Bloodborne Pathogens
Bloodborne pathogens are infectious microorganisms carried by blood that can cause disease in humans.

These pathogens include, but are not limited to:
- Hepatitis B
- Hepatitis C
- Human Immunodeficiency Virus (HIV)
- Needlesticks and other sharps-related injuries may expose workers to bloodborne pathogens.

Workers in many occupations, including first responders, housekeeping personnel in some industries, nurses and other healthcare personnel may be at risk for exposure to bloodborne pathogens.
The Bloodborne Pathogens Standard

- OSHA's Bloodborne Pathogens Standard (29 CFR 1910.1030) as amended pursuant to the 2000 Needlestick Safety and Prevention Act, is a regulation that prescribes safeguards to protect workers against health hazards related to bloodborne pathogens.
- The standard imposes requirements on employers of workers who may be exposed to blood or other potentially infectious materials such as certain tissues and body fluids.
- Due to the Needlestick Safety and Prevention Act, employers are required to evaluate, select, and use engineering controls (e.g., sharps with protection or needleless systems) to eliminate or minimize exposure to contaminated sharps.
The bloodborne pathogens standard contains many requirements that protect you in the workplace. Such as:

- **Exposure Control Plan:** A written plan to eliminate or minimize occupational exposures.
- **Annual Plan Update:** Employers must update the exposure control plan annually to reflect changes in tasks, procedures, and positions that affect occupational exposure, and also technological changes that eliminate or reduce occupational exposure.
The Bloodborne Pathogens Standard cont.

- **Universal Precautions:** Employers are required to implement the use of universal precautions (treating all human blood and other potentially infectious materials as if known to be infectious for bloodborne pathogens.)

- **Engineering Controls:** These are devices that isolate or remove the bloodborne pathogens hazard from the workplace and the standard requires that employers identify and use such engineering controls. They include sharps disposal containers, self-sheathing needles, and safety medical devices, such as sharps with engineered sharps-injury protection and needleless systems.
Work Practice Controls: Employers are required to identify and ensure the use of work practice controls. These are practices that reduce the possibility of exposure by changing the way a task is performed.

Personal Protective Equipment: Employers must provide personal protective equipment (PPE), such as gloves, gowns, eye protection, and masks.

Hepatitis B Vaccinations: Your employer must provide hepatitis B vaccinations to all workers with occupational exposure.

Post-exposure Evaluation and Follow-up: Employers must make available post-exposure evaluations and follow-up to any occupationally expose worker who experiences an exposure incident.
The Bloodborne Pathogens Standard cont.

- **Labels and Signs to Communicate Hazards:** Warning labels must be fixed to containers of regulated waste; containers of contaminated reusable sharps; refrigerators and freezers containing blood or other potentially infectious material; other containers used to store, transport, or ship blood or other potentially infectious material; contaminated equipment that is being shipped or serviced; and bags or containers of contaminated laundry, except as provided in the standard.

- **Training:** Employers must ensure that their workers receive regular training that covers all elements of the standard.

- **Medical and Training Records:** Employers also have an obligation to maintain worker medical and training records including a sharps injury log.
Pathogens can be transmitted when infectious blood or bodily fluids are introduced into the bloodstream of a person. Transmission of bloodborne pathogens can occur through several different routes:

- Injection: Blood or bodily fluids of an infected person may be introduced directly into your body through a break in your skin.
- Mucous Membrane: Another transmission route would be through mucous membrane exposure. This route of exposure means that the infected blood or body fluid enters the body through contact with a mucous membrane found in the eyes, nose, or mouth.
- Sexual Contact: Bloodborne pathogens may also be transmitted through sexual contact.
Common Pathogens for Healthcare Workers

- **Human immunodeficiency virus (HIV):** HIV disables the body's immune system until it is no longer capable of fighting infection. Once a person becomes immunocompromised, he or she can exhibit symptoms of weight loss, persistent low-grade fever, night sweats, and flu-like symptoms. The person is also more vulnerable to pneumonias, intestinal disorders, and fungal infections.

- **Ebola:** Though not currently as much of a risk in the general population in the U.S., healthcare providers caring for Ebola patients are at a high risk of getting sick because they may come in contact with infected blood or bodily fluids.
Hepatitis B: Hepatitis B can cause serious liver damage and death. Symptoms include jaundice, fever, nausea, and abdominal pain. The chance of becoming infected with Hepatitis B from a sharps injury is estimated to be between 6 and 30 percent.

