



# Preventing Slips, Trips and Falls

Strategies for Small Business  
Training Program

## FACILITATOR GUIDE



Achieve a competitive advantage through safety management.

Developed by the National Safety Council

In cooperation with the Occupational Safety and Health Administration  
and the National Floor Safety Institute

Funded by a Susan B. Harwood Grant

2006 – 1<sup>st</sup> Edition

## Making Our World A Safer Place



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The mission of the National Safety Council is to educate and influence people to prevent accidental injury and death.

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The mission of the National Floor Safety Institute (NFSI) is to aid in the prevention or slip and fall accidents through education training and research.



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# Preventing Slips, Trips and Falls Strategies for Small Business Training Program **OVERVIEW**

## ***Welcome . . .***

. . . to a training course developed by the National Safety Council's Occupational Safety and Health Services.

***The mission of the National Safety Council is to educate and influence people to prevent accidental injury and death.***

**Making Our World A Safer Place**



For more than 90 years, the Council has been accomplishing this mission through a global approach to safety and health issues, and a vast array of services and products. Through dozens of different programs and workshops, the Council's Occupational Safety and Health Services educates industry managers and safety and health professionals to improve the safety, quality, and production efforts of more than 10,000 organizations worldwide.

We are pleased to be the recipient of a Susan B. Harwood grant from the Occupational Safety and Health Administration (OSHA). Through this grant, we are able to present this *Preventing Slips, Trips and Falls* training program to you.

## About this Program

The *Preventing Slips, Trips and Falls* training program focuses on helping small businesses identify, evaluate and control the hazards in their workplaces that may cause slips, trips and falls. Designed to increase and improve participants' knowledge, skills and access to valuable resources, this training program will assist them in establishing systems that can help them prevent slips, trips and falls.

Program material is geared toward the small business owner, employer, manager, employee and/or their representatives who have responsibility for managing workplace slips, trips and falls; but who may have limited safety and/or training experience. The program addresses practical approaches to recognizing and controlling slip, trip and fall hazards and managing these hazards through comprehensive systems.

### Instructional Goals of the Program

During and as a result of the *Preventing Slips, Trips and Falls* training program, participants will:

- Identify the impact of slips, trips and falls on their workplaces.
- Recognize the various types of slips, trips and falls.
- Recognize the OSHA regulations and other industry standards relating to slips, trips and falls.
- Recognize the slip, trip and fall hazards at their workplaces.
- Conduct a baseline slip, trip and fall evaluation of their workplaces.
- Select controls for their organizations relating to slips, trips, and falls.
- Identify actions they can take to prevent slips, trips and falls when they return to their jobs.

## About this Program—continued

### Program Content

Content of this program reflects the needs and characteristics of small businesses and their workers, as well as effective training and education strategies resulting from NSC experience. The following modules of the program provide the structure for its delivery.

- Program Introduction
- Module 1: Introduction to Preventing Slips, Trips and Falls
- Module 2: Recognizing Slip, Trip and Fall Hazards
- Module 3: Evaluating Slip, Trip and Fall Hazards
- Module 4: Controlling Slips, Trips and Falls
- Module 5: Action Planning and Using Program Materials in Your Business

### Quality Based on Sound Instructional Design and Adult Learning Principles

Consistent with NSC's high quality training standards, this program is designed, developed and delivered to meet small business and worker needs through a performance-based training approach, using current instructional design and adult learning principles.

NSC uses the following principles in the design and development of its training programs.

- A systematic, research-based design and development process that includes the following phases to ensure instructional integrity from conception through delivery:
  - Phase 1: Conduct a project kick-off to define the needs, objectives and content of the program.
  - Phase 2: Create a design document, which gets refined in Phase #3.
  - Phase 3: Design and develop draft 1; which gets reviewed by NSC.
  - Phase 4: Develop a pilot draft.
  - Phase 5: Conduct a pilot test and determine revisions.
  - Phase 6: Develop final products.
- An interactive approach with balanced levels of information delivery and learner-centered, application activities that enhance skills.
- An emphasis on knowledge and skills transfer to the participants' worksites, including integration of job aids and suggestions for transferring new learning to work situations.

