

Bloodborne Pathogens - Understanding the Data



Bloodborne Pathogens Defined

Bloodborne pathogens are defined by the Occupational Safety and Health Administration, or OSHA, as micro-organisms present in human blood that can cause diseases. Such organisms include: Viruses such as hepatitis and flu, bacteria such as tuberculosis and gonorrhea, parasites such as malaria and trichinosis, and certain fungi.

Many micro-organisms can be bloodborne pathogens, but OSHA focuses its regulatory efforts on three primary pathogens found in the workplace:

- Human immunodeficiency virus (HIV), which causes acquired immunodeficiency syndrome (AIDS)
- Hepatitis B (HBV) virus
- Hepatitis C (HCV) virus



EXPOSURE

Exposure to bloodborne pathogens or potentially infectious bodily fluids in a work environment like ours is very limited.

The relatively few times that you may be exposed is when a co-worker suffers an injury that bleeds, such as a cut, abrasion, or amputation. Workers near the injured employee could be exposed by blood spurt-ing on them at the time of injury, or those of you cleaning up after an accident or handling waste that contains contaminated material may be exposed.

Someone providing first aid could be exposed to bloodborne pathogens when administering first aid, such as when applying pressure to a wound or wrapping an injury.

Before a work surface, such as a table, tool, or machine control panel, is decontaminated, you might touch the surface and be exposed to bloodborne pathogens.

Someone assigned to clean up bodily fluids after an injury may also be exposed to bloodborne pathogens.

Universal Precautions

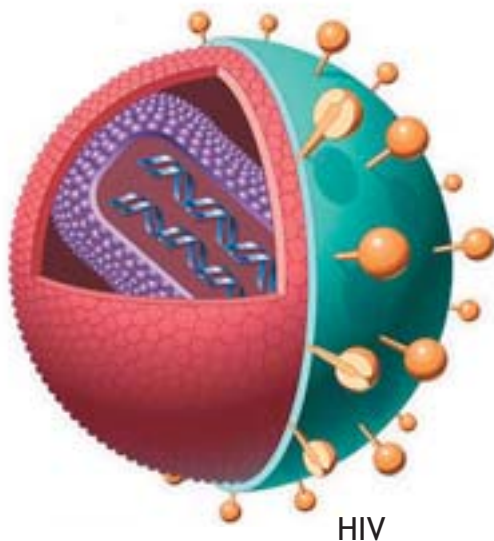
OSHA defines universal precautions as “an approach to infection control.” They include . . .

All human blood and certain human bodily fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Avoid contact with infectious materials. Use barrier protection such as gloves, masks, aprons, and eyewear to avoid contact with infected bodily fluids. By avoiding direct contact with bodily fluids or potentially contaminated items, there is no exposure.

Immediately clean up and decontaminate yourself, equipment, and tools.

Always wash your hands after handling any type of bodily fluid, even when wearing gloves. Immediately dispose of contaminated items or materials used to disinfect contaminated items.



Human immunodeficiency virus (HIV) is the virus that leads to Acquired Immunodeficiency Syndrome (AIDS). A person can carry HIV for many years and not have symptoms until it turns into full-blown AIDS. HIV attacks the person's immune system, which makes it difficult for the body to fight off common diseases.

Early HIV symptoms resemble common cold or flu virus.

Taking an HIV antibody test is the only way to know for sure if you have HIV.

Scientists and medical authorities agree that HIV does not survive well outside the body. When HIV-infected human blood or other bodily fluid is dried, the risk of environmental transmission is essentially reduced to zero.

There is no cure yet for HIV and AIDS.

Bloodborne Pathogens - HIV, HBV, HVC

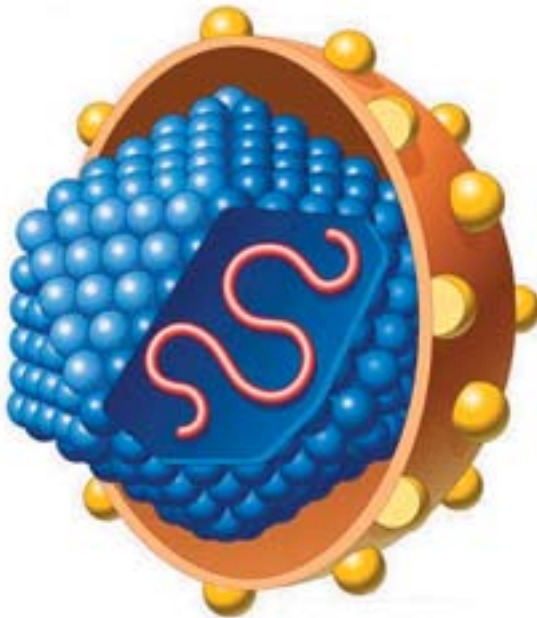


HBV

More than one million people nationwide are infected with the Hepatitis B virus. The disease can lead to chronic liver disease, liver cancer, and death. There are approximately 140,000 to 320,000 new infections each year in the United States. Symptoms include:

