

Bloodborne Pathogens

Kathleen Stefek, RN, MSN

What are Bloodborne Pathogens?



- Infectious agents carried in the blood and other body fluids that are capable of infecting a host (people like you and me) with the disease

(The Red Book Exposure to Blood on the Job , 1998)

Blood in the School Environment

- The classroom
- The playground
- The playing field
- The school bus



Who Sets the Standards?



- CDC – Center for Disease Control

www.cdc.gov



- OSHA – Occupational Safety & Health Administration

www.osha.gov

Compliance in School Districts

- Conducting training classes
- Maintaining medical & training files
- Implementing Universal Precautions
- Writing an Exposure Control Plan
- Maintaining Hepatitis B vaccination & acceptance or declination forms
- Maintaining a record of exposures & post exposure follow up

(Healthcare wide hazards bloodborne pathogens ,2009).

Pathogens

- Disease causing organisms that are transferred through blood to blood transmission
- Hepatitis B, Hepatitis C and HIV are the most common
- May take many years after exposure to develop symptoms

(The Red Book, 1998).

Why is this important?

- Anybody (including children) can carry this disease without being aware of it
- OSHA has issued standards that protect you from bloodborne pathogens on the job
- “Universal precautions” – term used to treat all body fluids as if they are infected and use gloves and other equipment if there is a risk of exposure to blood or other body fluids

(The Red Book, 1998).

Most Common Bloodborne Diseases

- Hepatitis B
- Hepatitis C – most common
- HIV – the virus that causes AIDS

(The Red Book, 1998).

Hepatitis B

- Viral disease that causes liver disease
- 100 times more contagious than HIV
- Can survive in dried blood for a week
- If stuck with contaminated needle, as high as 30% chance of infection
- Liver disease can be fatal
- Preventable through vaccination!

(The Red Book, 1998).

Symptoms of Hepatitis

- Fatigue
- Loss of appetite
- Nausea
- Vomiting
- Stomach or joint pain
- Jaundice
- Dark Urine
- Light colored stools

(Hepatitis ABC Fact Sheet, 2009).

Hepatitis C

- A serious, possibly fatal, disease caused by a virus that infects and damages the liver
- Most people are initially unaware that they have been infected
- 75-85% develop chronic infection and liver disease
- No cure or vaccine available at this time
- Medications are helpful

(Hepatitis, 2009)

HIV

- Human Immunodeficiency Virus
- Attacks the immune system over time making them susceptible to infection
- Eventually develop AIDS and death occurs from various opportunistic infections or cancers
- No cure or vaccines but there are medications to slow down the progression of the virus

(The Red Book, 1998).

Myths of Transmission

- Cannot be spread by sharing telephones, bathrooms, utensils, water fountains or swimming pools with infected person
- Sweat does not transmit the virus
- Being exposed to saliva (without visible blood) does not transmit these diseases

(The Red Book, 1998).

How are they transmitted?

- Transmitted most easily through DIRECT contact with infected blood
- Can also be spread through semen, vaginal secretions or other bodily fluids containing visible blood

(The Red Book, 1998).

Methods of Transmission

- Unprotected sex with an infected person
- Sharing of needles (ie. drug abusers)
- Infected mother to unborn child
- Receiving a blood transfusion prior to 1982
- Broken skin or mucous membranes come in contact with infected blood or bodily fluid with visible blood
- Accidental injury with an infected sharp object (pierces the skin)

(The Red Book, 1998).

PREVENTION

- Universal Precautions – Treat all blood and bodily fluids with blood as if they were contaminated
- Use of Personal Protection Equipment-
(i.e. gloves) when you anticipate touching blood, bodily fluids or contaminated surfaces
 - Wash Hands – and other skin exposed surfaces after contact with blood or bodily fluids

(Healthcare wide hazards bloodborne pathogens, 2009)

Prevention is Key

- Get the hepatitis B vaccination
- Do not share needles
- Use condoms during sex
- If getting a tattoo or body piercing, make sure staff wears gloves and cleans instruments properly
- Do not share toothbrushes or razors

(The Red Book, 1998).

Handling First Aid Situations

- Use Universal Precautions for all first aid emergencies
- All staff should have quick access to gloves and a barrier
- Micro shield should be available for use during CPR
- Allow victim to treat himself with barrier, if appropriate

(The Red Book, 1998).



- Victim should go to the nurse or the nurse is notified to come to the victim
- Notify custodian for appropriate clean-up/disinfectant (10:1 water to bleach solution or other EPA approved disinfectant)
- Discard all contaminated clothing, equipment in a plastic bag while wearing gloves.

(The Red Book, 1998).

EXPOSURE?!

- From injuries, bites, sharps, body fluids
- Thoroughly wash affected area with soap and warm water, flush eyes generously with warm if part of the exposure
- Report exposure to nurse as soon as possible
- Follow district policy so that you can receive treatment and minimize risk of infection

(The Red Book, 1998).



Post-exposure Prophylaxis

- This is recommended based on the type of exposure, amount of bodily fluid involved, etc.
- If advised, prophylaxis should be started as soon as possible after exposure (preferably within hours)

(The Red Book, 1998).

Remember

- Know your risks and how to protect yourself
- Most school employees have little risk for exposure
- Most exposures do not result in infection
- Washing hands is the best prevention

(The Red Book, 1998).



References:

The red book exposure to blood on the job:What school employees need to know. (1998). Retrieved on April 2, 2009 from The National Education Association website, <http://www.neahin.org/programs/reproductive/path>

Hepatitis ABC Fact Sheet (2009). Retrieved April 9, 2009 from The Center for Disease Control website, <http://www.cdc.gov/hepatitis/HBV/ProfResourcesB.htm#section1>

Healthcare wide hazards bloodborne pathogens (2009). Retrieved April 10, 2009 from the US Department of Labor Occupational and Safety Health Administration website, <http://www.osha.gov/SLTC/etools/hospital/hazards/bbp/bbp.html#Up precautions>