PERSONAL PROTECTIVE EQUIPMENT (PPE) PROGRAM

PURPOSE: This Program is published in accordance with OSHA 29 CFR 1910.132-1910.138 and the desire to provide all employees and students with information regarding equipment that is appropriate for them to work safely in an academic environment.

1. INTRODUCTION

The following sections provide general guidelines and requirements for using personal protective equipment, and will be covered within this program:

- Hand and Arm Protection
- Body Protection
- Ear and Face Protection
- Eyewash Stations
- Foot Protection
- Head Protection
- Respiratory Protection Program

Personal Protective Equipment (PPE) includes clothing and work accessories/equipment designed to protect employees from workplace hazards. PPE must not replace engineering, administrative, and procedural controls for safety. It should be used in conjunction with these controls. All employees and students working in laboratories or any maintenance function must wear protective equipment as required and when instructed to so by a supervisor.

PPE at Creighton University consists of, but is not limited to: hard hats, safety glasses, goggles, face shields, earplugs, steel-toed shoes, respirators, fume hoods, lab coats, *etc.*

2. RESPONSIBILITIES

A. UNIVERSITY RESPONSIBILITY

It is the responsibility of Creighton University to provide employees and students with adequate personal protective equipment to safely perform tasks and/or research assigned. In accordance with OSHA Standards, PPE will be provided at no cost to the individual.

B. SUPERVISORS, PRIMARY INVESTIGATORS, AND INDIVIDUALS IN MANAGERIAL POSITIONS RESPONSIBILITY

It is the responsibility of all employees, regardless of title, who manage or supervise employees or students, to provide appropriate PPE for those who require same. It is also the responsibility of this individual(s) to insure that affected employees are adequately and effectively trained to use the equipment and to monitor appropriate usage of the equipment.

C. INDIVIDUAL RESPONSIBILITY

It is the responsibility of the individual to use the PPE made available for their safety in work environments. It is also an individual responsibility to notify supervisory personnel of equipment failure or malfunction and the need to replace or procure equipment.

3. PPE COVERING SPECIFIC PARTS OF THE BODY

A. HANDS AND ARMS

Burns, cuts, electrical shock, amputation and absorption of chemicals are examples of hazards associated with arm and hand injuries. A wide assortment of PPE for these hazards is available including:

- Disposable exam gloves
- Reusable gloves of materials such as rubber, nitrile, or neoprene
- Leather gloves
- Non-asbestos heat-resistant gloves
- Metal-mesh gloves for meat cutters
- Cotton gloves
- Vibration absorbing gloves

Wear the appropriate hand and arm protection. You can double your hand protection by wearing multiple gloves when necessary (*e.g.,* two pairs of disposable gloves for work involving biological/chemical hazards). Arm protection most often is as simple as wearing a long-sleeved shirt, a laboratory coat, chemical-resistant sleeves, or gauntlet-length gloves.

Glove Tips

- Inspect and test new gloves for defects.
- Wash your hands before and after using gloves. Wash reusable chemical-protective/utility gloves with soap and water before removing them.
- Do not wear gloves near moving machinery.
- Do not wear gloves with metal parts near electrical equipment.

NOTE: *In laboratory environments, always avoid touching surfaces such as telephones, door knobs, etc. when wearing gloves. Contaminated gloves will spread the contamination to these surfaces. See also the One Glove Rule: gloves should not be worn in hallways or common areas.*

B. BODY PROTECTION

Many hazards can threaten the torso: heat, splashes from hot metals and liquids, impacts, cuts, acids, and radiation. A variety of protective clothing is available: vests, jackets, aprons, coveralls, and full body suits.

Hazards that threaten the torso tend to threaten the entire body. A variety of protective clothing, including laboratory coats, long pants, rubber aprons, coveralls, and disposable body suits among others are necessary and available for specific work conditions.

- Rubber, neoprene, and plastic clothing protect employees from most acids and chemical splashes.
- Laboratory coats, coveralls, and disposable body suits protect employees and everyday clothing from contamination.
- Welding aprons provide protection from sparks.

NOTE: *Laundering of lab coats is the responsibility of the employer. Individuals are not to launder their own coats at home due to the possibility of contaminating areas external to laboratory environments and in accordance with OSHA Standards. Contact Strategic Sourcing for more information on vendors.*

C. EAR AND HEARING PROTECTION

Exposure to high noise levels can cause irreversible hearing loss or impairment. It can also create physical and psychological stress.

Preformed or molded ear plugs should be individually fitted by a professional. Waxed cotton, foam or fiberglass wool earplugs are self-forming. Disposable earplugs should be used only once and thrown away; non-disposable plugs or muffs should be cleaned after each use for proper maintenance.

When you work in a high noise area, wear hearing protection must be worn. Depending on the level of exposure, the following devices are available:

- Disposable earplugs
- Reusable earplugs
- Noise cancelling headphones (extreme cases only)
- Headband plugs
- Sealed earmuffs

To avoid contamination and possible ear infections, follow these guidelines:

- Wash hands before inserting earplugs.
- Replace disposable earplugs after each use.
- Clean reusable earplugs after each use.

