

Safety Tips from the WorkSafe People

Blood Borne Pathogens Training

HIV/AIDS

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Determining Exposure

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HIV/AIDS

Definition: AIDS stands for Acquired Immune Deficiency Syndrome. AIDS is a life-threatening condition that makes a person's body unable to fight off disease.

AIDS diagnosis-existence of any of 23 diseases in a person who tests positive for HIV (Human Immunodeficiency Virus), expanded definition as of January 1, 1993, includes tuberculosis and recurring pneumonia, symptoms often seen in drug abusers, and invasive cervical cancer. The Center for Disease Control and Prevention has also included any HIV positive patients with a CD4 T-Lymphocyte cell count of 200 or fewer cells per cubic millimeter of blood or lower (health immune systems have CD4 counts in the range of 800 to 1,200).

The new symptoms are thought to be more common in women and injecting drug users, two groups increasingly affected by the epidemic.

Causative Agent: AIDS is caused by a virus called HIV, which attacks a person's immune system. The immune system fights off disease, but HIV damages the ability to fight disease, people become ill and die. The entire process is now being referred to as HIV disease.

Modes of Transmission: The virus can be spread by:

- Oral, anal or vaginal sex with an infected person
- Sharing contaminated needles (works) for injecting drugs, steroids, or vitamins; or for tattooing or ear piercing.
- Receiving contaminated blood or blood products.
- Infected mothers who may pass the virus to their babies during pregnancy or birth, or through breast milk.

Signs/Symptoms: Symptoms may include:

- Extreme tiredness, loss of energy
- Rapid, extreme weight loss greater than 10% of body weight.
- Fever: Low grade, persistent; or high grade, hard to break, night sweats
- Continuing bouts of diarrhea
- Swollen glands in the neck, armpits or groin
- Dry cough or wheezing
- Thrush: A thick whitish coating on the tongue or in the throat
- Headaches or unexplained pain
- Purple or discolored growths on the skin or mucous membranes (inside the mouth, nose or anus)
- Unexplained bleeding

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- Bruising more easily than usual
- Progressive shortness of breath
- Neurological (nervous system) changes

These symptoms may also occur with other diseases, so they don't necessarily mean that a person is infected with HIV or has AIDS. But anyone with these symptoms should see a doctor to rule out HIV/AIDS.

Incidence: The World Health Organization estimates there are currently 12 million people in the world who are HIV positive. In the U.S. there are 1.2 million infected with the disease.

Methods of Control:

- Universal precautions
- Sexual abstinence
- Safer sex practices — using latex condoms with Nonoxynol-9, activities which provide sexual pleasure without intercourse
- Don't use drugs or share IV drug needles
- Good communications between partners and respect for your health and safety

Hepatitis B Infection

Definition: Hepatitis B disease is an inflammation of the liver caused by the Hepatitis B virus (HBV). The term "viral hepatitis" is often used to describe Hepatitis B and other similar diseases which affect the liver.

Causative Agent: Hepatitis B Virus (HBV). It is one of five viruses that cause illness directly affecting the liver.

Modes of Transmission: Exposure of mucous membrane to blood or blood products, saliva, semen and vaginal fluids.

- Exposure to semen or vaginal secretions (vaginal, anal or oral sexual activities).
- Exposure to blood or blood products, intravenous drug use, intramuscular drug use (i.e. steroids) accidental needle stick injury, trauma splash, tattooing and ear piercing equipment; sharing of toothbrushes or razors.
- Childbirth: mother to infant during pregnancy or the birth process.

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Signs/Symptoms: An individual may not have any symptoms or they may experience any one or all of the following:

- Fatigue
- Loss of appetite
- General body aches
- Nausea/vomiting
- Abdominal tenderness or pain
- Jaundice
- Changes in color of bodily waste

Incidence: Worldwide, HBV infection is a major cause of hepatitis, cirrhosis and cancer of the liver. In the United States, 300,000 individuals are infected per year, primarily young adults. Out of the 8,700 health care workers who contact Hepatitis B each year, 200 will die. There are 1–1.25 million cases of chronic Hepatitis B in the United States. These individuals are potentially infectious to others.

Methods of Control:

- Use universal precautions
- Obtain immunization with Hepatitis B Vaccine
- Avoid potential high risk behaviors related to:
 - Sexual behaviors
 - Needle usage
 - Exposure to bodily fluids

Hepatitis B is a potentially fatal but PREVENTABLE disease. Consider receiving the Hepatitis B vaccine.

Hepatitis B Vaccine Information

The Disease: Hepatitis B is a viral infection caused by Hepatitis B Virus (HBV). Most people with Hepatitis B recover completely, but approximately 5–10% become chronic carriers of the virus. Most of these people have no symptoms, but can continue to transmit the disease to others. Some may develop chronic active hepatitis and cirrhosis. HIV also appears to be a causative factor in the development of liver cancer. Thus, immunization against Hepatitis B can prevent acute hepatitis and also reduce sickness and death from chronic active hepatitis, cirrhosis and liver cancer.

