



PPE & Workplace Safety

Why PPE is the *Last Line of Defence!*

The majority of workplace injuries are avoidable due to industrial accidents.

You name it: manufacturing, construction, engineering, oil & gas, retail, hospitality etc.

- So why are injuries so frequent if they may be avoided?
- And how have certain businesses significantly decreased the number of injuries they have?

Unbelievably, safety footwear or other PPE's are not the solution. Furthermore, PPE isn't your primary line of defence against harm.

Instead, the best way to lower workplace injury rates is to re-evaluate & rebuild your safety program utilising a hierarchy of controls.

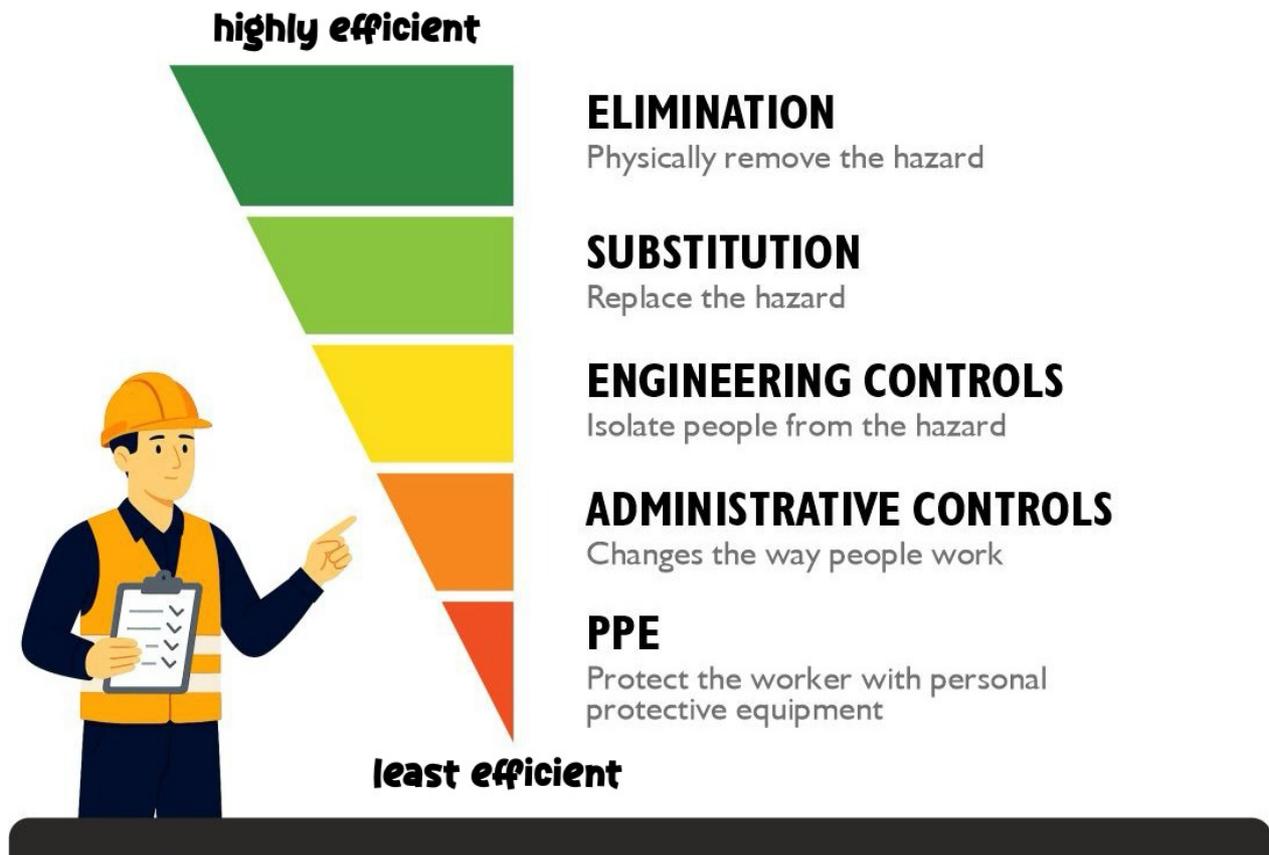
REDUCING + ELIMINATING INJURIES

The hierarchy of controls outlines the process you can follow to reduce or eliminate the risk of injuries in workplace.

This process begins with the most effective approach, which is eliminating hazards all together when possible, and offers other tactics in decreasing order of effectiveness, ending with PPE which can prevent & reduce remaining hazards.

