

# Identifying Hazard Control Options: Job Hazard Analysis

## Why Conduct a Job Hazard Analysis (JHA)?

A critical element of any effective safety and health program is a proactive, ongoing process to identify and assess hazards and hazardous situations in both commonly performed jobs and non-routine jobs (those performed infrequently or outside the workers' normal duties). A job hazard analysis (JHA), sometimes referred to as a job safety analysis, helps you identify and control unrecognized hazards, as well as hazards that might emerge when a new process or piece of equipment is introduced. Some OSHA standards require a JHA, including the Bloodborne Pathogens and Personal Protective Equipment (PPE) standards, but many are used by employers voluntarily as part of their safety and health program.



A job hazard analysis is an exercise in identifying what can go wrong during a job. Your goal is to discover the following:

- What are the potential consequences and worst case scenarios?
- How could an incident happen?
- What are other contributing factors?
- How likely is it that an incident will occur?
- How can the hazard(s) be controlled?

It's important that you build and train a team of workers and supervisors with diverse expertise and experiences to complete your JHAs. Bring in outside expertise from individuals or organizations if you need to, such as industry associations, insurance carriers, and OSHA's [On-Site Consultation Program](#).

For hazards that pose an immediate danger to an employee's life or health, employers must take immediate action to protect the worker. A JHA can be a first step.

## What Are the Steps to Prepare for a JHA?

Before conducting a JHA, create a plan:

- Gather your team
- Identify jobs that are candidates for JHAs
- Decide how you will record the results of the JHA
- Establish the process to follow up and address the hazards identified in the JHA

## Create a Plan for Your JHA<sup>1</sup>

There are many ways to complete a JHA. Below is a sample JHA plan that could be used in your workplace:

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<sup>1</sup> This publication does not alter or determine compliance responsibilities which are set forth in OSHA standards and the OSH Act.

## 1. Select and prioritize jobs to analyze

Start with either a job that frequently results in injuries or one where the potential injury could be severe. Ask workers which jobs are the most dangerous, review injury and illness records, and draw on previous work you've done to improve safety and health and prioritize hazards. Consider jobs that are new to your operation or have undergone changes in processes, procedures, or where new employees are working.

## 2. Analyze all steps of the job

Watch several different workers do the work activity, including special procedures that are not part of the normal routine. Break it into a series of smaller steps, until you have a list of all the steps from start to finish. You can reduce any worker concerns about this observation by clearly communicating to workers that this exercise is to help identify potential hazards and make the job safer, not to evaluate their performance. Taking photos or video may help break the job into steps. Consult with workers to ensure the list of steps you identified is accurate and representative of how the job is done. Check with multiple workers—you might be surprised by how different one person's description of a job is from another's.

## 3. Look at each step of the job for hazards

Identify the hazards that could occur before a job begins and at each step in the job. Think about previous injuries/illnesses, what could happen if things go wrong (possible injuries/illnesses), and the worst-case scenarios (that might result in a fatality or serious injury/illness). Common types of hazards to look for include:

- Slips, trips, and falls
- Impacts (struck-by)
- Mechanical (caught on, in, crushed, severe laceration, or amputation)
- Possible migration of material(s) to areas outside of the immediate work area
- Vibration and noise
- Toxic chemicals (inhaled, splashed to eyes, skin contact)
- Heat/temperature
- Flammability or explosive
- Pressurized vessels (tanks, piping)
- Electrical contact
- Ergonomic (lifting, pulling, twisting)
- Combustible dust (sugar, grain, aluminum)

## 4. Describe the hazards

Your hazard description should include:

- Where the operation occurs (the environment)?
- Who or what does it affect (the exposure)?
- What causes the hazard (the trigger)?
- What could happen (the consequence)?
- Any other contributing factors?

## 5. Select, install, maintain, and review controls

Consider how to change the job step(s) to eliminate the hazard. If the job step(s) can't be changed, determine how to protect workers from the hazard. Using the hierarchy of controls, select the control (or combination of controls) that will most effectively prevent the hazard from causing an injury.<sup>2</sup> Once controls are identified and installed, review each control with workers, have the workers attempt the job step(s) with the new controls in place, and gather their feedback. Continue to monitor job performance and workers' safety after implementing controls (e.g., make sure workers are not trying to bypass controls to do their work faster).

## 6. Review your job hazard analysis

It is important to review your JHA when there is a change in the job or if an injury or illness occurs on a specific job. Periodically review your JHAs to ensure they are still accurate and continue to identify hazards that were not identified in the initial analysis.