## About this Program—continued

- An integration of participant background, experience, and expertise in training activities.
- A review and application of previously learned concepts throughout the program.
- Program evaluation methods that include pilot testing of course materials and a post-course evaluation tool.
- Appropriate media that reflect the participants' needs and learning styles, setting, and objectives while considering available resources.
- Integration of a variety of learning methods such as realistic case studies, group discussions, and large and small group activities during the training to enhance learning.

### Instructional Strategy

An instructional strategy is a plan for what will be taught (content) and how it will be taught (process) to achieve program goals and objectives. All modules are designed and developed based on the following strategy, giving facilitators a blueprint of what must be done to achieve objectives.

#### *Pre-Instructional Activities*

- Identify and/or appeal to participant motivation for learning.
- Review module objectives and content.
- Relate outcomes to participant experiences/work setting.

#### *Information Presentation*

- Present information, including definitions and key concepts, with related small business examples in a logical sequence.
- Progressively build on information to integrate key concepts throughout the program.

#### *Learner Participation*

- Engage participants in interactive opportunities for problem solving and practice and feedback with newly learned concepts.
- Link all activities to support key objectives.
- Help participants link concepts to what they already know—during and at the end of each module.

## About this Program—continued

### *Evaluation of Learning/Testing*

- Measure a participant's knowledge, skill, and/or attitude change depending on the topic and desired outcome/objective.
- Implement a variety of different testing (informal and/or formal) mechanisms throughout the program. For example, participant completion of activities provides facilitators with regular opportunities to monitor their learning progress and offer direct feedback.

### *Application, Retention, and Follow-Through*

- Facilitate retention of new information by providing opportunities for participants to apply what they have learned during the module or program.
- Provide individual consultation and/or recommend other resources when participants need special assistance.

### **Instructional Methods**

Instructional methods are the way that instructional strategies are implemented—approaches and activities used by a facilitator to ensure that learning occurs. For example, if a strategy is to “gain the attention of a learner,” then a method might be to “ask the learner to list questions they have about module topics to be addressed.” A variety of methods, such as those listed below, support the instructional strategy of the *Preventing Slips, Trip and Falls* training program.

- Facilitator presentations (mini-lectures) with PowerPoint slides
- Small and large group discussions
- Small and large group learning activities
- Case studies (analysis and problem solving)
- Worksheets and checklists

### **Audience Profile**

In training development, audience (participant/learner) types, characteristics, and needs must be addressed in content examples and exercises so that content is interesting and appropriate to those in attendance. Content must be designed to match the interests, previous knowledge, and previous skills of participants so they are motivated in the learning experience and effective learning occurs.

## About this Program—continued

Participants who attend the *Preventing Slips, Trips and Falls* training program are likely to have a range of knowledge, skills, and experience in on-the-job safety practices. In general, participants who take this program are more likely to have had formal training on a specific job, and less likely to have had training on proactive safety systems. The following characteristics, including education, skills, experience, demographics, and pre-program attitudes, describe the average participant expected to attend the program.

### *Education/Knowledge, Skills, and Experience*

- Education ranging from high school to some college (Master's level is rare)
- Majority are experts in a specific job; work experience may range from new hires to employees who have been in the same job for many years
- Limited number of participants (approximately 5-10%) have had formal safety training; low level or no previous knowledge and skills in creating proactive safety systems
- Reading, English, and math skills at approximately a 7th grade level
- A low to moderate level of problem-solving skills

### *Demographics*

- Approximately 25% represent a diverse group of cultural backgrounds
- Average age is 35-40 years old
- Approximately 90% male; 10% female

### *Pre-Program Attitudes*

- Have a moderate to high level of motivation to learn about preventing slips, trips and falls
- Approximately 10% may be required to attend and have low interest in learning about preventing slips, trips and falls

## Note on Special Learning Needs

Facilitators may occasionally find that they have a participant in class with a special learning need, often evidencing itself with a difficulty in reading, writing, math, or problem solving. Reading may be difficult for an individual due to his/her education level, a learning disability, or a difficulty with language translation. It is also possible that a participant has trouble hearing or seeing. It is important to deal with these situations in a sensitive and proactive manner, helping to improve participant success in this program.