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The Vaccine: Possible Side Effects: (Incidence of side effects is generally low.)

- Injection site soreness is the most common adverse reaction
- Less common local reactions are redness, swelling, warmth of an area of hardness which usually subsides in 48 hours
- Low grade fever occurs occasionally during the 48-hour period after vaccination
- Fatigue, headache, nausea, dizziness, muscle or joint pains are uncommon
- Rash is rare

Contraindications:

1. Hypersensitivity to any component of the vaccine.
2. Presence of any serious active infection.

Note: Because of the long incubation period for Hepatitis B, it is possible for unrecognized infection to be present at the time the vaccine is given. The vaccine may not prevent Hepatitis B in such people.

You should not be vaccinated if:

- You have already received the complete Hepatitis B vaccination series
- Antibody testing reveals that you are immune
- You should not receive the vaccination for other specific medical reasons determined by your personal physician
- If you are pregnant, consult with your physician prior to being vaccinated

If you have any questions about Hepatitis B or the Hepatitis B vaccine, contact your physician.

Making an Exposure Determination

Occupational Exposure: Is defined as reasonably anticipated skin, eye, mucous membrane or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Identifying employees who are at risk for exposure to blood or other potentially infectious material is done by making an exposure determination. An exposure determination set forth by the OSHA regulations requires:

- **All** job classifications in which **all** employees may be exposed to blood or other potentially infectious materials
- **All** job classifications in which **some** employees **occasionally** may be exposed to blood or other potentially infectious material

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- **All** tasks and job procedures performed by employees in the aforementioned job classification in which **some** employees may be exposed to blood or other potentially infectious materials

The determination must be made without considering whether or not PPE that is provided or worn would help protect an employee.

Protecting Yourself

Universal Precautions: It is a standard approach designed to prevent you from having contact with all human blood and certain body fluids known to contain HIV, Hepatitis B or other blood borne pathogens.

Use of Universal Precautions: When exposed to potentially infectious materials, which include:

- Blood
- Semen
- Vaginal secretions
- Cerebrospinal fluid (fluid protecting the brain and spine)
- Synovial fluid (fluid from the joints)
- Pleural fluid (fluid from the lungs)
- Any body fluid with visible blood
- Any unidentifiable body fluid
- Saliva from dental procedures

Not Required Unless Visible Blood is present:

- Feces
- Nasal secretions
- Sputum (fluid from coughing or clearing throat)
- Sweat
- Tears
- Urine
- Vomit

Personal Protective Equipment:

- Gloves
- Eye protection/face shield
- Gown

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Take Steps to Protect Yourself

Wear Gloves:

- Any time YOU ARE in contact with blood or other body fluids
- When touching any mucous membrane or broken skin
- When handling items or surfaces soiled with blood or other body fluids
- **Do not reuse disposable gloves.**

Eye Protection: Face shields are to be used any time there is a chance for blood or body fluids to splash into your mouth, nose or eyes.

Wear a Gown: Any time splashing of blood or other body fluids is likely.

Wash Your Hands: Wash your hands and all skin surfaces immediately after:

- Direct contact with blood or other body fluids
- After removing gloves, eye protection or any other protective equipment/clothing
- After handling any potentially contaminated articles

Cover Open Wounds: Before using gloves, make sure all your cuts or broken skin on your hands have been bandaged.

Recommended Protective Equipment Against HIV and HBV Transmission in Pre-hospital Settings

Task or Activity	Hand washing	Disposable Gloves	Gown	Mask	Protective Eyewear
Bleeding control with spurting blood	Yes	Yes	Yes	Yes	Yes
Bleeding control with minimal bleeding	Yes	Yes	No	No	No
Handling and cleaning contaminated equipment and clothing	Yes	Yes	No, unless soiling likely	No	No

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Preventing a Blood Borne Pathogen Exposure During an Emergency

- Develop a mind set that all blood and body fluids should be treated as if they were infected.

Follow the American Red Cross First Aid Steps:

- Make sure the scene is safe for you — **do not enter a dangerous situation**
- Determine the number of victims
- Do not move a seriously injured person
- Determine if victim is conscious
- Unconsciousness — life threatening, call 911

CARE Only If You Have Been Trained

- If you render assistance, do so in a manner that you will not be exposed to blood or body fluids containing blood, and report this **at once** to your supervisor.
- Let the injured person apply his/her own bandage.
- Let the injured person, if capable, apply direct pressure to a cut.
- For a nosebleed, hand the person the box of tissues so they can try to stop the bleeding themselves.
- Report all incidents involving blood or body fluids containing blood to your supervisor at once.

Further Resources/Materials on AIDS

Centers for Disease Control and Prevention 1600 Clifton Rd. Atlanta, GA 30333, USA 800-CDC-INFO (800-232-4636) <http://www.cdc.gov/>

National Association of People with AIDS 8401 Colesville Road, Suite 505, Silver Spring, MD 20910 <http://www.napwa.org/>

National Minority AIDS Council -- Main Office -- 1931 13th Street NW, Washington, DC 20009 (202) 483-6622 <http://www.nmac.org/>
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