

Chapter 10 Universal Precautions

Universal Precautions is an approach to infection control whereby all human/primate blood and other human/primate body fluids, tissues and cells are treated as if known to be infectious for HIV, HBV and other blood-borne pathogens (BBP's).

Aspects of Universal Precautions include frequent hand washing; proper handling and disposal of contaminated needles; no eating, drinking, smoking or application of cosmetics or contact lenses in the lab; and no mouth pipetting. Food and drink should be stored in refrigerators or shelves outside of the laboratory. Eating and drinking within BL-1 laboratories is acceptable only in designated areas.

Containers for storage, transport or shipping of BBP's must be labeled properly.

Engineering controls (biosafety cabinets, ventilation, closed top centrifuge rotors) are the primary methods to control exposures. Personal Protective Equipment (PPE) should also be used to protect personnel from exposures. Personal Protective Equipment (e.g., gloves, lab coats, gowns, face shields, masks) should be selected and used as appropriate.

All work with human blood, tissues, cells and other body fluids must be conducted using BL-2 containment practices, procedures and facilities.

Quiz

1. Universal precautions is based on the assumption that all human/ primate blood or other body fluids, tissues and cells are capable of transmitting blood borne pathogens including Human Immunodeficiency Virus (HIV) and Hepatitis Virus.
 - True.
 - False.
2. As defined by OSHA, Other Potentially Infectious Material (OPIM) includes all of the following except:
 - Unfixed human tissue.
 - Blood products.
 - Buccal cells.
 - Any body fluid visibly contaminated with blood.
3. In the order of preference, how should blood-borne pathogens be managed?
 - Engineering controls, personal protective equipment, training.
 - Training, personal protective equipment, engineering controls.
 - Personal protective equipment, training, engineering controls.
 - None of the above.
4. The eating of food and smoking are allowed in laboratories, as long as they are done in designated places.
 - True
 - False
5. Research with all of the following material must be done using biosafety level 2 (BSL-2) containment except:
 - Human cell lines.
 - Cell lines derived from tumors.
 - Cell lines transformed by oncogenic viruses.
 - Plant cell culture.
6. Since most blood borne pathogens can be transmitted through breaks in the skin, it is important to properly glove during procedures where there is exposure to blood or OPIM.
 - True
 - False

7. Personal Protective Equipment (PPE) relating to protecting yourself from blood or OPIM include all of the following except:
 - Gloves

 - Lab coats.
 - Biological safety cabinets.
 - Eye protection

8. The basis for using “Universal Precautions” as the foundation for preventing occupationally acquired blood borne diseases is simply that medical history and examination cannot reliably identify all patients who are infected.
 - True
 - False

9. For laboratory workers who are potentially exposed to HIV, the Department of Risk Management includes Appendices in The University of Arizona Blood borne Pathogen Control Plan.
 - True
 - False

10. Who is ultimately accountable for ensuring that Universal Precautions are developed, implemented and monitored in the laboratory?
 - Building Monitor
 - Risk Management and Safety
 - University Police Department
 - Principal Investigator