## About this Program—continued

### Testing Strategies

Learner progress should be tested to ensure that participants reach a desired level of competency.

#### *Knowledge-Based Testing*

Informal knowledge-based testing will occur during the program as participants answer questions posed in activities and by facilitators. As a result of their observation of participants' ability to engage in discussions, facilitators may need to provide individual consultation during the program. A formal, end-of-program knowledge-based test will not be used in the *Preventing Slips, Trips and Falls* training program.

#### *Application Testing*

Application testing will be informally implemented through observation by facilitators as participants complete learning activities. All learning activities (individual, pairs, small group, etc.) completed during the program, although not formally scored, provide facilitators with continuous opportunities to monitor knowledge and skills transfer. Facilitators should monitor participant progress during the program. As a result, facilitators may need to provide individual consultation to participants as the program progresses.

**NOTE:** Participant receipt of a “recognition of completion” certificate is based on attendance during the entire program. Certificates should be distributed at the end of the program.

## Delivery Considerations

Delivering the *Preventing Slips, Trips and Falls* training program in a way that complements a participant-centered, interactive design is critical to effective learning.

### Instructional Media (Products) and Equipment

An appropriate selection of media helps to achieve objectives, ensuring that the instructional strategy and methods are effectively implemented. Media communicate instructional messages to a learner and include materials, devices, and people through which information is delivered. For example, media may be a textbook, video, facilitator, piece of equipment, or participant manual.

The following media support the *Preventing Slips, Trips and Falls* training program.

- **Participant Guide.** This is a manual comprised of reference material and learning activities for small business employers and employees. Containing a program introduction and five main modules, it guides learners through the training with information that includes module purpose, objectives, and discussion points with note-taking space, as appropriate. The Participant Guide also contains reference materials, checklists and other appropriate learning resources.
- **Participant CD-ROM.** Each participant will receive a CD-ROM that contains a variety of tools and resources. This CD-ROM replaces the *Tools and Resources* section that appeared in the Participant Guide in previous years' grants.
- **Facilitator Guide.** This is the manual you are currently reading. It is a moderately-scripted guide for facilitators who will deliver the program to small business employers and employees in their service areas. The organization and content of the Facilitator Guide complements the organization and content of the Participant Guide (above).
- **PowerPoint slides.** These are visuals that support the facilitator's delivery and reinforce key learning points in the program. You have an electronic file of these slides on the facilitator CD-ROM. If you have a computer and an LCD projector, you can use the CD-ROM for your PowerPoint presentation.
- **Facilitator CD-ROM.** Included on this CD-ROM are the complete program contents for the Facilitator Guide, PowerPoint slides, and templates for the course evaluation and the completion certificate.

## Delivery Considerations—continued

### Class Size and Training Site Considerations

To achieve the total number of attendees per delivery identified in the grant, this course is designed for a maximum of 32 participants.

From an instructional perspective and to promote an interactive and effective learning experience, a maximum of 32 and minimum of 15 participants per delivery is optimal in each program. Running courses at less than 15 or more than 32 participants may negatively impact the quality of the learning experience by detracting from skills development and individual attention by facilitators to participants.

Facilitators need to adjust how activities are implemented if class size is near to the minimum or maximum number of participants. For example, with large groups of 32 participants, use smaller grouping arrangements in corners of a large room or breakout rooms.

To encourage comfort, interest, and group involvement, the program should be delivered at a site that can comfortably accommodate up to 32 participants in a U-shape, double U, or herringbone style setting. The program should *not* be conducted using a typical classroom setting (rows of chairs facing forward). Ample tabletop room for comfort and writing/work space is needed. Sites should be modern training facilities conducive to program delivery, including access to a projection unit.

