Module 2

RECOGNIZING SLIP, TRIP AND FALL HAZARDS

Purpose

This module prepares you to recognize slip, trip and fall hazards in your organization. It begins with an introduction to four risk factor categories. Next, it acquaints you with the key areas in your organization that contain slip, trip and fall hazards. You will learn about the various tools for identifying these hazards, and you will be introduced to a checklist that can help you identify slip, trip and fall hazards at your worksite.

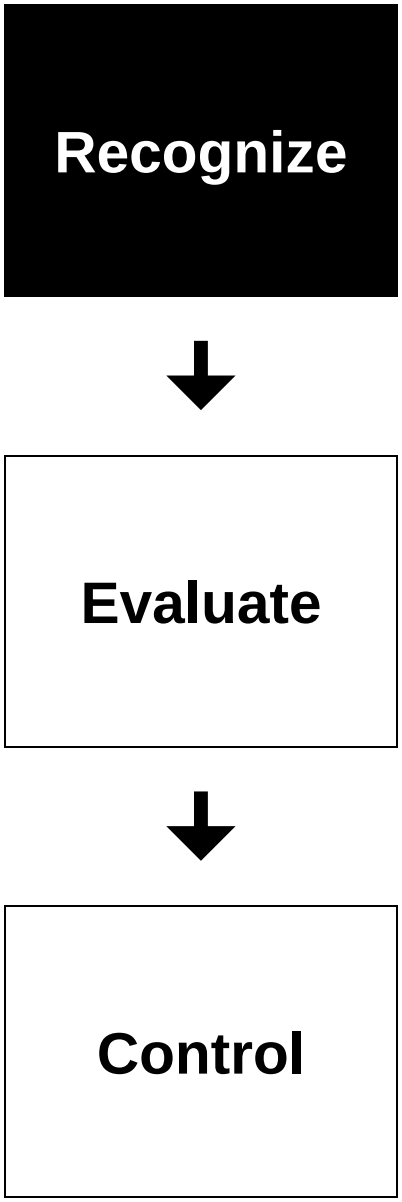
Objectives

After completing this module, you will be able to:

- Identify the four risk factor categories for slips, trips and falls.
- Identify the key areas in an organization that contain slip, trip and fall hazards.
- Identify the various tools you can use for identifying slip, trip and fall hazards.
- Use a checklist to identify slip, trip and fall hazards at your workplace.
- Recognize the slip, trip and fall hazards at your workplace.

Hazard Recognition, Evaluation and Control

Let's examine the first step in proactive slip, trip and fall management: recognition.



Reactive or Proactive Slip, Trip and Fall Management

There are two ways for an organization to manage slip, trip and fall prevention: reactively or proactively. Identify some characteristics of each approach.

Reactive	Proactive
List some characteristics of *reactive* slip, trip and fall management.	List some characteristics of *proactive* slip, trip and fall management.

1. Which way offers the best prevention for slips, trips and falls?

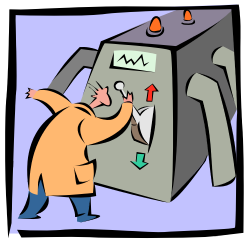
2. Which way does the typical organization manage slip, trip and fall prevention?

3. Which way describes how your organization generally manages slip, trip and fall prevention?

Four Risk Factor Categories

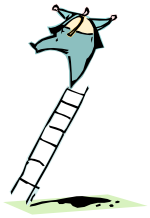
There are four categories of risk factors that you need to consider when recognizing slip, trip and fall hazards. Test your safety management knowledge by identifying the four categories.

Risk Factor Category 1



Risk Factor Category 2

Risk Factor Category 3



Risk Factor Category 4

Risk Factors Relating to the Environment

Factor	Explanation
Light	■ Poor lighting can create an environment in which employees can't clearly see their walking path.
Floors	■ Floors that are extremely smooth do not have adequate friction and can cause slips.
Floor coverings	■ Floor covering that is poorly secured or uneven can cause tripping.
Stairs and escalators	■ Uneven steps or steps with chips or irregularities can cause stumbling. Steps lacking visual cues from one step to another can cause confusion. A change in elevation containing one or two stairs can surprise a person and cause stumbling or falling.
Clutter	■ Clutter or obstructions on walking surfaces can cause tripping or stumbling.
Weather	■ Ice can make outdoor walking surfaces slippery. Snow can hide bumps and obstructions in the pathway. Rain, snow and glare from the sun can obscure visibility. Precipitation can make indoor walking surfaces slippery.
Sidewalks	■ Uneven or deteriorating sidewalks can cause tripping.
Ramps	■ Ramps without proper signage can throw a person off balance. Ramps without railings offer no protection if a person loses balance.
Parking lots	■ Curbs, wheel stops and speed bumps that are not clearly marked in contrasting colors are difficult to see and pose a trip hazard.

