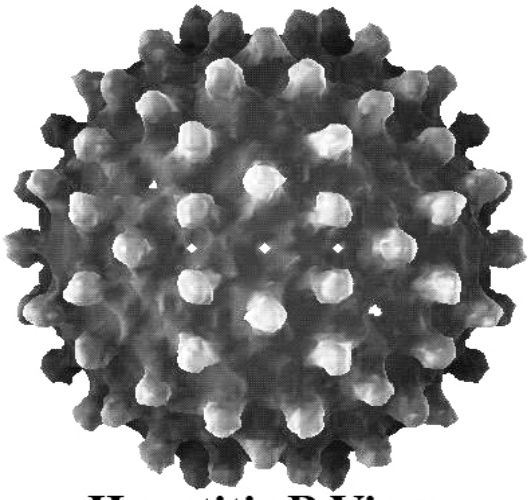
Bloodborne Pathogens

There's nothing like stabbing yourself with a needle or cutting yourself with broken glass to ruin your day - except for maybe getting hepatitis while you're at it. Bloodborne pathogens may be small, but they are huge problems. In this segment, we'll cover the basics on common bloodborne pathogens and how to protect yourself.

Get Out Your Magnifying Glass

Bloodborne pathogens are microscopic organisms found in human blood. Many of these can cause serious or life-threatening diseases and include:

Hepatitis:



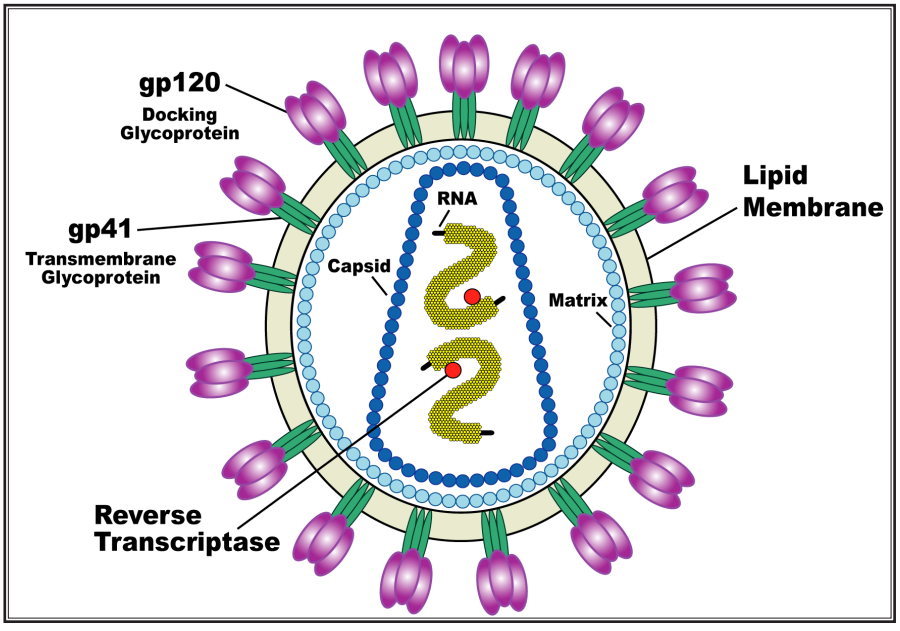
Hepatitis B Virus

- Hepatitis B (HBV): a viral infection usually transferred through blood contact that attacks the liver. The disease causes inflammation, cirrhosis, cancer, and failure of the liver and can survive for days in dried blood. There is no cure, but there is a vaccination that is provided free of charge to employees who may be exposed to the virus.
- Hepatitis C (HCV): similar to HBV, but there is no vaccine currently available. Most people develop a chronic infection that can result in long-term health problems, or even death.

Human Immunodeficiency Virus: HIV

- Human Immunodeficiency Virus (HIV): a viral infection that leads to Acquired Immune Deficiency Syndrome (AIDS), a deadly disease that attacks the immune system and leads to death. There is no known cure.

