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Personal Protective Equipment (PPE)

Tyler Bains, Paramedic, FP-C, CCP-C, NREMT-P

Field Paramedic, University Medical Center EMS
Instructor, Texas Tech University Health Sciences Center
Instructor/Owner, Lonestar CPR and First Aid Training
Lubbock, Texas

General Staff Education I 43919

OSHA 29 CFR 1910.132-137 Personal Protective Equipment

Protecting employees from workplace hazards

OSHA – Occupational Safety and Health Administration

Objectives

- **Understand the requirements for a company PPE (personal protective equipment) program**
- **Understand the basic requirements for PPE**
- **Understand the requirement of hazard analysis**

The Purpose of PPE

- **PPE is designed to protect employees from workplace hazards**
- **PPE creates a protective barrier that separates the user from the hazard**
- **PPE reduces the hazard of exposure, it does not eliminate it**

PPE is NOT the Best Solution

- **Personal protective equipment is designed to minimize hazards that cannot be eliminated**
- **These hazards, even with PPE, can still present a danger to employees**
- **PPE may only be required if these hazards cannot be removed**
- **Engineering out the hazard or changing the process is always preferable; PPE should be used as a last resort if the hazards cannot be removed**

Administrative and Engineering Controls

- **An employer must try to eliminate a hazard with administrative or engineering controls**
- **If the hazard cannot be eliminated, then PPE can be assigned as a protective barrier**
- **Adding handrails to an elevated platform to eliminate the need for fall protection PPE is an example of engineering controls**

Job Hazard Analysis

- **The employer must assess the workplace to determine if hazards, or likely hazards, are present that necessitate the use of PPE**
- **The job hazard analysis and PPE assessment must be certified by management; they must be completed for each job task**

Personal Protection Equipment

- **When hazards are present in the workplace, the employer must ensure that proper personal protective equipment is used by employees**
- **If employees provide their own PPE, it is the responsibility of the employer to ensure it is adequate**

Equipment Selection

- **The employer must select, and have employees use, the type of PPE that will protect employees from the identified hazards**
- **The PPE requirements must be communicated to employees with signs and training**
- **The selected PPE must fit each employee properly**
- **Worker must wear a hard hat to protect from falling debris, and a reflective jacket to increase visibility to traffic**

PPE Warning Signs

- **The employer must inform employees and visitors of PPE requirements**
- **Signs should include the type of PPE required and indicate the general area they are required**

When is PPE Required?

- **When the work environment or work processes present a hazard to the body**
- **During work where employees may come in contact with hazardous chemicals, irritants, or radiation**
- **When the employer is unable to prevent exposure or potential exposure by using work practice controls, engineering controls, or administrative controls**

Training Requirements

- **Employees must be trained on:**
 - **when PPE is required**
 - **what PPE is required**
 - **how to properly don, doff, adjust, and wear PPE**
 - **limitations of PPE**
 - **maintenance, care, useful life, and proper disposal of PPE**

Training Requirements

- **Each person must demonstrate understanding of these concepts; employees should be periodically evaluated and retrained if necessary**

Eye and Face Protection

- **Each employee must use appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation**
- **The eye and face protection must offer protection from the sides; detachable side protectors are allowed**

Head Protection

- **The employer must ensure that each affected employee wears a protective helmet when working in areas where there is a potential for injury to the head from falling objects**
- **The employer must ensure that a protective helmet designed to reduce electrical shock hazard is worn by each affected employee when near exposed electrical conductors that could contact the head – these helmets are usually marked with an “E”**

Hand Protection

- **Employers must select and require employees to use hand protection when employees' hands are exposed to hazards such as:**
 - **skin absorption of harmful substances**
 - **severe cuts or lacerations**
 - **severe abrasions**
 - **punctures**
 - **chemical burns**
 - **thermal burns**
 - **harmful temperature extremes**

Foot Protection

- **The employer must ensure that each affected employee uses protective footwear when working in areas where there is a danger of foot injuries due to:**
 - **falling or rolling objects**
 - **objects piercing the sole**
 - **employee's feet are exposed to electrical hazards**

Respirators

- **Respirators shall be provided by the employer when such equipment is necessary to protect the health of the employee from exposure to harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors**
- **Employers should consult an industrial hygienist for proper evaluation of a workplace for hazards that may require use of respirators**

Respirator Program

- **Companies who utilize respirators as PPE must have:**
 - **a written program, which includes:**
 - **procedures for selecting respirators for use in the workplace**
 - **medical evaluations of employees required to use respirators**
 - **fit testing procedures for tight-fitting respirators**
 - **procedures for proper use of respirators in routine and reasonably foreseeable emergency situations**
 - **procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding, and otherwise maintaining respirators**
 - **procedures for regularly evaluating the effectiveness of the program**

Respirator Program

- **Companies who utilize respirators as PPE must have:**
 - **a designated program administrator, who is adequately trained to the task of running a respirator program**

Respirator Evaluation

- **The employer must select a NIOSH (National Institute for Occupational Safety and Health) approved respirator that provides protection from the hazards presented in the workplace**
- **The employer must perform an evaluation to ensure this respirator is adequate to the task**
- **Employees must complete a medical evaluation and a fit test prior to being allowed to wear a respirator in a hazardous environment**

Other Specialized PPE

- **Some specialized PPE require specific training and safety programs; these programs include:**
 - **respiratory protection**
 - **fall protection**
 - **chemical safety**
 - **hearing protection**

Selecting Appropriate PPE

- **All PPE clothing and equipment will be of safe design and construction, and will be maintained in a clean and reliable condition**
- **Your supervisor will inform you of the required PPE for your area**
- **If you have any suggestions or concerns, please ask**

PPE Inspections

- **PPE must be inspected before each use**
- **Check for wear, abrasions, or tears**
- **Refer to the PPE owner's manual for other appropriate inspection measures**

Donning and Using PPE

- **Make sure that all the required PPE is on properly before entering the hazard area**
- **PPE should be relatively comfortable and not interfere with the work**
- **Do not remove the PPE; if you have a task that cannot be completed with the PPE on, ask a supervisor for guidance**

Removal and Storage

- **Do not remove PPE in the hazard area; PPE should be removed in designated safe areas**
- **Place the PPE in the proper container or dispose of it in the proper waste bin**

PPE Limitations

- **The effectiveness of PPE is limited by the design and intended use**
- **PPE may be limited by attributes such as:**

Personal Protective Equipment Plan

- **The company has drafted a personal protective equipment plan and this plan is available to employees**

Summary

- **PPE should only be required when the hazard cannot be removed with reasonable actions**
- **The employer should assess hazards in the work area and determine PPE requirements**
- **Employees must be trained on:**

References

- **OSHA CFR 29 1910.132 – OSHA CFR 29 1910.137**
- **Company Personal Protective Equipment Plan**

Personal Protective Equipment (PPE)

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