*What are some **environmental** risk factors at your worksite?*

Risk Factors Relating to Equipment

Factor	Explanation
Leakage	■ Oils and lubricants spilled or leaking from machinery can cause the floor to be slippery.
Misuse	■ A person operating equipment improperly or without using the appropriate restraints can fall from the equipment.
Faulty equipment	■ Equipment that fails to operate properly can cause a fall when it malfunctions.
Position	■ Equipment that is placed too close to walkways or that contains parts or levers that jut out into walkways can cause trips and falls.
Stability	■ Bulky loads or loads with an awkward center of gravity can topple and cause the operator to fall with it.
Footwear	■ Shoe type, material and condition can affect floor traction.
Seating furniture	■ Faulty or poorly adjusted furniture can cause falls.

*What are some risk factors relating to **equipment** at your worksite?*

Risk Factors Relating to Work Practices

Factor	Explanation
Emphasis on productivity at all costs	■ When employees feel pressure to produce, they may lack time to keep their work areas clean and free of clutter.
Poor housekeeping procedures	■ If an organization lacks well-written housekeeping procedures, employees may not take the initiative to keep their work space clean and free of clutter.
Cleaning methods	■ If cleaning materials are not appropriate for the type of contamination, cleaning can make floors more slippery.
Lack of training	■ Even if there are housekeeping procedures, employees who are not trained are unlikely to follow the procedures.
Lack of enforcement	■ Even with proper training, if an organization doesn't enforce safe operating and housekeeping procedures, employees are less likely to comply.
Lack of space	■ If adequate space is not provided for equipment, supplies, furniture and employees, the overcrowding can create tripping hazards.
Lack of signage	■ A hazardous area that is not marked, such as a wet floor or a sudden step, invites trips or falls.

*What are some risk factors relating to **work practices** at your worksite?*

Risk Factors Relating to the Individual

Factor	Explanation
Rushing	■ A person who is rushing may lose traction on a slippery floor or may fail to see a hazard or obstruction on the floor.
Sloppiness	■ An employee who is messy and fails to pick up spills and dropped items creates a hazard.
Age	■ Balance and flexibility diminishes with age, making a person more likely to fall.
Vision	■ A person with poor vision may not see a flaw or obstruction on the walking surface.
Choice of footwear	■ Improper footwear can cause slipping.
Fatigue or stress	■ A person who is tired or stressed may not see a flaw or obstruction on the walking surface, or may misjudge the extent of the hazard.
Inattentiveness	■ A person who is busy talking, using their cell phone or otherwise preoccupied may not notice a flaw or obstruction on the walking surface.
Failure to use safety equipment	■ Failure to use handrails or other safety equipment can cause a person to slip or fall.
Carrying items that obstruct the view	■ Carrying objects that block a person's forward vision may cause that person to overlook a hazard on the walking path.
Opportunism	■ A person can take advantage of a hazard to initiate a lawsuit.

*What are some of the **individual** risk factors at your worksite?*

Where Do Hazards Lurk?

Slip, trip and fall hazards have a tendency to lurk in plain sight. Hazards are there, but because employees see them day after day, they become invisible. To manage slips, trips and falls proactively, it is important to recognize the hazards and their hiding places. Following are areas where there is danger for slips, trips and falls. Encourage your employees to help you identify key areas of risk.

