# Hazard Prevention and Control: Workplan

After you've completed the necessary hazard and risk assessments you're ready to put your hazard control plan to work.

An effective hazard control plan (HCP):

1. Involves worker input.
2. Reduces or removes hazards.
3. Minimizes or eliminates risk.
4. Uses a hierarchy of controls and a hazard control plan to guide the selection and implementation of controls.
5. Considers controls needed in emergency situations and nonroutine activities.
6. Is evaluated to determine how well controls are working and if new/better controls exist.

### Step 1: Identify control options

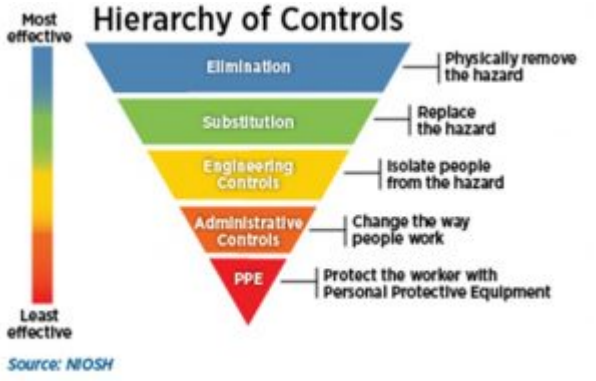
Collect, organize, and review information on control options.

- Review sources such as safety standards and guidance, industry consensus standards, National Institute for Occupational Safety and Health (NIOSH) publications, manufacturers' literature, and engineering reports to identify potential control measures. Keep current on relevant information from trade or professional associations.
- Investigate control measures used in other workplaces and determine whether they would be effective at your workplace.
- Get input from workers who may be able to suggest and evaluate solutions based on their knowledge of the facility, equipment, and work processes.
- For complex hazards, you may need to consult with safety and health experts.

### Step 2: Select controls

Select controls that are the most *achievable*, *effective*, and *permanent*.

- Eliminate or control all serious hazards (hazards that are causing or are likely to cause death or serious physical harm) immediately.
- Use interim controls while you develop and implement longer-term solutions.
- Select controls based on a hierarchy that emphasizes engineering solutions (including elimination or substitution) first, followed by safe work practices, administrative controls, and finally personal protective equipment.




- When possible, select equipment, machinery, and materials that are inherently safer.
- Check that controls don't directly or indirectly introduce new hazards. Examples:
  - Exhausting contaminated air back into a work space.
  - Hearing protection that makes it difficult to hear backup alarms.
  - Gloves that limit movement or decrease dexterity.
- Be prepared to use a combination of control options.

### Step 3: Develop and update a hazard control plan

A hazard control plan defines how the controls will be implemented.

- List the hazards needing controls in order of priority and address serious hazards first.
  - Temporary controls may be needed, but the overall goal are effective long-term controls.
- Assign responsibility for installing or implementing the controls to a specific person or persons.
- Establish a target completion date.
- Plan how you will:
  - Track progress toward completion.
  - Verify the effectiveness of controls after they are in place.

### Step 4: Select controls to protect workers during nonroutine operations and emergencies

The HCP must include provisions to protect workers during nonroutine operations and foreseeable emergencies. Examples:

- Develop procedures to control hazards that may arise during nonroutine operations (e.g., removing machine guarding during maintenance and repair).
- Develop or modify plans to control hazards that may arise in emergency situations.
- Get any equipment needed to control emergency-related hazards.
- Assign responsibilities for implementing the emergency plan.
- Conduct emergency drills to ensure procedures and equipment provide adequate protection during emergency situations.

Emergency examples:

- Fires and explosions
- Chemical releases and hazardous material spills
- Unplanned equipment shutdowns
- Infrequent maintenance activities
- Natural and weather disasters
- Workplace violence, terrorist, or criminal attacks
- Disease outbreaks (e.g., pandemic influenza) and medical emergencies

### Step 5: Implement selected controls in the workplace

Once hazard prevention and control measures have been identified, they should be implemented according to the hazard control plan.

- Implement hazard control measures according to the priorities established in the hazard control plan. Focus on, "*Worst First*".
- Go ahead and immediately implement any measures that are easy and inexpensive—e.g., housekeeping, removal of tripping hazards such as electrical cords, basic lighting—regardless of the level of hazard they involve.

### Step 6: Follow up to confirm that controls are effective

Track the progress of implementing controls. Once installed, check controls are and remain effective.

- Track progress and verify implementation by asking the following questions:
  - Have control measures been implemented according to the hazard control plan?
  - Have engineering controls been properly installed and tested?
  - Have workers been appropriately trained so that they understand the controls, including how to operate engineering controls, safe work practices, and PPE use requirements?
  - Are controls being used correctly and consistently?
- Conduct regular inspections (and industrial hygiene monitoring, if indicated) to confirm that engineering controls are operating as designed.
- Evaluate control measures to determine if they are effective or need to be modified.
  - Involve workers in the evaluation of the controls.
  - If controls are not effective, identify, select, and implement further controls.
- Confirm work practices, administrative controls, and use of PPE are being followed.
- Conduct routine preventive maintenance of equipment, facilities, and controls to help prevent incidents due to equipment failure.

Review the control plan at least annually and when conditions, processes, or equipment change to verify chosen controls are effective and still the best option.