

CONTROLLING SLIPS, TRIPS AND FALLS

Purpose

This module begins with a review of the hierarchy of controls as they relate to slips, trips and falls. Participants will be provided with a review of the hierarchy, then learn how to identify controls for slips, trips and falls at each of the hierarchy levels. They will learn the features to consider when selecting a floor, and ways to make existing floors more slip-resistant. They will learn how to keep their employees safe when they are working at heights. Since footwear is an important component of preventing slips, trips and falls, participants will learn how to choose a good slip-resistant shoe. Finally they will learn about fraud and how they can deter fraud from occurring in their organizations.

Objectives

After completing this module, participants will be able to:

- Identify the hierarchy of controls as it relates to slips, trips and falls.
- Identify the various floor types and their corresponding characteristics.
- Identify three actions they can take to make their existing floors less slippery.
- Implement controls that make employees safe when they are working at heights.
- Determine how to select and recommend an appropriate shoe.
- Recognize the role that fraud plays in floor safety.

Time

105 minutes: 1:55 to 3:40 PM

Followed by a 10 minute break, 3:40 to 3:50 PM

Agenda (Instructional Strategy and Content Outline)

The following topics and activities are covered in this module. An estimate of the time needed to cover each section of the module appears in parentheses.

1. The Hierarchy of Controls—Presentation and Discussion (25 minutes)
2. Using Controls to get Less Slippery Floors—Discussion (10 minutes)
3. Using Controls to Prevent Falls—Presentation and Discussion (10 minutes)
4. Selecting a Slip-Resistant Shoe—Presentation and Activity (15 minutes)
5. Using Controls to Prevent Fraud—Presentation and Discussion (5 minutes)
6. Slip, Trip and Fall Prevention—Case Study (40 minutes)

Key Terms and Concepts

- The hierarchy of controls
- Engineering controls
- Administrative controls
- Personal protective equipment controls
- Factors in controlling slippery floors
- Ladder safety
- Fall arrest systems
- Slip-resistant shoes
- The role of fraud

Materials and Equipment

To prepare for delivering *Module 4*, you will need the following:

- Participant Guide and Facilitator Guide
- Flipchart, markers, and tape
- Laptop computer (PC) and LCD projector with wireless remote or overhead projector
- Overhead transparencies or PowerPoint slides: 4-1 through 4-21

Suggestions for Time Management

- Start promptly on time after break.
- For this entire chapter, it is not important to discuss every point on every page. Instead, encourage discussion that focuses on the most important points.
- If you are running short on time, you can do the case study at the end of the module as a large group discussion.

Cues

**25 Minute
Presentation and
Discussion**

**5 Minute
Presentation**

PPT 4-1

**PPT 4-2 and
PPT 4-3**

PPT 4-4

Question

Presentations and Activities

**1. The Hierarchy of Controls—Presentation and Discussion
(25 minutes)**

- Lead a 25 minute presentation and discussion in which you introduce participants to controlling slips, trips and falls. Allocate your time as follows:
 - Pages 1-3 (5 minute presentation)
 - Pages 4-9 (20 minutes of alternate presentation and discussion, spend roughly 5 minutes each on environment, equipment, work practices, and individual)

- Lead a 5 minute presentation in which you introduce participants to the control of slip, trip and fall hazards.

- Show PPT 4-1 and refer participants to Page 1 of Module 4, *Controlling Slips, Trips and Falls*.

- Show PPT 4-2 and PPT 4-3 to introduce the module objectives.

- Refer participants to Page 2. Show PPT 4-4 as you quickly point out that this module will cover the third and final step in proactive slip, trip and fall management: control.

- Refer participants to Page 3. Introduce slip, trip and fall controls with the following.
 - A control is a measure or an action that is taken to eliminate current hazards and to prevent future hazards.
 - There are three important controls.

- Ask: Does anyone know what the three types of control are?
 - Get ideas from a few participants.
 - When someone says “Engineering, Administrative and Personal Protective Equipment,” congratulate him/her.

PPT 4-5

- Encourage participants to take notes in the space provided on Page 3 while you give the following overview of each of the three types of controls:
- Show PPT 4-5 to introduce the definition of *engineering controls*.
- Emphasize that this is the preferred method of control for two reasons.
 - First, it attempts to eliminate the hazard altogether.
 - Second, engineering control is built into the system and doesn't rely on people to be effective.

PPT 4-6

- Show PPT 4-6 to present the types of engineering controls.

PPT 4-7

- Show PPT 4-7 to introduce administrative controls.
- Point out that this is the second most preferred method and explain:
 - Administrative controls don't eliminate hazards.
 - However, they reduce employee exposure to hazards.
 - Administrative controls are only effective if people do what they are supposed to do.