Hiding Place	What to Look For
Parking lots	■ Free of uneven surfaces? ■ Adequately lit? ■ Speed bumps and tire stops clearly marked? ■ Free of holes and divots? ■ Free of snow and ice? ■ Free of loose gravel? ■ Designated pedestrian walkway?
Sidewalks	■ Free of uneven surfaces? ■ Adequately lit? ■ Free of snow and ice? ■ Free of fallen timber/debris? ■ Free of loose gravel? ■ Free of upheaval?
Building entrances (including ramps and stairways)	■ Free of clutter and obstructions? ■ Adequately lit? ■ Entrance threshold and walking surface at same elevation or, if not, clearly marked and signed?
Floors	■ Correct floor type? ■ Free of contaminant build-up? ■ In good condition, free of loose finishes, holes and cracks? ■ Spill procedures in place and known to all? ■ Warning signs available where needed? ■ Free of electrical cords and computer wiring?
Floor coverings	■ Carpets or mats properly anchored to floors? ■ Carpets or mats free from rolling or bunching up? ■ Carpets or mats in good condition?

Where Do Hazards Lurk?—continued

Hiding Place	What to Look For
Floor and wall openings	■ Properly protected with cover or guard rail? ■ Proper fall protection equipment available? ■ Properly marked?
Stairwells and escalators	■ In good condition? ■ Stairs of uniform height and shape? ■ Visible edges on stairs? ■ Free of objects/clutter? ■ Adequately lit? ■ Proper handrails/guardrails? ■ Nosing visible and in good condition? ■ Single steps or slightly elevated surfaces noticeable/signed?
Aisles and passageways	■ Free of clutter and debris? ■ Free of protrusions? ■ Adequately lit?
Docks and ramps	■ Adequately lit? ■ Properly marked? ■ Proper guardrails where required? ■ Metal dock plates in good condition? ■ Abrasive and non-skid surface coatings used? ■ Walkways marked with yellow paint to control traffic? ■ Ramp slopes gradual?
Ladders	■ Free of cracks, loose rungs and sharp edges? ■ Free of dirt and grease? ■ Employees informed of proper use? ■ Correct ladder for intended use? ■ Tall enough? ■ Slip-resistant grip?
Furniture	■ Good condition? ■ Appropriately used (e.g. for seating, not standing)?

Methods for Recognizing Hazards

There are a variety of methods you can use to recognize hazards. Which does your organization use?

Method	Example	Already Use?		Will Start Using?	
		Yes	No	Yes	No
Proactive safety systems	■ Safety inspections	☐	☐	☐	☐
	■ Job safety observations	☐	☐	☐	☐
	■ Job hazard analyses	☐	☐	☐	☐
Analysis of incidents	■ Incident investigations	☐	☐	☐	☐
	■ Identification of troubling trends	☐	☐	☐	☐
	■ OSHA logs	☐	☐	☐	☐
	■ Insurance claims	☐	☐	☐	☐
	■ First aid logs	☐	☐	☐	☐
	■ Workers' compensation claims	☐	☐	☐	☐
	■ Employee complaints or suggestions	☐	☐	☐	☐
Measure against published standards	■ OSHA sub-part D	☐	☐	☐	☐
	■ NFSI Slip-Resistance Standard	☐	☐	☐	☐
	■ ASTM Standard for Safe Walking Surfaces	☐	☐	☐	☐
	■ OSHA guidelines for foot protection	☐	☐	☐	☐
Constant vigilance	■ Supervisor vigilance	☐	☐	☐	☐
	■ Employee vigilance	☐	☐	☐	☐
	■ Hazard watch teams	☐	☐	☐	☐
	■ Surveillance cameras in problem areas	☐	☐	☐	☐

Case Studies: Recognizing Hazards

Directions: Your facilitator will show a series of slides. Review each slide, then in your groups, identify the slip, trip and fall hazards that are present in each scene.

Case Study 1

Case Study 2

Case Study 3

Case Study 4

Case Studies: Recognizing Hazards—continued

Directions: Your facilitator will show a series of slides. Review each slide, then in your groups, identify the slip, trip and fall hazards that are present in each scene.

Case Study 5

Case Study 6

Case Study 7

Case Study 8

Case Studies: Recognizing Hazards—continued

Directions: Your facilitator will show a series of slides. Review each slide, then in your groups, identify the slip, trip and fall hazards that are present in each scene.

Case Study 9

Case Study 10

Case Study 11

Case Study 12

Case Studies: Recognizing Hazards—continued

Directions: Your facilitator will show a series of slides. Review each slide, then in your groups, identify the slip, trip and fall hazards that are present in each scene.