Below is an example description of hazards that could be found in a bakery. On the following pages are a completed and blank JHA template that you can use. It is important to note that work environments may differ and that the example provided below may not be representative of your specific work area(s). Additionally, the completed template is not meant to be a complete list of hazards and controls. An employer could bring in an outside professional to evaluate and recommend additional controls.

For more information, see OSHA's Job Hazard Analysis (OSHA 3071, 2002, revised):

<https://www.osha.gov/sites/default/files/publications/osha3071.pdf>

### Example description of hazards in a bakery

Date: \_\_\_\_\_ Evaluator: \_\_\_\_\_

#### Observing machine loading in the dough making process:

Loading flour into mixers: Using a manual pallet jack (manual forklift), employee #1 transports a pallet of 40-pound flour bags from the storage area to the mixing area (*environment*), drops the pallet, and returns to the storage area with the pallet jack. Employee #2 (*exposure*) manually lifts (*trigger*) each flour bag from the pallet (one at a time) and pours them into a mixing machine (*trigger*), generating a visible plume of dust that comes in contact with Employee #2's skin and can trigger dermatitis (*consequence*). Employee #2 begins coughing after inhaling the flour dust (*consequence*). It takes 15 minutes to load 6 bags of flour into the mixing machine. Employee #2 complains about back pain (*consequence*).

After emptying each bag of flour, Employee #2 places the empty bags by their feet (*trigger*), creating a tripping hazard (*consequence*), because they can't access the large trash receptacle. It was found that where the pallet had been positioned for unloading the bags of flour, access to the large trash receptacle was blocked (*contributing factor*). Employee #2 creates an additional step when they pick up the empty bags and place them in the receptacle (*trigger*), which creates another plume of dust (*consequence*). Employee #2 is again exposed to inhaling the dust and having large amounts of loose flour stick to their skin.

<sup>2</sup> OSHA's Hierarchy of Controls worksheet (PDF) can be found on OSHA's website at: [https://www.osha.gov/sites/default/files/Hierarchy\\_of\\_Controls\\_02.01.23\\_form\\_508\\_2.pdf](https://www.osha.gov/sites/default/files/Hierarchy_of_Controls_02.01.23_form_508_2.pdf).

## Job Hazard Analysis Form

<b>Location:</b> Grocery Store	<b>Department:</b> Bakery	<b>Job:</b> Baker
<b>Shift:</b> Morning	<b>Date:</b>	<b>Job Classification:</b> Associate Staff
<b>Operation/Job Process:</b> Dough Making		
<b>Assessment Members:</b> Safety Team, Bakery Manager, Union Representative		

#	Steps	Hazards	Examples of Controls
1	Employee #2 manually lifts 40-lb flour bags, one at a time, from pallet unassisted.	<ul style="list-style-type: none"> <li>• Repetitive motion and stress on lower back (ergonomic)</li> </ul>	<ul style="list-style-type: none"> <li>• Adjustable lift table</li> <li>• Two-person lifts</li> <li>• Frequent breaks</li> </ul>
2	Employee #2 pours the flour bags into mixing machines.	<ul style="list-style-type: none"> <li>• Process generates dust around mixer opening and Employee #2's breathing zone (inhalation)</li> <li>• Dust cakes on exposed skin (contact)</li> <li>• Pinch points for loose hair and clothing</li> </ul>	<ul style="list-style-type: none"> <li>• Lid for mixer</li> <li>• Local exhaust ventilation system</li> <li>• Appropriate respirator protection</li> <li>• Long sleeve clothing (tight fitting)</li> <li>• Gloves</li> <li>• Remove any accumulations of dust</li> </ul>
3	Employee #2 drops empty bag on the floor for removal later.	<ul style="list-style-type: none"> <li>• Tripping hazard and</li> <li>• Additional dust exposure when bags are removed (housekeeping, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Waste container near worker</li> <li>• Reposition process so pallet is near mixer and not blocking path to waste receptacle</li> <li>• Routine housekeeping inspection</li> </ul>

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<b>Operation/Job Process:</b>		
<b>Assessment Members:</b>		

#	Steps	Hazards	Examples of Controls

# Sign-off

Is the above information up to date and accurate?

## Worker

Yes     No

Name \_\_\_\_\_ Date \_\_\_\_\_

## Manager

Yes     No

Name \_\_\_\_\_ Date \_\_\_\_\_

## Supervisor

Yes     No

Name \_\_\_\_\_ Date \_\_\_\_\_