

# Hierarchy of Controls

In this toolbox talk, learn how to use the hierarchy of controls to minimize hazards on the construction site.

## Hierarchy of Controls

Construction sites are dangerous places, and workers can face numerous hazards at any given moment. As an employee, it's important to know how to protect yourself by using controls.

There are typically multiple safeguards that can be utilized to control a single hazard. This toolbox talk will explain a safety mechanism known as “the hierarchy of controls” and provide an example of how to evaluate and mitigate risk using this system.

### What is the hierarchy of controls?

The hierarchy of controls is a system used in the construction industry to minimize or eliminate exposure to hazards. It includes five levels of action to reduce or remove hazards, sorted from most to least effective.

The hierarchy is:

1. Elimination
2. Substitution
3. Engineering controls
4. Administrative controls
5. Personal protective equipment

### Hierarchy of controls levels

Each of the five levels of the hierarchy of controls has its own definition.

#### Elimination

The best solution in any dangerous situation is to physically remove the hazard from the jobsite. Elimination is the preferred control to protect workers because, when the hazard is no longer present, no exposure to risk or injury occurs.

## **Substitution**

The next best solution is to use substitution to replace the hazardous object, material, or process with a safer, less risky alternative. For example, this could involve swapping out a toxic material with an environmentally safe material.

## **Engineering controls**

Engineering controls are used to isolate workers from the hazard. When performing a hazardous task, evaluate if there are any engineering controls that you can implement to keep employees safer. This can include using physical barriers, equipment guards, and ventilation systems.

## **Administrative controls**

Administrative controls change the way people work, encouraging safe behaviors through training and company policies. For example, not all employees may need to be on a jobsite when a hazardous task is being performed. A business may establish a company policy to clear the work area except for necessary staff, limiting the number of employees at risk.

## **PPE**

[Personal protective equipment, or PPE](#), is physical gear used to protect workers from hazards. The task you are performing will determine what types of PPE you should wear.

Some common examples of PPE are:

- Gloves
- Steel toe shoes
- Respirators
- Coveralls
- Earplugs
- Hard hats
- Safety glasses

## **Hierarchy of controls examples**

Let's review how to use the hierarchy of controls with a real-life example. In this example, a painter will apply paint with a high level of volatile organic compounds (VOCs) to a metal surface.

### **Elimination example**

The application of paint could be accomplished by an automated process instead of by a worker. That would take the danger completely away from the painter himself.

### **Substitution example**

The painter can check to see if he can substitute the paint with one that has lower VOC levels. Chemicals and hazardous solutions pose a risk to the individual using them. If there are safer options available, you should always opt to use those instead.

### **Engineering control example**

The painter could use a variety of methods to help workers be more cautious and safe during application. A great way to protect the painter and other employees who are in the building during painting is to make sure there is proper ventilation to keep the toxic fumes at a minimum.

### **Administrative control example**

The painter can use administrative controls to ensure the exposure to hazardous substances is minimal. The length of time of exposure is important. Two painters can be hired so shift changes can be taken periodically.

### **PPE example**

The painter could use a few different PPE options to protect themselves from the hazardous fumes of the paint such as goggles, a respirator, and coveralls.

### **Remember the hierarchy and stay safe**

The hierarchy of controls and its five levels can be used to minimize or eliminate risk on the jobsite. Remember this safety mechanism the next time you're on the jobsite and follow the controls from top to bottom for best results.