

Universal Precautions Policy

According to the concept of Universal Precautions, all **human** blood, **human** blood components, products made from **human** blood and certain other materials are treated and handled as if known to be infectious for HIV, HBV and other bloodborne pathogens.

The other potentially infectious materials (OPIM) which require Universal Precautions include 1) the following **human** body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; 2) any unfixed **tissue** or organ (other than intact skin) from a **human** (living or dead); 3) HIV-containing cell or **tissue** cultures, organ cultures and HIV-containing culture medium or other solutions; and 4) blood, organs or other tissues from experimental animals infected with HIV or HBV.

The following shall be observed:

Personal Protective Equipment (PPE)

Personal protective equipment shall be used to prevent skin and mucous membrane contact with blood and OPIM. These may include the use of gloves, masks, protective eyewear or face shields and gowns or aprons, as appropriate for the task.

Hand washing

Hands and other skin surfaces shall be washed immediately after contact with blood or OPIM. Hands shall be washed each time gloves are removed.

Sharps

All sharps (needles, scalpels and razor blades) shall be disposed of in labeled, leak-proof, puncture-proof sharps containers. Needles shall not be bent, sheared or recapped. Sharps containers shall be available in the area where sharps are being used.

Dermatitis

Employees who have exudative lesions or weeping dermatitis shall refrain from handling blood or OPIM until the condition resolves.

Biological Safety Cabinets (BSC)

BSC are required for procedures that may generate an aerosol (vortexing, grinding, blending, etc.).

Prohibitions

Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are *prohibited* in work areas where there is a reasonable likelihood of occupational exposure to blood. Contaminated needles or other contaminated sharps must not be bent, recapped, or removed unless it can be demonstrated that no alternative is feasible or that such action is required by a specific medical procedure.

Exposure Occurrence

If you should have an exposure incident to another person's blood, immediately wash the exposed area with warm water and soap. If the exposed area is in your mouth, rinse your mouth with water or mouthwash. If the exposure was in your eyes, flush with warm water or saline if available. A quick rinse is probably not adequate; you want to irrigate the area completely with water. Next, report the incident with the following information: how, when and where the incident occurred and with whose blood or body secretions you came in contact. Your blood may then be tested for HIV but only with your consent. The source individual's blood will also be tested if available and the results of the test will be made known to you.

Prions

Deactivate potential prions such as Creutzfeldt-Jakob Disease (CJD) prior before taking tissue to the public. Prions are not killed by formalin fixation (see 1, 2, 4). High concentrations of phenol or formic acid deactivate them (see 1, 2, 4). However, formic acid makes the tissue brittle and may not be suitable for whole brains. Other deactivating agents include 1N sodium hydroxide, 4.0 M guanidinium hydrochloride, and household bleach (sodium hypochlorite, > 2% free chlorine) (4). Immerse formalin-fixed brains in household bleach or liquefied phenol (90% w/w; Fisher Scientific, Pittsburgh, PA) for 2-3 days to deactivate potential prion that may occupy the brain surface. Special brain dissections and brain slices should be treated in the same fashion prior to public display so that all surface areas are deactivated. Brain surfaces prepared in this fashion should have essentially no risk of prion disease. Otherwise, the risk of CJD prior in 6 European populations between 1993-1995 was 0.71 cases per million people (5). If it is assumed that the average number of people killed by lightning in the United States each year is 20.1 deaths per million (6), the probability of getting killed by lightning is 28 times greater than the probability of contacting a body with CJD. Nonetheless, even though the bloodborne pathogens standard of the US Occupational Safety and Health Administration (OSHA) (3) does not apply to fixed tissue unless it is infected with the human immunodeficiency virus (HIV) or the hepatitis B virus (HBV), deactivate potential prions prior to public display.