Identify Control Options

Once you've identified and assessed hazards, it's time to choose, implement, and evaluate the effectiveness of the controls. Use the "hierarchy of controls" to help you choose the most effective controls. There's plenty of information available to help you prevent injuries and illnesses. Involve workers so that you can tap into their knowledge and expertise.

To-Do
☐ **Gather and evaluate information about controls for hazards in your workplace.**
☐ **Consult workers about the pros and cons of control options.**
☐ **Use the "hierarchy of contols" to prioritize control methods.**
☐ **Get outside expertise as needed, especially for complex hazards.**

Gather and evaluate information about controls for your identified hazards. You likely already have many controls to address the risks. Where the controls are missing or fall short, seek more information on possible improvements. You can use sources such as:

- Manufacturers' literature
- Service vendors and suppliers
- Local business associations and networks
- Workers' knowledge
- NIOSH publications (see https://www.cdc.gov/niosh/pubs/hc_date_desc_nopubnumbers.html)
- The OSHA website
- OSHA standards
- Industry consensus standards
- Professional safety and health organizations

As you identify control options and possible improvements, get workers' insights about the pros and cons. Ask them what has worked well and what hasn't. Find out whether proposed controls would make the job harder and whether they would actually be used. Workers often know the most about potential hazards and controls, since they are closest to them while performing work activities.

Pro Tip: Complex Hazards

Complex hazards may need special consideration. Examples include:

- Multiple energy sources (such as a power press with electrical and pneumatic energy)
- Equipment/machinery that is integrated and computer-controlled (such as automated systems with robots and machines)
- Hazards with both health and safety risks (such as chemicals that are both toxic and flammable)
- Equipment/machinery that needs difficult troubleshooting (such as with the power on or in spaces that are difficult to get in and out of)
- Vehicle travel in congested areas (such as construction areas with poor lighting and pedestrians)

Simple hazards can *become* complex hazards—for example, when work is done during bad weather, under pressure, or without proper personnel or equipment.

You may need to consult an outside expert. You can talk to a safety and health professional (such as a Certified Safety Professional or Certified Industrial Hygienist) or trade/industry groups. You can also use OSHA's On-Site Consultation program (https://www.osha.gov/consultation) at no cost.

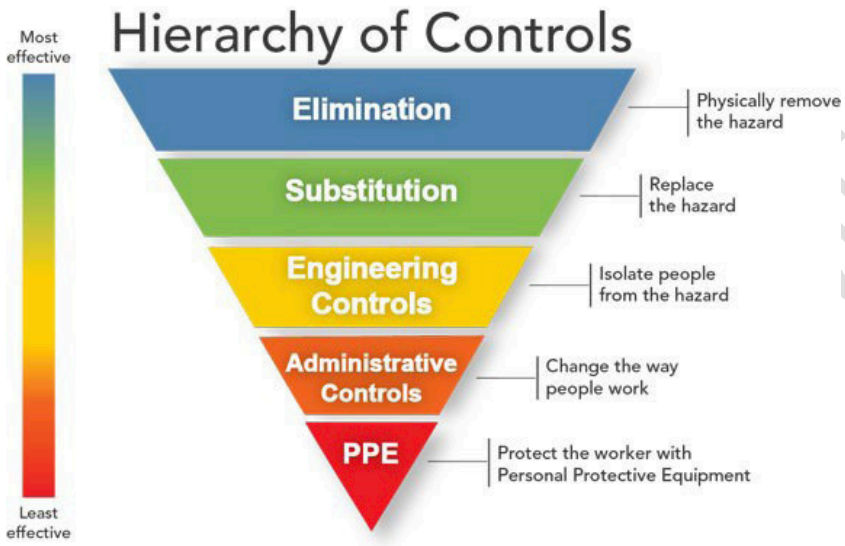
Activity: Identify control options for hazards in your workplace

Go back to the list of hazards you developed in Hazard Identification, Worksheet 5. This list shows how you prioritized the hazards based on the level of risk. This list of priorities help you focus on controls that offer the best opportunities for improvements.

In the table on page 4, list the hazards that need new or better controls. Start with hazards and controls that offer the best opportunities to improve safety and health. For each hazard, list current and potential new control(s). Figure out where each control falls in the "hierarchy of controls" (see box below) and identify where to find information about it. You will use this table for the next worksheet (Worksheet 2, Select Controls).

The Hierarchy of Controls

The hierarchy of controls is a tool for understanding and prioritizing control methods. Methods at the top of the hierarchy are generally more effective than those at the bottom. Often a combination of controls is used to manage hazards.



Source: NIOSH

Hazard	Current controls (indicate place on hierarchy of controls*)	Potential controls (indicate place on hierarchy of controls*)	Sources of information about controls
Example: Unguarded mechanical power press (risk of amputation)	Safety mat (EN) Warning signs (A) On-the-job training (A)	Fixed barrier guard (EN) Light curtain (EN) Safety talk on hazard and proper use of safeguarding (A) Job hazard analysis posted on the machine (A) Preventive maintenance (A) Training for workers on periodic testing of, and limitations of, the light curtain (A)	Mechanical power press manufacturer's manuals Light curtain manufacturer's manuals OSHA machine guarding manual Worker knowledge Consensus safety standards
Example: Unguarded mechanical power press (risk from flying particles)	Safety glasses (PPE)	Fixed barrier guard (EN)	OSHA machine guarding manual Worker knowledge
Example: Unguarded mechanical power press (risk from noise)	None	Hearing protection (PPE)	OSHA occupational noise exposure resources Worker knowledge

* EL = elimination S = substitution EN = engineering control A = administrative control PPE = personal protective equipment

Hazard	Priority for action (high, medium, low)	Current controls (indicate place on hierarchy of controls*)	Potential controls (indicate place on hierarchy of controls*)	Sources of information about controls
11	2	3	4	5
6	7	8	9	10
				6

* EL = elimination S = substitution EN = engineering control A = administrative control PPE = personal protective equipment