PPE – General Quiz

QUESTION

What does OSHA require with respect to PPE’

ANSWER

- Employees identify hazards that require PPE.
- Select the appropriate safety equipment; and
- Train workers on their proper use.

WHY IS IT RIGHT

PREVENTION

Protection Strategy

It is important to understand the underlying principles of protection strategies in the workplace. Then you can begin to plan a PPE safety program.

The main elements that must be considered are:

- protection of workers
- compliance with applicable laws / regulations / standards / guidelines
- compliance with internal company requirements
- technical feasibility

A Comprehensive Protection Strategy Includes:

- Conduct a risk assessment.
- Evaluate all control methods.
- Integrate various approaches.
- Re-examine controls frequently to ensure hazards continue to be controlled.

DESIGN OF A PPE PROGRAM

A PPE program must be comprehensive. It requires commitment and active participation at the planning, development, and implementation stages from all levels: senior management, supervisors, and workers. A good PPE program consists of these essential elements:

The organization’s occupational health and safety policy should be a statement of principles and general rules which serve as guides to action. Senior management must be committed to ensuring that the policy and procedures are carried out. PPE programs must be, and must be seen to have equal importance with all other organizational policies, procedures, and programs.

Program Co-ordinator

The appointment of a program coordinator will help to make sure the program is successful. The coordinator has the responsibility to make sure that each of the elements of a program is in place and operational.

A program must be planned carefully, developed fully and implemented methodically. The beneficial effects of the program should be publicized widely, and the target date set well ahead for compliance. If the use of PPE is new, time should be allowed for workers to choose a style that fits best, to become accustomed to wearing PPE, and comply with the program, with no enforcement action taken until the target date.

Guidelines to develop a PPE program

a) Match PPE to the Hazard

There are no shortcuts to PPE selection. Choose the right PPE to match the hazard. On some jobs, the same task is performed throughout the entire job cycle, so it is easy to select proper PPE. In other instances, workers may be exposed to two or more different hazards.

b) Obtain advice

Make decisions based on thorough risk assessment, worker acceptance, and types of PPE available. Once you have determined your PPE needs, do research and shop around. Discuss your needs with trained sales representatives and ask for their recommendations.

c) Involve workers in evaluations

It is extremely important to have the individual worker involved in the selection of specific models. This assistance in selection can be achieved by introducing approved models into the workplace for trials in which workers have the opportunity to evaluate various models.

d) Consider physical comfort of PPE (ergonomics)

If a PPE device is unnecessarily heavy or poorly fitted it is unlikely that it will be worn. Note also that if a PPE device is unattractive or uncomfortable, or there is no ability for workers to choose among models, compliance is likely to be poor.

e) Evaluate cost considerations

The cost of PPE is often a concern. Some programs use disposable respirators because they appear to be inexpensive. However, when the use is evaluated over time, it is possible that a dual cartridge respirator would be more economical.

f) Review standards

Performance requirements of all standards must be reviewed to ensure that exposure to injury will be minimized or eliminated by using PPE.

g) Check the fit

When the selection has been made, the ‘fitting’ component should be put in place. The key is to fit each worker with PPE on an individual basis. At the time of fitting, show each worker how to wear and maintain PPE properly.

The calculated degree of protection will not be achieved in practice unless the PPE is worn properly at all times when the worker is at risk.

h) Perform regular maintenance and inspections

Without proper maintenance, the effectiveness of PPE cannot be assured. Maintenance should include inspection, care, cleaning, repair, and proper storage.

Probably the most important part of maintenance is the need for continuing inspection of the PPE. If carefully performed, inspections will identify damaged or malfunctioning PPE before it is used.

Wearing poorly maintained or malfunctioning PPE could be more dangerous than not wearing any form of protection at all. The workers have a false sense of security and think they are protected when, in reality, they are not.

i) Conduct education and training

No program can be complete without education and training to make sure PPE is used effectively. Education and training should cover why it is important, how to fit and wear PPE, how to adjust it for maximum protection, and how to care for it.

Emphasize the major goals of the program and reinforce the fact that engineering controls have been considered as the primary prevention strategy.

Workers and their supervisors will require education and training in when, where, why, and how to use the equipment to achieve the necessary level of protection.

j) Get support from all departments

Once the program is under way there will be a continuing need for involvement from management, safety and medical personnel, supervisors, the health and safety committee, individual workers, and even the suppliers of the chosen PPE.

k) Audit the program

As with any program or procedure implemented in an organization, the effectiveness of the PPE program should be monitored by inspection of the equipment and auditing of procedures.

