

**University of California, Davis
Health System, Sacramento
Department of Pathology and Laboratory Medicine**

PERSONAL PROTECTIVE EQUIPMENT

Administrative Procedures 276.A

PURPOSE:

This section outlines the policy for the use of personal protective equipment (PPE) in the Laboratory. The Occupational Health and Safety Administration (OSHA) requires the use of personal protective equipment (PPE) to reduce employee exposure to hazards when engineering and administrative controls are not feasible or effective in reducing exposures to acceptable levels.

DEFINITION:

Personal protective equipment (PPE) are items that do not permit blood or other potentially infectious materials to pass through to the skin or reach the employee's work clothes or footwear.

POLICY:

It is the policy of the Department of Pathology to:

- A. Ensure that necessary personal protective equipment (PPE) is provided to all staff.
- B. Maintain PPE in sanitary and reliable conditions in all technical work areas in which blood and body substances are handled and in circumstances in which exposure is likely to occur.
- B. Monitor the use of personal protective equipment (PPE) for compliance and protecting the health of each staff member through the use of protective barriers including gloves, masks, eye protectors, lab coats and gowns.
- C. Maintain records of personal protective equipment (PPE) supplies and provides documentation to external agencies (County, State and Federal) with proof of supply availability.
- D. Train personnel on the proper use of personal protective equipment (PPE) and maintain a written record of all required training. Records of all required training can be generated in Medical Training Solutions (MTS).
- E. Implement a PPE program that addresses the hazards present, the selection, maintenance and use of personal protective equipment (PPE), training of personnel and monitoring of the program for effectiveness.
- F. Adhere to UCDMC Personal Protective Equipment policy 1648. Refer to policy at http://intranet.ucdmc.ucdavis.edu/policies/hospital_policies_and_procedures/environmental_health_and_safety/1648.shtml

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PROCEDURE:

A. Hazard Assessment and PPE Selection:

1. In order to assess the need for personal protective equipment (PPE) hazards must be identified.
2. A walk through of each laboratory section must be completed to identify the sources of hazards considering basic hazard categories such as infectious agents and chemicals
3. After completion of the assessment, appropriate personal protective equipment (PPE) must be selected.
4. The hazard assessment and PPE selection must be documented, signed, dated and identified as a certification of hazard assessment. The documents must be maintained in the Department Injury Prevention Binder. (Refer to **PERSONAL PROTECTIVE EQUIPMENT** form).

B. Training:

1. Each employee who is required to wear PPE shall be trained on the proper use of PPE to include at least the following:
 - a. When PPE is necessary.
 - b. What PPE is necessary.
 - c. How to properly don, doff, adjust and wear PPE.
 - d. The limitations of PPE.
 - e. The proper care, maintenance and disposal of PPE.
2. New employee and annual training is accomplished via Medical Training Solutions (MTS).

C. PPE Requirements:

1. Protective Gloves:

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- a. Are required to be worn when contact with potentially infectious agents is anticipated.
 - b. Are required when handling biohazard waste (medical waste) or visibly contaminated equipment.
 - c. Are required when performing venipuncture on patients.
 - d. Should be changed as soon as possible whenever gloves become visibly contaminated with blood or show signs of puncture or tearing.
 - e. Should be changed between each patient contact.
 - f. Should be removed before touching uncontaminated areas and environmental surfaces.
 - g. Disposable gloves should not be washed, reused or disinfected; this practice degrades the protective function of the glove.
 - h. Double gloves are required when handling BSL-3 organisms based on risk assessment determined by lab director.
 - i. Rubber, lined or nitrile neoprene gloves should be used when handling hazardous chemicals.
 - j. Insulated neoprene gloves should be used when handling dry ice and liquid nitrogen.

2. Respirators:

- a. Are required when there is potential exposure to an infectious agent by aerosol or droplet.
- b. N-95 rated disposable particulate respirators are used when enhanced PPE items are required for airborne pathogens.
- c. N-95 respirators must be certified and approved by the National Institute for Occupational Safety and Health (NIOSH).
- d. OSHA requires that respirators be used as part of a respiratory protection program that includes medical evaluations, annual fit testing and training and respirator maintenance.

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3. Splash and Barrier Protection:

a. Chemical Handling:

1. Appropriate Personal Protective Equipment (PPE) must be worn while working with hazardous chemicals in the clinical laboratory. Refer to Handling Hazardous Chemicals Procedure 241.A
2. Safety goggles, face shields, benchtop safety shields or other eye and face protection are required when handling chemicals.

b. Biological Specimens:

1. Eye protection such as safety glasses with solid side shields should be worn when handling potentially infectious materials and potential for splashing exists. Typical prescription glasses alone are not considered appropriate eye protection.
2. All protective eyewear must meet American National Standards Institute standards (ANSI) and be appropriate for the tasks being performed.
3. Other splash barriers/protection for biological samples can include benchtop safety shields, eye protection and gauze when opening samples.

4. Protective Clothing:

- a. Closed toe and closed heel shoes or heel strap must be worn.
- b. All personnel working in technical areas must wear knee-length laboratory coats that close in the front.
- c. All personnel working in technical areas of the laboratory must wear full length pants or equivalent.
- d. Laboratory coat sleeves must be of sufficient length to prevent skin exposure while wearing protective gloves.
- e. Employees are to wear a disposable closed-front lab coat with cuffs when working with select agents. Disposable gloves will be worn pulled over the

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cuffs when working with select agents in the Biological Safety Cabinet (BSC).

- f. Fluid resistant gowns or aprons may be required if exposure to large volumes of body fluids are anticipated.
- g. Disposable fluid resistant shoe covers should be worn when splashing is expected.
- h. Personal protective equipment should be changed at appropriate intervals to ensure cleanliness and should be changed immediately grossly contaminated with infectious material.
- i. Contaminated gowns and/or laboratory coats should be disposed of or laundered according to UCDCM policy.

5. Additional Requirements:

- a. Certain operations and procedures may require additional PPE, as indicated by the Safety Data Sheet (SDS), standard operating procedure (SOP), regulatory requirements, and UCDCM policies or the hazard assessment.
- b. For visitors and support personnel such as IT, PO& M and Environmental Services, minimum personal protective equipment must include closed heel shoes and lab coats.
- c. The outer clothing requirement such as a lab coat will be provided by UCDCM and collected or disposed of upon leaving the laboratory.

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REFERENCES:

1. CAP (College of American Pathologists) Accreditation Guidelines.
2. CLSI (Clinical Laboratory and Standards Institute) Guidelines.
3. UCDMC Policies and Procedures 1648: Personal Protective Equipment (PPE).
http://intranet.ucdmc.ucdavis.edu/policies/hospital_policies_and_procedures/environmental_health_and_safety/1648.shtml
4. Hazard Assessment and Personal Protective Equipment Selection
[http://intranet.ucdmc.ucdavis.edu/policies/hospital_policies_and_procedures/pdfs/1648\(1\).pdf](http://intranet.ucdmc.ucdavis.edu/policies/hospital_policies_and_procedures/pdfs/1648(1).pdf)