PPT 4-8

- Show PPT 4-8 to show the types of administrative controls.

PPT 4-9

- Show PPT 4-9 to introduce personal protective equipment as a control method.
- Point out that this is least preferred method of control.
 - It doesn't do anything to eliminate or reduce exposure to the hazard—it just provides protection from the hazard.
 - Furthermore, it is only effective if employees use it.

PPT 4-10

- Show PPT 4-10 as you present the various types of PPE.
- Refer participants to Pages 4 through 9.

Question

- Ask: Remember how earlier we identified four risk categories for slip, trip and fall hazards? Can anyone remember what they are?
- Get a few participant responses. The four risk categories are:
 - Environment.
 - Equipment.
 - Work practices.
 - Individual.
- Now let's look at some controls for these risk categories.
- Refer participants to Pages 4 and 5 to introduce them to control factors relating to the environment.
- Refer to the list at the top of Page 4 to remind participants what the risk factors relating to the environment are.
- Briefly present the controls on these two pages, then ask participants to discuss the following:
 - Which controls on this list do you do well?
 - Which controls do you wish you could do better?
 - Which controls do you have questions about?
- Continue the discussion as long as time permits.
- Refer participants to Pages 6 and 7 to introduce them to control factors relating to equipment.
- Refer to the list at the top of Page 6 to remind participants of the risk factors relating to equipment.
- Briefly present the controls on these two pages, then ask participants to discuss the following:
 - Which controls on this list do you do well?

- Which controls do you wish you could do better?
- Which controls do you have questions about?
- Continue the discussion as long as time permits.
- Refer participants to Page 8 to introduce them to control factors relating to work practices.
- Refer to the list at the top of Page 8 to remind participants of the risk factors relating to work practices.
- Briefly present the controls on these two pages, then ask participants to discuss the following:
 - Which controls on this list do you do well?
 - Which controls do you wish you could do better?
 - Which controls do you have questions about?
- Continue the discussion as long as time permits.
- Refer participants to Page 9 to introduce them to control factors relating to the individual.
- Refer to the list at the top of Page 9 to remind participants of the risk factors relating to the individual.
- Briefly present the controls on these two pages, then ask participants to discuss the following:
 - Which controls on this list do you do well?
 - Which controls do you wish you could do better?
 - Which controls do you have questions about?
- Continue the discussion as long as time permits.

10 Minute Discussion

2. Using Controls to get Less Slippery Floors—Discussion (10 minutes)

- Lead a 10 minute discussion in which you talk about the controls to prevent floor slipperiness.
- You’ll cover Pages 10 through 13 and the following topics in this discussion:
 - Selecting the right floor.
 - Floor types.
 - Making the best of existing floors.

PPT 4-11

- Allocate your time among these topics about evenly.
- Refer participants to Page 10. Show PPT 4-11 as you introduce participants to the features they should look for in a slip-resistant floor.
- After you present the features, lead a discussion of the following as time permits.

Question

- Ask: Is anyone getting new flooring? Can you influence the decision? What is your organization leaning toward?
- Refer participants to Pages 11 and 12. Point out that these two pages summarize the most common floor types, when they should be used and how to treat and maintain them.

Facilitator Note

- Don’t discuss every floor type and every characteristic, but engage participants in a discussion about their own floors and how they feel their floors are performing.
- The following questions can guide your discussion, or use your own questions.

Question

- Ask: Would anyone like to share what kind of floor they have in their organization’s lobby?

Question

- Ask: What kind of floors do you have in the main workshop of your organization?

Question**PPT 4-12**

- **Ask:** Does anyone have questions about the floors in their organization?
- Refer participants to Page 13. Show PPT 4-12 as you introduce the three things organizations can do to make the best of their existing floors.
- Don't discuss every point on this page, but engage participants in a discussion as time permits by asking them to share the following:
 - The type of floor treatments they use.
 - What their experience has been with their floor treatment.
 - What their experience has been with floor mats.
 - What their experience has been with skid strips.
- Close the discussion of floors by telling participants that a good, clean, slip-resistant floor goes a long way toward preventing slips, trips and falls in their organization.

