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## **Blood Borne Pathogens**

In 1991 the Occupational Safety and Health Administration (OSHA) issued regulations on job exposure to blood borne pathogens. Pathogens refer to any bacteria and viruses present in human blood and body fluids that can cause disease in humans. These pathogens can be as simple as those that cause a common cold to the Hepatitis B virus (HBV) causing Hepatitis and human immunodeficiency virus (HIV), which causes acquired immune deficiency syndrome (AIDS).

The need for Blood Borne Pathogen awareness training impacts all businesses where there is the potential for injury and certainly where the employer has designated certain personnel as first aiders/first responders in the event of medical emergencies.

As a result of the risk to these people it's always a good idea to review the dangers of these pathogens. These pathogens can take the form of Viruses (colds, chicken pox), Bacteria (tuberculosis, meningitis), Fungi (Athletes foot), Protozoa (Malaria), Rickettsia (Rocky Mountain spotted fever), and Parasitic Worms (anemia, abdominal pain) and many more.

There are four kinds of exposures that allow pathogens to enter the body. Direct Contact is the most serious which includes touching body fluids from an infected person which an unprotected body part. Indirect Contact is less serious but is potential as dangerous and includes touching objects that have touched the blood or another body fluid of an infected person. Airborne is the third kind of exposure; breathing in droplets that become airborne when an infected person coughs or sneezes. Vector borne is the last type of exposure and perhaps least likely; this occurs through a bite from an infected animal or insect.

Although pathogens can be spread by any of these exposure types four conditions must exist for the disease of an infected person to be transmitted from one person to another.

First and foremost the pathogen must exist (not all victims are suffering from an infectious disease), there also needs to be enough of the pathogen to cause disease (most pathogens won't live if they are exposed to oxygen), a person also must be susceptible to the pathogen, and lastly, the pathogen passes through an entry site on the first aider (this is why we wear personal protective equipment).

The first responders need to properly protect themselves when in contact with blood and bodily fluids, this might include facemasks, disposable gloves, gowns and protective eye wear. Depending on the type of injuries that occur in the work place, such as cuts or penetrating injuries, immunizations would be recommended for the first aiders. These immunizations could include common Influenza up to and including a Hepatitis B series.

If a workplace exposure occurs a predefined and readily available employer procedure needs to be in place to insure that the correct sequence of events is followed. This procedure includes a written report submitted to human resources for potential insurance and compensation issues. Additionally, the first aider should seek medical attention at the same facility as the injured victim if they believe there was an exposure of any kind.

This is serious stuff, but if an employer and their first aid team take the proper precautions the risk of being infected by a victim's blood or bodily fluid can be greatly reduced and/or eliminated.