Hepatitis C: Hepatitis C causes serious damage to the liver and can be fatal. Infection can occur without symptoms or only mild ones. Chronic hepatitis develops in 75 to 80 percent of infected patients, and 70 percent of these individuals get active liver disease. Of those with active liver disease, 10 to 20 percent develop cirrhosis and 1 to 5 percent develop liver cancer.
Reducing Risk of Exposure

- Using universal precautions, appropriate protective clothing, and proper disinfection and sanitization practices can greatly reduce or eliminate the risk of contamination.

- If you are concerned exposure has occurred, first, immediately wash the exposed area with soap and water. If an exposure to the eyes, nose, or mouth has occurred, flush the area with water only. After thoroughly washing the area, promptly report the exposure to your supervisor. Your supervisor or employer will inform you of the next steps to follow.
Sharps Injuries and Requirements

- Occupational exposure to bloodborne pathogens from needlesticks and other sharps injuries is a serious problem to healthcare workers, but is often preventable.
- Who in the healthcare industry is being injured?
  - 43% nurses
  - 28% physicians
  - Technicians, housekeeping and maintenance staff, admin staff, dental staff, and students are also being injured
- 4 out of every 5 of sharps injuries are due to the use of hypodermic needles or syringes, suture needles, winged-steel or butterfly-type needles, blood collection needles, scalpels, and IV catheter stylets
The following are types of sharps devices that can be used to protect you:

- Needle free IV systems
- Sheathed, blunting, or retractable needles
- Blood transfer adapters
- Non-breakable plastic vacuum and capillary tubes
- Sharps disposal containers

Make sure all sharps containers meet requirements, and also ensure the containers are disposed of properly and not overfilled.
Employers must also ensure that contaminated sharps are disposed of in sharps disposal containers immediately or as soon as feasible after use using the following guidelines:

- Sharps disposal containers must be readily accessible and located as close as feasible to the area where sharps will be used.
- Containers also must be available wherever sharps may be found, such as in laundries.
- If recapping, bending, or removal is necessary, employers must ensure that workers use either a mechanical device or a one-handed technique.
- Contaminated broken glass must not be picked up by hand, but must be cleaned up using mechanical means.
The CDC has provided some general tips that should assist in Starting Safe and Staying Safe when working with sharps. These steps include:

- Organizing your work area with appropriate sharps disposal containers within reach
- Working in well-lit areas
- Receiving training on how to use sharps safety devices
- Before handling sharps, assessing any hazard getting help if needed
- Keeping the exposed sharp in view
- Being aware of people around you
- Stopping if you feel rushed or distracted
- Focus on your task
- Avoiding hand-passing sharps and use verbal alerts when moving sharps
- Watching for sharps in linen, beds, on the floor, or in waste containers
Injected medicines are commonly used in healthcare settings for the prevention, diagnosis, and treatment of various illnesses.

Unsafe injection practices put patients in harm’s way and put you, the healthcare provider, at risk of infectious and non-infectious adverse events and have been associated with a wide variety of procedures and settings.

Safe injection practices are part of Standard Precautions and are aimed at maintaining basic levels of patient safety and provider protections.
In case the worst happens and you are exposed to infectious materials via an exposure incident, such as a needlestick or sharps injury or are exposed to the blood or other bodily fluid of a patient during the course of your work, immediately follow these steps:

- Wash needlesticks and cuts with soap and water
- Flush splashes to the nose, mouth, or skin with water
- Irrigate eyes with clean water, saline, or sterile irrigates
- Report the incident to your supervisor
- Immediately seek medical treatment
After an exposure incident, such as a needlestick, OSHA’s Bloodborne Pathogens standard requires your employer to provide you with an immediate confidential medical evaluation and follow-up care.

The evaluation and follow-up must be:
- made available to you at no cost and at a reasonable time and place.
- performed by or under the supervision of a licensed physician or other licensed healthcare professional, and provided according to the recommendations of the U.S. Public Health Service current at the time the procedures take place.
- Laboratory tests must be conducted by an accredited laboratory and also must be at no cost to you.