Jaundice, fatigue, abdominal pain
loss of appetite, and intermittent nausea and vomiting

Vaccination against Hepatitis B has been available since 1982. HBV can survive for at least one week in dried blood on environmental surfaces such as a work table, knife, tools, broken glass, and sharp metal. This is the primary reason for properly cleaning and disinfecting any contaminated work surfaces and tools.



HCV

An estimated 3.9 million Americans have been infected with Hepatitis C virus (HCV) of whom 2.7 million are chronically infected. It is the most common chronic bloodborne infection in the United States. Like HBV, the disease can lead to chronic liver disease, liver cancer, and death.

Persons chronically infected with HCV may not be aware of it because they are not clinically ill. Sometimes it can take two decades before symptoms are recognized. Chronic liver disease occurs in approximately 70 percent of infected persons. Symptoms of HCV include:

Flu-like symptoms, jaundice, dark urine, and fatigue
Loss of appetite, nausea, and vomiting, and abdominal pain
There are some drugs that have been licensed for treatment of HCV; however, they are only effective in 10-40 percent of persons.

Bloodborne Pathogens - Decontamination



General Decontamination

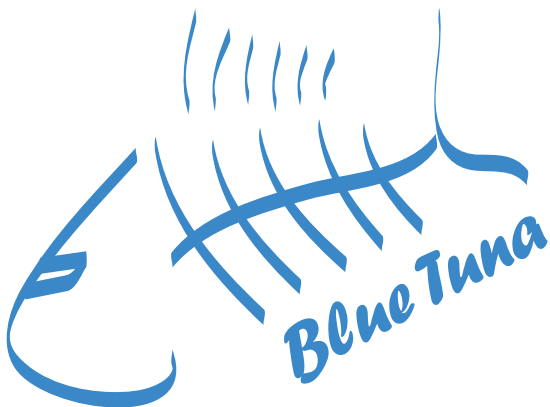
An important part of preventing exposure to infected bodily fluids and bloodborne pathogens is to properly clean and disinfect equipment, tools, and work surfaces.

Assume the bodily fluids that contaminated the equipment or work surface are infected with bloodborne pathogens, per universal precautions. Wear protective gloves, such as latex or nitrile gloves, and protective eyewear, such as glasses or goggles, which should be located in the first-aid kit.

The bodily fluid disposal kit contains fluid cleanup materials such as an absorbent powder, a disinfectant solution, a disposal bag, and PPE such as gloves, eye protection, an apron, and even foot covers. The absorbent powder can be sprinkled on bodily fluids, such as blood. When the powder absorbs the fluid it can be scooped up and placed into the disposal bag.

Wipe down all potentially contaminated surfaces where spills have occurred with a 10% bleach solution (about a pint bleach per gallon of water) or an EPA-approved disinfectant in order to ensure that all bloodborne pathogens are killed. You can use a 1% bleach solution (about $\frac{1}{4}$ cup bleach per gallon of water) for routine cleaning.

Dispose of all contaminated gloves, towels, rags, and scooped-up absorbent powder. Place it all in the disposal bag.



Bloodborne Pathogens -DO's / Don'ts



DO's

These are some common safe work practices that, when followed, will help prevent exposure to potentially infected blood and bodily fluids.

Remove contaminated clothing, shoes, and PPE as soon as possible, but always before leaving the work area. Wash your skin in the area underneath the clothing that was contaminated.

Cleaning and disinfecting tools, work surfaces, and equipment that made contact with potentially infected blood or bodily fluids will prevent the next user from infection.

Immediately, thoroughly wash any areas of your skin that may have come into contact with potentially infected blood or bodily fluids. For eye splashes, immediately go to an emergency eyewash station and flush your eyes.

Seek immediate medical attention to allow healthcare professionals to determine if follow-up is required.

Consider double-gloving so the outer glove can be removed if you need to scratch or answer a phone. Replace with a new glove before returning to work.

Dispose of all items that cannot be decontaminated such as rags, paper towels, and barrier protection in an appropriately labeled container.

DON'TS

Do not eat, drink, smoke, apply cosmetics or lip balm, or handle contact lenses in any work areas where there is the possibility of exposure to blood

Do not place or store food or drink on bathroom shelves, in cabinets, or on countertops or work surfaces in any work areas where blood or bodily fluids may occur.