10 Minute Presentation and Discussion

PPT 4-13

Facilitator Note

3. Using Controls to Prevent Falls—Presentation and Discussion (10 minutes)

- Facilitate a 10 minute presentation and discussion in which you discuss ways to prevent falls.
- Allocate the time approximately as follows:
 - 5 minutes to discuss ladder safety (Page 14).
 - 5 minutes to discuss fall arrest systems (Pages 15 through 17).
- Refer participants to Page 14. Show PPT 4-13 as you point out that there are four primary methods for controlling safety on ladders.
- These methods are listed at the top of Page 14. Note that the first method is an engineering control and the other three are administrative controls.
- Spend the remainder of your time on this page discussing what they can do at their organization to administer ladder controls.
- Remind participants that there is a copy of the Ladder Safety list on the *Tools and Resources* CD-ROM that came with their Participant Guides.
- Refer participants to Page 15. Begin a discussion of fall arrest systems by asking participants how many have employees who work regularly in high places?
- The number of people who answer this question affirmatively will tell you how to present these pages.
 - If most of the people in the room regularly use fall arrest systems, then treat Pages 15 through 17 as review pages and spend the time discussing questions or concerns about fall arrest controls or about their fall arrest systems.

PPT 4-14

- If most of the people in the room are not familiar with fall arrest systems, then present Pages 15 through 17 to the participants and answer any questions.

- Following is a suggested approach for the presentation.
- Use Page 15 to present the terminology relating to fall arrest systems.
- Refer participants to Page 16. Show PPT 4-14 to introduce the four components of a fall arrest system.
- Refer participants to Page 17 and introduce them to the other requirements of a fall arrest system.

PPT 4-15

- Show PPT 4-15 to introduce participants to the maximum arresting force allowed.

PPT 4-16

- Show PPT 4-16 to introduce participants to the maximum fall distance.
- Address participant questions and concerns.

**15 Minute
Presentation and
Activity**

**4. Selecting a Slip-Resistant Shoe—Presentation and Activity
(15 minutes)**

PPT 4-17

- Refer participants to Page 18. Facilitate a 15 minute presentation and activity that introduces participants to the criteria for choosing a slip-resistant shoe.

PPT 4-18

- Allocate your time as follows:
 - 5 minutes to introduce the characteristics of a slip-resistant shoe (Page 18).
 - 10 minutes for a small and large group activity.

PPT 4-18

- Show PPT 4-17 to introduce choosing a shoe.
- Refer participants to Page 18. Show PPT 4-18 as you introduce the criteria for choosing a shoe.
- Allow time for participants to ask questions and make comments.
- Keep PPT 4-18 on the screen as you facilitate the activity
- Break the large group into smaller groups of 4-5 participants.
- Instruct the group to examine their shoes and pick the person who has the best example of a slip-resistant shoe.
- Allow a few minutes for participants to determine their “finalist,” then bring all the finalists to the front of the room to present their shoes. Each should describe the features of his or her shoe that make it an effective slip-resistant shoe.
- After all the finalists present their shoes, the facilitator asks for applause to select the winner.
- Close by emphasizing that employee footwear is very important to the control of slips, trips and falls in the workplace. They should take footwear requirements very seriously in their organizations.

**5 Minute
Presentation and
Discussion****5. Using Controls to Prevent Fraud—Presentation and Discussion (5 minutes)**

- Facilitate a 5 minute presentation and discussion in which you introduce the role that slippery floors play in fraud.
- Refer participants to Page 19. Make the following points as you discuss this page:
 - Fraud is a perfect example of what can happen if an organization has unsafe practices and procedures.
 - The good news is that most slip, trip and fall incidents are caused by something other than fraud.
 - The bad news is that fraud still exists.
 - The National Floor Safety Institute has identified two kinds of fraud.

PPT 4-19

- Show PPT 4-19 to introduce the definition of hard fraud. Tell participants that hard fraud is characterized by the points listed in the left column on Page 19.

PPT 4-20

- Show PPT 4-20 to introduce the definition of soft fraud. Tell participants that soft fraud is characterized by the points listed in the right column on Page 19.

Question

- Ask: What is the best way to prevent fraud in your organization?
- Get a few participant responses. The main answer you are looking for is to have an excellent, legally defensible slip, trip and fall prevention strategy.
- Such a strategy deters hard fraud by making it difficult for plaintiffs to find a reason to sue.
- Such a strategy deters soft fraud by keeping employees safe and unhurt. If they are unhurt, they don't have that *opportunity* to exaggerate their condition.

40 Minute Case Study

6. Slip, Trip and Fall Prevention—Case Study (40 minutes)

- Facilitate a 40 minute case study in which participants will read about a situation, then complete a series of worksheets that allow them to recognize and evaluate the hazards in the situation, then identify controls.
- Allocate the time as follows:
 - 5 minutes to read the case study summary on Page 20.
 - 5 minutes for groups to answer the questions on Page 21.
 - 5 minutes for a large group discussion of the groups’ answers to the questions on Page 21.
 - 10 minutes for groups to select one hazard and evaluate it using the worksheets on Pages 22-23.
 - 5 minutes for a large group discussion of the how the groups evaluated their hazard.
 - 5 minutes for groups to answer the questions on Page 24.
 - 5 minutes for a large group discussion of the groups’ answers to the questions on Page 24.
- Break the large group into smaller groups of 4-5 participants each. Introduce the case study as follows:
 - Today you’ve learned how to recognize, evaluate and control hazards relating to slips, trips and falls.
 - Now you are going to apply what you’ve learned.
 - Pages 20 through 24 contain a case study.
 - In your groups, you will analyze this case study to recognize hazards, evaluate them and find ways to control them.
- Refer participants to Page 20. Read the summary aloud or designate a participant to read it.

