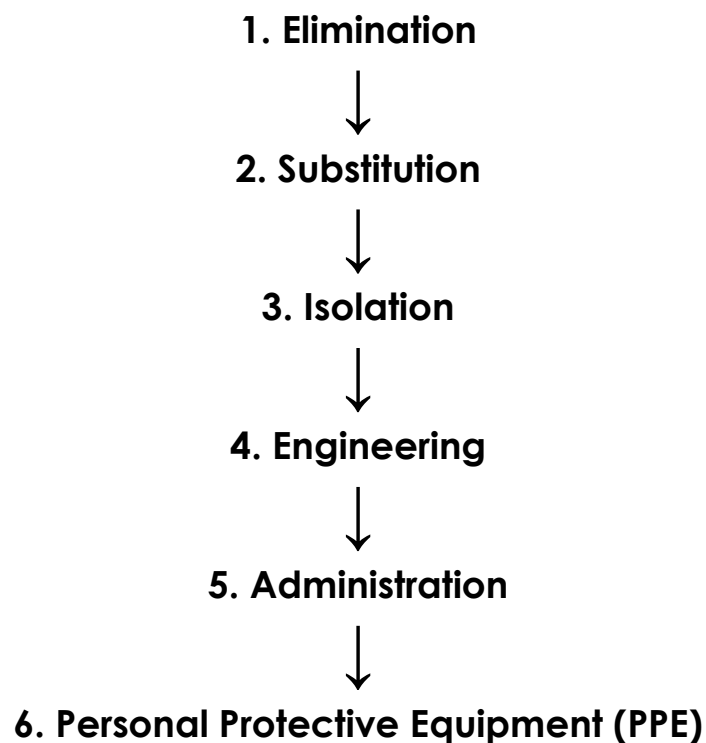


Hierarchy of Control

Hazard Control using the “Hierarchy of Control”

Controls should be determined according to the “Hierarchy of Control” system described below. The following control elements should be utilised in the order presented and where appropriate used in conjunction.



Elimination

As the title suggests, this control measure involves eliminating or removing the risk in its entirety. For example:

- Risk: High levels of manual handling when loading and unloading glassware onto trolleys from shelving.
- Control: Store glassware directly onto trolleys hence eliminating the need to unload and load from the shelves.

Substitution

This form of control involves substituting a safer process or material for the hazardous process/material identified. For example:

- Risk: Cleaning solution causing allergic reactions and nausea.
- Control: Substituting a less toxic or non-allergenic cleaning solution for the task.

Hierarchy of Control

Isolation

This control involves separating the hazard or hazardous work practice from employees other work areas. This may involve sectioning off the area by erecting barriers or by relocating either the hazardous work practice or the 'other' employees and their work practices. For example:

- Risk: Excessive noise emanating from machinery.
- Control: Enclosing the machinery or the personnel hence creating an isolating barrier between the hazard and the person by using a barrier.

Engineering Controls

This method of control involves designing and/or adding physical safety features to plant or equipment.

(i) Equipment and Workplace Design The provision of new and/or additional equipment or redesign of a workplace can be used to control identified hazards. For example:

- Risk: Animal handling.
- Control: Hoists. Slide Boards.
- Risk: A poor clerical workstation design resulting in a risk of injury to the back, neck, shoulder and wrist.
- Control: Re-design the workstation to recommended ergonomic specifications for the personnel including the provision of equipment such as slope- boards, document holders, foot stools and ergonomic chairs.
- (ii) Automation Fully or partially automating a process removes the need for, or reduces the risk of, performing a hazardous task. For example:
 - Risk: Manual handling in washing glassware process.
 - Control: Introduction of an automatic washing system.

(iii) Containment (ventilation, dilution, extraction) Containing or drawing away a hazard at the source so that personnel are not exposed. For example:

- Risk: Chemical fumes given off during cleaning, laboratory, or welding processes.
- Control: Construction of a local extraction system to remove the fumes at the source.

(iv) Guarding Guards must be provided when there is the potential for people to come into contact with hazardous situations to ensure that no part of the person (including hair, clothing etc) can be caught in the moving part. There are several different types of guards, movable/interlocked, fixed, and photoelectric beam. For example:

- Risk: Accessible high speed rotating parts on a machine
- Control: Placing appropriate guards to prevent access to the rotating parts.



Hierarchy of Control

Administrative Controls

This type of control is most effective when used in conjunction with measures mentioned above or as an interim control whilst more effective control measures are developed and implemented. It requires systems to be established or amended in order to control the risk presented. Most often it requires the assessment and modification of the task(s) performed. It may include measures such as:

- (i) Amendment or establishment of new Policy and Procedures. For example: developing documented safe work practices for a hazardous task, or implementing restrictive policy to prevent staff or students from coming in contact with identified hazards.
- (ii) The introduction or review of existing maintenance schedules for plant and equipment, or safe work practices. This measure is used to ensure that existing plant, equipment and procedures do not deteriorate to the point where they become hazardous.
- (iii) Limiting the exposure of personnel to elements that are only hazardous when they exceed a certain threshold. These types of hazards can include: noise, radiation, heat, chemicals, etc., and can be controlled by introducing elements as simple as job rotation.
- (iv) Providing training and information in safe work practices and other workplace health issues so that personnel can work safely.

Personal Protective Equipment (PPE)

PPE is not a particularly effective control method and should only be used:

- (i) When all other control measures are impractical; or
- (ii) In conjunction with other more effective, control measures.

It is important to select the correct PPE for the hazard identified, and advice should be sought in this regard if you are not sure ([Health and Safety](#) ext. 4900)

The above "Hierarchy of Control" provides a basic guide for controlling hazards in the workplace. Consult your SHR and attempt to find solutions by working your way down the hierarchy. Once appropriate controls are identified it is necessary to consult senior management and the staff that will be affected by the changes. This will reduce the possibility of oversights and help to gain the support of the staff in the implementation phase.