Case Study 13

Case Study 14

Case Study 15

Case Study 16

Checklist for Recognizing Slip, Trip and Fall Hazards

Work Area: _____ **Date:** _____

ITEM

1. General Work Environment	OK?	CORRECTIVE ACTIONS
• Documented, functioning housekeeping program in place	_____	_____
• All workstations clean, sanitary and orderly	_____	_____
• Adequately lit	_____	_____
• Work surfaces kept dry	_____	_____
• Spills cleaned up immediately according to proper procedures	_____	_____
• Combustible scrap, debris and waste stored safely and removed from worksite properly	_____	_____
• Regulated waste discarded according to federal, state and local regulations	_____	_____
• Accumulations of combustible dust routinely removed from elevated surfaces	_____	_____
• Oily and paint-soaked waste disposed in metal waste cans	_____	_____
• Other: _____	_____	_____
• Other: _____	_____	_____
• Other: _____	_____	_____

Notes: _____

_____

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Checklist for Recognizing Slip, Trip and Fall Hazards—continued

Work Area: _____ **Date:** _____

ITEM 2. Aisles and Walkways	OK?	CORRECTIVE ACTIONS
• Kept clear	_____	_____
• Marked as appropriate	_____	_____
• Adequately lit	_____	_____
• Free of surface defects	_____	_____
• Mats and carpets properly anchored with no worn, frayed or upturned edges	_____	_____
• Wet surfaces covered with high-traction material	_____	_____
• Walkway free of protruding objects	_____	_____
• Walkway free of cords, cables wiring, open drawers and other obstacles	_____	_____
• Spills cleaned up immediately	_____	_____
• Slight changes in elevation clearly identifiable	_____	_____
• Adequate headroom	_____	_____
• Guardrails provided when walkway is elevated	_____	_____
• Bridges provided over conveyers and similar hazards	_____	_____
• Other: _____	_____	_____
• Other: _____	_____	_____

Notes: _____

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Checklist for Recognizing Slip, Trip and Fall Hazards—continued

Work Area: _____ **Date:** _____

ITEM 3. Stairs, Stairways and Ramps	OK?	CORRECTIVE ACTIONS
• Adequately lit	_____	_____
• Generator or battery powered emergency lighting available	_____	_____
• Handrails on all stairways with four or more risers and on ramps	_____	_____
• Stairways at least 22 inches wide	_____	_____
• Stairs that change direction have landing platforms	_____	_____
• Stairs angle no more than 50 and no less than 30 degrees	_____	_____
• Stairs of uniform size and shape	_____	_____
• Steps have slip-resistant surface and nosings	_____	_____
• Handrails between 30 and 34 inches from the leading edge of stair treads	_____	_____
• Handrails located at least 3 inches from the wall they are mounted on	_____	_____
• Stair bottom and top clear of swinging doors	_____	_____
• Other: _____	_____	_____
• Other: _____	_____	_____

Notes: _____

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Checklist for Recognizing Slip, Trip and Fall Hazards—continued

Work Area: _____ **Date:** _____

ITEM		
4. Escalators	**OK?**	**CORRECTIVE ACTIONS**
• Handrail is easy to hold	_____	_____
• Escalator safety procedures posted at every escalator	_____	_____
• Step nosings marked in a bright color	_____	_____
• Under-step lighting at top and bottom landings to provide visual indicator of start and end of escalator ride	_____	_____
• Side clearance between step and sidewall is no more than 3/16 inch	_____	_____
• Sidewalls made of low-friction material so that shoes will not stick on them	_____	_____
• Emergency shutoff buttons are located at top and bottom of every escalator	_____	_____
• Sensory devices are installed that detect foreign objects and shut off the escalator automatically	_____	_____
• Other: _____	_____	_____
• Other: _____	_____	_____