It is important to follow the hierarchy in order, starting from the most effective, rather than *choosing the easiest control measure*. And while these controls can be implemented in phases over time, multiple levels of hierarchy can be adopted simultaneously, depending on the company's logistical necessities.

LEVELS OF RISK CONTROL



Note: For a successful adoption of these measures, a thorough assessment of workplace hazards & the users current safety program is of utmost importance A customized safety program will help prioritize effective & actionable solutions at each stage.

Let's peep into control hierarchy & implementation thereof, starting from TOP.

>> ELIMINATION

HOW COULD A HAZARD BE ELIMINATED? Elimination is the process of removing hazards entirely from the workplace & is considered the most effective way to protect workers from injury as the hazards are no longer present. Hazards may be eliminated by altering where or how the task is done. When considering this option, ask yourself: can my workers perform this task more safely? For example:

- Redesigning a task such as moving it to ground level to eliminate a fall hazard
- Removing inflammable materials from areas where there is exposure to heat & fire

The AIM here is to design a workspace where workers are entirely removed from the hazard.

>>SUBSTITUTION

When a hazard cannot be removed from a worker's environment, substitution kicks in. Substitution is replacing materials or pieces of equipment with those that are less hazardous. When considering this option, ask yourself: can my workers use something less harmful to complete the same task? *For example;*

- *Replacing toxic chemicals, with less toxic substitute to minimize exposure*
- *Substituting sharp knives with box cutters to prevent & minimize cut injuries.*
- *Using mechanical instead of manual tools to avoid muscle strain*
- *Redesigning processes to remove hazardous equipment & substitute it with appropriate one to avoid injuries*

Before implementing substitution solutions, ensure you have considered all the implications & potential risks of the new material or tool to ensure you are not trading one hazard for another.

>> ENGINEERING CONTROLS (EC)

If a certain hazard cannot be eliminated or substituted, the next best option is to use EC. EC offer protection to workers by isolating them from hazards that can lead to injuries. When considering this option, explore choices that will make the workplace less dangerous for your workers, as you are unable to eliminate the hazard itself. This includes adding guards to machines with dangerous moving parts to safeguard arms, hands, fingers or foot from injury. ECs can also mean placing barriers, around hazardous machinery, so only trained workers have access.

Could an emergency stop be added to the equipment? Can a trigger grip be added that must be held to keep the machine running, so it stops the instant the worker lets go?

EC are a great way to reduce the risk of injuries when substitution & elimination is not an option. For successful adoption, however, workers still need to be aware of the risks & hazards around them, especially if working around or with hazardous machinery. This is where next step in the hierarchy becomes important.

>> ADMINISTRATIVE CONTROLS

Administrative controls include things like operation-specific regulations, work schedules that reduce exposure to hazardous tasks, and systems that increase workers' hazard awareness. As such, administrative controls cover an exhaustive list of possibilities, including, but not limited to:

- *Visual guides for safe work procedures or standard operating procedures*
- *Easy access to PPE such as self-serve vending machines on worksites*
- *Warning signs, training programs, and safety checklists*

- *Emergency wash stations for chemical exposure*
- *Job-rotation schedules that limit hazard exposure*
- *Break schedules to improve workers' concentration*
- *Ensuring proper maintenance of equipment & tools*
- *Maintaining orderly & clean workspaces*

When considering this option, it is important to note that the value of this control is truly realized when implemented in conjunction with other measures. For instance, although you may substitute a more dangerous machine with a less hazardous one, the risk of injury is still present. Proper training, procedures, and guidelines on how to use the new less hazardous machine is necessary to avoid injuries. Similarly, for tasks where gloves are mandatory, the right type of gloves must be accessible & must be required to be worn at the appropriate time. All these are administrative controls & integral to the success of creating a safer workplace.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

At the bottom of the hierarchy, is your last line of defence, which is PPE.

Why is PPE at the bottom? Aren't Safety Footwear, gloves, helmets, and other PPE important to protect workers from the hazards? The answer is not a simple yes or no. ***PPE is considered the final shield when all other shields have failed.*** Safety team & users often forget to consider the other important control measures discussed above **when they rely solely on PPE.** This asks more of their PPE, because hazards are higher & they're fighting more hazards than they need to.

When we take a holistic approach that addresses gaps in all safety controls—not just PPE—***there are less hazards for PPE to fight. This often means increased productivity & lower costs, because there are fewer & less extreme hazards in the workplace.*** For example, if a potentially dangerous machine already has adequate safeguards in place to protect its operators from injuries, workers may be able to complete the same tasks more confidently & efficiently with PPE, and without the fear of getting seriously injured.



PERSONAL PROTECTIVE EQUIPMENT

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