

BLOODBORNE PATHOGENS



What is a Bloodborne Pathogen?

A **PATHOGEN** is a substance, frequently a microscopic organism such as a bacterium or fungus, that causes disease.

A **BLOODBORNE PATHOGEN** is a microorganism that causes disease and lives in the bloodstream, human blood, components of human blood, such as plasma, blood cells, and platelets, and products made from human blood.

How is a Bloodborne Pathogen transmitted?

Bloodborne pathogens can be transferred from an infected individual in several ways including:

To cause infection, harmful pathogens must enter the body, and can do so through open wounds in the skin and conditions like acne, broken cuticles, or skin irritation.



A piercing event such as cuts and scrapes



Mucous membrane exposure



Sexual contact



Exposure to infected blood or body fluids



Mother to newborn during birth or through breastfeeding

What types of Bloodborne Pathogens are there?

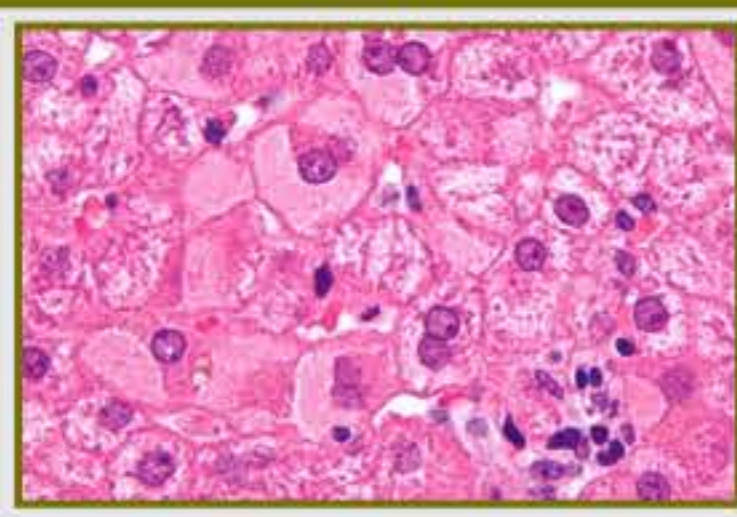
20 pathogens are transmitted through blood or bodily fluids.

The most common types are:

- Syphilis
- Hepatitis B virus (HBV)
- Malaria
- Hepatitis C virus (HCV)
- Herpes
- Human Immunodeficiency Virus (HIV)

* HBV, HCV, and HIV are the pathogens of greatest concern.

Hepatitis B Virus (HBV)



What is it?

A viral infection that attacks the liver causing cirrhosis, cancer, liver failure, and death.

What are the possible symptoms?

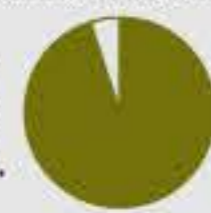
- Fever
- Mild nausea and vomiting
- Fatigue
- Loss of appetite
- Muscle or joint pain
- Bloating/swollen stomach
- Yellow eyes and skin/jaundice

**Hepatitis B symptoms may appear six-weeks to six-months after exposure, and are less common in children; however only thirty percent of infected individuals display symptoms.

How is it treated?

Fortunately, hepatitis B is easily diagnosed by a simple blood test. There is no cure for hepatitis B; however, a vaccine has been available since nineteen eighty-two. Drugs to treat chronic hepatitis B are available; however, they should not be used by pregnant women, and while undergoing treatment, individuals with hepatitis B should refrain from using alcohol and follow their health care provider's recommendations.

The percentage of HBV infections has decreased by **95%** since 1985.



Hepatitis C Virus (HCV)



What is it?

HCV is similar to HBV in many ways. Both attack the victim's liver, and both are spread by contact with infected blood. The FDA states 8,000-10,000 deaths per year are caused by HCV.

What are the possible symptoms?

- Abdominal Pain
- Fatigue
- Fever
- Headaches
- Loss of appetite
- Nausea
- Muscle or joint pain
- "Brain fog"
- Jaundice
- Mood swings
- Indigestion
- Depression

How is it treated?

Those infected with Hepatitis C can continue to lead normal lives if they educate themselves and protect the liver with a healthy diet, regular exercise, plenty of rest, and very limited alcohol consumption. A combination therapy of interferon and ribavirin is prescribed for patients with chronic Hepatitis C. Developing a Hepatitis C vaccine is difficult because the virus changes, or mutates, during infection.

The risk of a mother passing Hepatitis B along to her child is around 5% but rises to **20%** if the mother is also infected with HIV.



Human Immunodeficiency Virus (HIV)



What is it?

The human immunodeficiency virus (HIV) is the causative agent for Acquired Immunodeficiency Syndrome or AIDS that attacks an individual's immune system. This weakens the body's ability to fight infections and cancers, and puts affected individuals at risk of opportunistic infections that normally would pose no health threat.

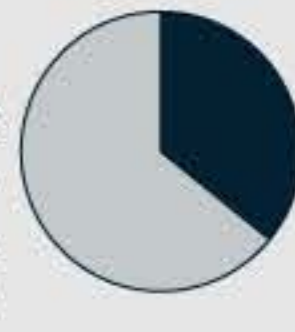
What are the possible symptoms?

- Fever
- Headache
- Fatigue
- Swollen lymph glands
- Weight loss
- Chronic diarrhea
- Blurred vision
- Dementia
- Cough
- Several cancers

How is it treated?

Researchers have found the most effective treatment is a combination of three or more medications called Highly Active Antiretroviral Therapy, or HEART. Although not a cure for acquired immunodeficiency syndrome, this type therapy greatly improves the health of many infected individuals.

Over one-third, **36%**, of AIDS cases in the US can be directly or indirectly linked to injection drug use.



How are diseases from Bloodborne Pathogens prevented?

Practicing good hygiene is the easiest way to prevent exposure to pathogens. Effective practices include:



Frequent Handwashing



Moderate Alcohol Use



No Intravenous Drug Use



Practicing Safe Sex
Using latex condoms;
Refraining from Promiscuity



Not Sharing Personal Items
For example, razors and toothbrushes



Receiving an HBV Vaccination



Consulting a Physician Regarding Risk to Baby if Infected



Using Universal Precautions

For More Information on Bloodborne Pathogens, visit

www.schooltrainingsolutions.com

School Training Solutions
Staff Development Training