According to the Occupational Health and Safety Administration (OSHA), few cases of AIDS have been documented from occupational exposure. However, approximately 8,700 health care workers each year contract hepatitis B. About 200 will die as a result. In addition, some who contract HBV will become carriers, passing the disease on to others. Carriers also face a significantly higher risk for other liver ailments which can be fatal, including cirrhosis of the liver and primary liver cancer.

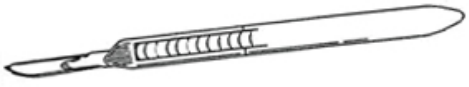


Transmission

Body fluids known to transmit HBV, HCV, and HIV are blood, pre-ejaculate, semen, vaginal secretions, amniotic fluids, body tissues, and clear fluid from the joints, brain, spinal column, heart, ir lung. If you are in a situation where you could be exposed to such fluids, do not eat, drink, apply cosmetics or lip balm, smoke, or handle contact lenses.

There are a variety situations in which you can come in contact with contaminated fluids, such as through sexual contact, sharing hypodermic needles, and when providing first aid or CPR. In the workplace, transmission commonly occurs through:

- Puncture wounds from contaminated needles, scalpels, broken glass, wiring, or other contaminated objects (called "sharps").



- Contact between infected fluids and the unprotected body. Although unbroken skin is a protective barrier, pathogens can still enter through:
  - open sores, blisters, cuts, and abrasions
  - dry/chapped hands, paper cuts, hang nails
  - acne and sunburn on the skin
  - eyes, nose, mouth, and other mucous membranes

Protective Equipment

If you must handle infectious or contaminated objects, wear protective equipment to avoid personal exposure. Use protective equipment such as:

- Aprons
- Face shields/goggles
- Nitrile gloves
- Face mask (if air-borne)

Prevention

Use universal precautions. In other words, treat all blood and other potentially infectious materials as dangerous. This means keeping yourself and your workplace clean. Wash your hands. In addition, take the following precautions:

- Remove and replace protective-wear that is torn, punctured, or has lost its ability to function as a barrier.
- Keep protective clothing readily accessible in case it needs to be replaced.
- Handle sharps as little as possible to minimize possible exposure.

After finishing work with sharps or fluid waste, you must safely dispose of them in a way that prevents others from having exposure to pathogens. Custodians are especially at risk for infection if objects are not disposed of correctly. When you are ready to dispose of sharps or fluid waste:

- Disinfect the object or fluid first using a freshly made 10% solution of household bleach.
- Use forceps, a broom and dust pan, or pliers to move needles. Do not bend, break, or recap sharps. Never reuse sharps
- Place all used sharps in a red container that is sealable, puncture-resistant, leak proof, and labeled as a biohazard.

Never pick up sharps or touch fluid waste that you do not recognize. Call community safety for disposal.

After disposing of sharps and removing protective clothing, be sure to:

- Wash your hands and any exposed skin with antibacterial soap.
- Place used clothing in the appropriate receptacle before leaving the work area.
- Decontaminate work areas promptly.

How Do I Tell if It's Infectious?

You don't. Treat all sharps and other objects contaminated with fluids or dried blood as if they were infectious.

When Accidents Happen

No matter the level of preparedness, accidents happen. When there is an accident involving fluid or sharps contaminated with blood or other fluids:

- Wash exposed skin immediately and thoroughly with soap and water. Be careful not to use abrasive soaps that will open the skin and increase the likelihood of transmission.
- Flush mouth, nose, and eyes for 15 minutes if contaminated fluids were splashed in or near them.
- Report your exposure to your supervisor and seek medical attention immediately.
- If there has been a spill:
  - carefully cover the spill with paper towels or rags
  - gently pour disinfectant solution over the towels or rags and it sit for 10 minutes
  - wear gloves to collect and dispose of waste

SOURCES:

http://www.osha.gov/SLTC/bloodbornepathogens/

http://www.osha-safety-training.net/BBP/BBP.html

http://www.cdc.gov/niosh/topics/bbp/