Annual audits are common but it may be advisable to review critical areas more frequently.

WHY IS EVERYTHING ELSE WRONG

PURPOSE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personal protective equipment, commonly referred to as “PPE”, is equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses. These injuries and illnesses may result from contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards. Personal protective equipment may include items such as gloves, safety glasses and shoes, earplugs or muffs, hard hats, respirators, or coveralls, vests and full body suits.

OSHA does not mandate specific PPE for specific circumstances but OSHA does require that:

- employees identify hazards that require PPE
- select the appropriate safety equipment; and
- train workers on their proper use.

FACTS ABOUT PPE

A Last Resort

Compliance with the Management of Health and Safety at Work Regulations 1999 requires there to be a hierarchy of prevention and control measures where personal protective equipment should be used only as a last resort.

Engineering controls and safe systems of work should be used wherever possible instead.

Unfortunately, some employers encourage employees to use PPE without ever considering the introduction of prevention and control measures that could eliminate the use of PPE. This leads to a number of problems:

- PPE protects only the person wearing it, whereas measures controlling the risk at source can protect everyone at the workplace.
- Theoretical maximum levels of protection are seldom achieved with PPE in practice, and the actual level of protection is difficult to assess.
- Protection is often ineffective because the PPE is not suitable, incorrectly fitted, not properly maintained, and may be used improperly.
- PPE is often designed for men, and for women workers which may introduce serious hazards and discomfort.
- PPE is also often designed without considering the reality that both male and female workers come in all shapes and sizes, that parts of the body to be protected vary considerably, that many workers wear spectacles, some have beards and stubble, and so the PPE may fail due to not fitting correctly.
- PPE may restrict the wearer by limiting mobility or vision, or by requiring additional weight to be carried, causing musculo-skeletal problems. As well as the health and safety problems that this may cause, it can also lead to a ‘blame the worker’ culture when the PPE is discarded because of the discomfort that it can cause.

Workers Hazards

Yet even where engineering controls and safe systems of work have been applied, it is possible that some hazards might remain. These hazards may lead to

injuries to the:

- lungs, for example, from breathing in contaminated air
- head and feet, for example, from falling materials
- eyes, for example, from flying particles or splashes of corrosive liquids
- ears and hearing from noise
- skin, for example, from contact with corrosive materials or biological substances, or chemical substances that can be absorbed through the skin or hands, feet or head from extremes of heat or cold.

Sometimes, PPE is needed in these cases to reduce the risk.

CAUSES OF PPE FAILURES

- **Inadequate assessment by the employer ‘** Failure of the employer to properly assess hazards can lead to workplace injuries, ranging from head trauma to chemical exposures.
- **Poorly fitted PPE ‘** in order for PPE to work properly, it should fit properly, It is particularly important when working with hazards such as heat, respiratory irritants, and chemicals.
- **Improper PPE usage ‘** Eye protection can be aggravating and gloves can limit dexterity. Workers often find respiratory protective equipment uncomfortable and fell that it interferes with vision and communication. However, it is important to understand that the proper usage of PPE is essential for worker safety and well-being.
- **Insufficient worker training ‘** employers often fail to provide detailed training to workers on the proper use of PPE.

The **training** should include:

1. How to inspect PPE
2. When to use PPE
3. How to wear and adjust PPE
4. Limitations of PPE
5. How to remove, maintain, and store PPE safely
6. Identifying and replacing damaged and worn PPE

PRECAUTIONS IN THE USE PPE

PPE programs are often plagued by the belief that once a piece of equipment is put on, the worker is totally protected. This is a false sense of security. Basic safety principles, such as housekeeping and engineering controls, must not be ignored.

PPE is designed to meet criteria which is only an approximation of real working conditions. PPE should not be used when hazards are greater than those for which that specific piece of equipment is designed. When it comes to the evaluation of potential hazards, uncertainties need to be taken into account. Unfortunately, PPE design criteria cannot cover all eventualities.

Wearing PPE should not in itself create a greater danger. For example, gloves prevent skin damage while working with moving equipment, but can create an entanglement hazard when working with a drill press or metal lathe.

Most regulatory agencies require that PPE not be used unless the employer has

taken all the necessary measures in terms of engineering controls, work practices, administrative controls, and hygiene to control the hazard.

Vigilance, diligence and adherence to these PPE precepts will lead to firstly, were safety and security for employees and secondly to a higher bottom line of the business.