NOTE: *Earphones and headphones from portable music players DO NOT constitute hearing protection and can not be worn as such.*

D. EYE AND FACE PROTECTION

Protection should be based on kind and degree of hazard present and should: 1) be reasonably comfortable, 2) fit properly, 3) be durable, 4) be cleanable, 5) be sanitary, and 6) be in good condition. In addition, the type of protection must meet the requirements of the work to be performed.

It is extremely important that employees and students wear protection when hazards exist that could cause eye or face injury. Eye and face protection should be used in conjunction with all chemical usage, engineering controls, and overall safe management practices.

NOTE: *Protective eyewear is required in laboratories. Safety glasses or goggles should be an integral part of any and all experimentation which utilizes chemicals. When there is a splash hazard, goggles must be worn.*

Always wear adequate eye and face protection when performing tasks such as grinding, buffing, welding, chipping, cutting, or pouring chemicals. Safety glasses with side shields provide protection against impact and some splashes. Safety goggles provide protection against impact, splashes. Face shields protect the face. It is highly advisable and prudent to wear both goggles and the proper face shield such as when pouring acids or when welding.

IMPORTANT: *Research has shown that contacts do not increase the risk of eye injuries. Therefore, while contact lenses provide no eye protection and may reduce the effectiveness of an emergency eyewash, they are allowed in labs. Wearing contacts is a risk that must be weighed against the quality of sight afforded by other means. If you are wearing contacts, it is* strongly *recommended that you verify that the chemicals you are working with will not affect them.*

Eye and Face Safety Tips

- If you wear prescription glasses, wear goggles or other safety protection over the glasses.
- Safety glasses with side shields provide primary protection to eyes and are four times as resistant as most prescription glasses to impact injuries.
- Goggles protect against impacts, sparks, chemical splashes, dust, and irritating mist. Wear full goggles, not safety glasses, when working with chemicals.
- Eyecup welding goggles with filter lenses give protection from glare and sparks.
- A welding helmet protects from flash burn due to welding, soldering, or brazing, BUT DOES NOT PROVIDE PRIMARY EYE PROTECTION; safety glasses or goggles should also always be worn with the helmet.
- A face shield is designed to protect the face from some splashes or projectiles, BUT DOES NOT ELIMINATE EXPOSURE TO VAPORS. A face shield should be worn with goggles or safety glasses.
- Sunglasses may be useful to prevent eyestrain from glare and to minimize ultraviolet light exposure.

E. EYE WASH STATIONS

Eye wash stations provide emergency eye treatment for people exposed to hazardous materials. Learn eyewash and shower locations so that you can find them before you need one.

Eyewash bowls and drench hoses at sinks provide a continuous water flow. Most are equipped to stay on so that both hands can be used to hold eyes open. Plumbed eyewashes and drench hoses can be easily contaminated by sediment and bacteria; therefore, they must be flushed weekly. Plastic eyewash bottle stations do not provide a continuous water flow, and they do not allow free use of both hands. They are not approved in laboratories or other hazardous areas.

NOTE: *If the eyes are exposed to hazardous materials or irritating elements, immediately flush the eyes with water for at least 15 minutes, notify Public Safety at* 402-280-2911 *for emergency medical assistance, and have someone pull the Safety Data Sheet (SDS) to provide to the physician if required.*

F. FOOT PROTECTION

To protect feet and legs from falling objects, moving machinery, sharp objects, hot materials, chemicals, and slippery surfaces to name but a few of the hazards, employees working in laboratories or in maintenance/grounds keeping functions must wear closed-toed shoes, (preferably leather) boots, footguards, or safety shoes as appropriate. Safety shoes are designed to protect people from the most common causes of foot injuries--impact, compression, and puncture. Special foot protection is available for protection against static electricity, sparks, live electricity, corrosive materials, and slipping as the need may dictate.

NOTE: *Never wear sandals, high-heeled or open-toed shoes in laboratories, shops, or other potentially hazardous areas.*

G. HEAD PROTECTION

Safety (hard) hats protect the head from impact, penetration, and electrical shock. Head protection is necessary if you work where there is risk of injury from moving, falling, or flying objects or if you work near high-voltage equipment. In general, at Creighton University, hard hats and general head protection will only be required in construction sites or for Public Safety officers on Bicycle Patrol. However, in maintenance rooms with a significant amount of low items, “bump hats” are suggested. These will protect you from striking your head on low items but do not provide the same level of protection from falling objects that hard hats provide.

H. RESPIRATORY PROTECTION

See Respiratory Protection Plan

Any question relating to Personal Protective Equipment should be directed to responsible supervisory personnel or to EH&S at 402-546-6400, or jtbaxter@creighton.edu .

Prepared by: John Baxter; Reviewed and updated November 2023 by Mary Duda