Notes: _____

_____

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_____

Checklist for Recognizing Slip, Trip and Fall Hazards—continued

Work Area: _____ **Date:** _____

ITEM 5. Floor and Wall Openings	OK?	CORRECTIVE ACTIONS
• Openings guarded by a cover, guardrail or equivalent (except at entrance to stairways or ladders)	_____	_____
• Toeboards installed around the edges of permanent floor openings	_____	_____
• Skylight screens constructed and mounted to hold at least 200 pounds	_____	_____
• Grates and similar covers over floor openings designed so that foot traffic or rolling equipment will not get caught	_____	_____
• Manhole covers, trench covers and similar covers, plus their supports carry a truck rear axle load of at least 20,000 pounds when subject to vehicle traffic	_____	_____
• Other: _____	_____	_____
• Other: _____	_____	_____

Notes: _____

Checklist for Recognizing Slip, Trip and Fall Hazards—continued

Work Area: _____ **Date:** _____

ITEM

6. Elevated Surfaces	OK?	CORRECTIVE ACTIONS
• Signs posted showing elevated surface load capacity	_____	_____
• Guardrails on surfaces elevated more than 30 inches above floor or ground	_____	_____
• Elevated surfaces provided with 4-inch toeboards	_____	_____
• Permanent means of access and egress provided to elevated storage and work surfaces	_____	_____
• Required headroom provided	_____	_____
• Material on elevated surfaces placed to prevent it from tipping, falling, collapsing, rolling and spreading	_____	_____
• Dock boards or bridge plates used when transferring materials between docks and trucks or rail cars	_____	_____
• Other: _____	_____	_____
• Other: _____	_____	_____

Notes: _____

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Checklist for Recognizing Slip, Trip and Fall Hazards—continued

Work Area: _____ **Date:** _____

ITEM		
7. Ladders and Scaffolding	**OK?**	**CORRECTIVE ACTIONS**
• Portable step ladder height 20 feet or less	_____	_____
• Portable step ladder equipped with a metal spreader or locking device	_____	_____
• Single ladder height 30 feet or less	_____	_____
• Extension ladder height 60 feet or less	_____	_____
• Fixed ladder height 30 feet or less—after 30 feet, landing platforms every 30 feet	_____	_____
• Fixed ladders over 20 feet equipped with a cage	_____	_____
• Ladders and scaffolds free of cracks, loose rungs and sharp edges	_____	_____
• Ladders and scaffolds free of dirt and grease	_____	_____
• Ladders and scaffolds have slip resistant grips	_____	_____
• Employees are following safe standards and procedures	_____	_____
• Footing on scaffolding sound, rigid and capable of carrying maximum load	_____	_____
• Scaffolding capable of carrying 4 times its maximum load	_____	_____
• Other: _____	_____	_____

Notes: _____

Checklist for Recognizing Slip, Trip and Fall Hazards—continued

Work Area: _____ **Date:** _____

ITEM

8. Parking Lots and Sidewalks	OK?	CORRECTIVE ACTIONS
• Kept clear of fallen timber/debris and loose gravel	_____	_____
• Curbs and ramps properly color coded	_____	_____
• Clear of snow and ice	_____	_____
• Speed bumps and tire stops clearly marked	_____	_____
• Adequately lit	_____	_____
• Free of surface defects	_____	_____
• Free of upheaval	_____	_____
• Fluids cleaned up immediately	_____	_____
• Slight changes in elevation clearly identifiable	_____	_____
• Guardrails provided when walkway is elevated	_____	_____
• Other: _____	_____	_____
• Other: _____	_____	_____

Notes: _____

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Note: A blank copy of this all of these checklists is on the *Tools and Resources* USB drive that came with your Participant Guide.

Planning for Your Business

Directions: Based on what you've learned in this module, what will you do back on the job?

1. Identify two or three actions you will take when you return to your worksite. You can select from the actions listed below, or identify your own.
2. In addition, identify the potential barriers you might encounter in taking these actions.
3. Then list ideas for overcoming the barriers you've identified.

Possible Actions

- ❒ Share the four categories of slip, trip and fall risk factors with your management team. Use the information on Pages 5 through 8 to guide you. Encourage your managers to be aware of these risks in their units or departments.
- ❒ Using Page 11 as a guide, determine the method(s) you should use when identifying slip, trip and fall hazards in your organization.
- ❒ Conduct a tour of your facility with an eye for identifying potential slip, trip and fall hazards. Use the checklists on Pages 15 through 21 as a guide.

Action Plan

Action	Potential Barriers	Overcoming the Barriers