Facilitator Note

- Refer participants to Page 21. Tell them they have 5 minutes to work in their groups to identify the hazards in this case.
- When time is up, call the groups back together and spend 5 minutes discussing the hazards they identified.
- Refer participants to Pages 22-23. Ask participants to pick one hazard from Page 21, then tell them they have 10 minutes to work in their small groups to evaluate this hazard. They can use Pages 22-23 to guide them.
- As participants work, walk around the room to see how they are doing and to answer their questions.
- When time is up, call the groups back together and spend 5 minutes discussing how they evaluated the hazard they selected.
- Refer participants to Page 24. Tell them that they will now have 5 minutes to identify some controls for this situation by answering the questions on Page 24.
- When time is up, call the groups back together and lead a 5 minute discussion in which participants share the controls they identified.
- At the end of the discussion, tell participants that this was a real situation that actually happened. NIOSH, through its FACE program, was asked to investigate this incident and provide recommendations to the companies.
- If you have time, you can share the following NIOSH recommendations regarding this case.
- **Recommendation 1:** Employers should ensure that all employees required to work from elevated work platforms understand the potential danger of a fall, and the proper methods of erecting, placing, securing, and using scaffolds and ladders.

- **Discussion of Recommendation 1:** Occupational Safety and Health Administration (OSHA) Safety and Health Standard 29 CFR 1926.451(e)(8) states that, "Scaffolds in use by any persons shall rest upon a suitable footing and shall stand plumb, also the casters or wheels be locked to prevent any movement." The employer should ensure that all employees understand the danger of working on scaffolding; this includes the necessity of locking casters or wheels. Employers should also instruct all employees to report all unsafe working conditions (e.g., the unlocked casters observed by the co-worker) to the supervisor. If the victim had locked the casters or the co-worker had reported this unsafe working condition, this fatality may have been prevented.
- **Recommendation 2:** Employers should ensure that appropriate guardrails and toeboards are installed on mobile scaffolding used for work at levels exceeding 10 feet above the ground or floor.
- **Discussion of Recommendation 2:** OSHA Safety and Health Standard 29 CFR 1926.451(a)(4) requires that guardrails and toeboards be installed on all open sides and ends of platforms more than 10 feet above the ground or floor. The work platform of the mobile scaffolding was 17 feet above the floor, and all four sides surrounding the platform were open. The employer should have equipped the mobile scaffolding with guardrails and toeboards before the platform was used.
- **Recommendation 3:** Employers should ensure that mobile scaffolding platforms are tightly planked.
- **Discussion of Recommendation 3:** OSHA Safety and Health Standard 29 CFR 1926.451(e)(4) requires that mobile scaffolding platforms be tightly planked for the full width of the scaffold. In addition to the hazard created by leaning an 8-foot wooden stepladder against the wall, the platform was only partially planked, creating an opening approximately 17 inches wide by 7 feet long. The employer should regularly inspect to ensure that all scaffolding meets the requirements established by the OSHA Safety and Health Standards (e.g., locked casters, installed guardrails, and tightly planked platforms, etc.).

PPT 4-21**Transition****10 Minute Break**

- **Recommendation 4:** In the event an employee is injured on the job, the employer should review, and revise if necessary, the safety rules and procedures, inspect the work site for unsafe working conditions, and initiate actions to ensure safe working conditions before work activities continue.
- **Discussion of Recommendation 4:** This fall is one of four falls experienced by employees of the contractor or sub-contractor at this specific job site (initiated October, 1986). Although the previous three falls did not result in death, the workers involved received severe injuries including fractures and lacerations. One of these workers is permanently paralyzed as a result of a fall. It is evident that safety conditions are poor at this specific work site; the employer should initiate immediate action to correct these unsafe working conditions.
- Refer participants to Page 25. Use PPT 4-21 to emphasize that this page provides an opportunity to identify actions they will take when they return to their jobs.
- As time permits, allow participants to identify some actions.
- Tell participants that, after break, they will have some time to prepare a plan for what they are going to do when they return to their jobs.

Take a 10 minute break.