### Characteristics of Chapter Facilitators: Delivery System

The following facilitation skills are necessary for successful program delivery. In addition to presenting information (platform skills) in a knowledgeable manner, facilitators must:

- Motivate participation.
- Direct participants' activity.
- Manage group process.
- Keep participants focused and involved.
- Process activities/learning experiences.

## Delivery Considerations—continued

### Suggestions for Effective Facilitating

There are many things a facilitator can do to keep participants on track, hold their interest, and provide them with a successful learning experience.

#### *General Suggestions*

- Emphasize to participants that the Participant Guide is more than just training materials. It is a resource book designed to be used on their jobs long after the class is over.
- Use every small group activity as an opportunity to assess participants and their understanding of the subject matter. For example, if a group identifies some answers that are incorrect or that show a lack of understanding of the content, use this to clarify the topic. Be sure to do this without putting the group down or embarrassing them.
- As you move through the program, keep participants informed of where they should be in their Participant Guides. You can do this by referring to every page, even if one is just a resource page.
- Have as many resources in the training room as possible. For example, having slipmeters available for demonstration can greatly enhance the participants' understanding of and ability to use slipmeters. Set these resources up at a demo table in the training room to enable participants to view them on their lunch and breaks.
- Consider grouping individuals so that each group contains a combination of novices and people with experience. One way to do this is to have them line up according to the amount of safety and health experience they have, then have them count off by the number of groups you need to have (example: count from 1-6 for six groups). Encourage the veterans to share their knowledge and experience with the novices.
- When participants speak, make sure they are loud enough so that everyone in the room can hear them. If there is a soft-spoken participant, the facilitator should repeat what the participant has said before responding.

## Delivery Considerations—continued

### *Suggestions for Managing Time*

- Start the class on time—in the morning, after breaks, and after lunch. State in the introduction your expectation for participants to be punctual. You will make a commitment to let them out on time if they will make the commitment to be in class on time.
- Remember that it is not essential for you to address every point on every page. Instead, discuss the big picture. Explain the key learning points, then move on.
- The Participant Guide is designed with many resource pages. When you prepare for the program, look at each module, then identify the content areas where you will dedicate the most time. The remaining content areas can serve as resources pages to participants.
- Pay attention when participants share their learning goals in the opening activity. During the day, if you find you are short of time, you can cut back on the pages/activities for which people did not have learning goals.
- For small group activities, have participants form groups during the first activity, then use the same groups all day. This saves time in two ways. First, you don't spend time re-forming groups for each activity. Second, groups will not spend time getting acquainted when a new group is formed.
- If you find you are running short of time, use these options to adjust activities.
  - Instead of covering a page with a lecture or discussion, ask participants to review the page, then ask questions. Take one or two questions, then move on.
  - Change a small group activity into a large group discussion, then cover only the most important learning points.
  - Change a lecture or activity into a resource page.

## Delivery Considerations—continued

### *Suggestions for Handling Large Groups*

If you have a large group (over 25 participants), it will be critical to manage the group effectively. Here are some suggestions that can keep large groups on track and moving quickly.

- For small group activities, assign one case study/problem per group (rather than assigning all problems to all groups).
- When debriefing activities, get only one or two ideas from each group (rather than getting all of their ideas).
- Identify the participants who are most skilled or experienced and enlist their help in keeping the group on track.
- If a discussion has gone on long enough and you need to move on, but people still have questions, offer to address them during break or lunch or after class.

### *Suggestions for Handling Small Groups*

A very small group (fewer than 12 participants) will present you with a different problem. You will be relying on the same people to participate over and over. Here are some suggestions to alleviate the pressure.

- Use fewer groups, but make the group size at least 5-6 participants.
- If you have 9 or fewer participants, consider using only one large group.
- You can be more informal in a small group. Consider sitting down at the table with participants and working with them.
- You will have more time flexibility with a small group. Consider teaching the course entirely based on their learning goals.
- To relieve participants of the pressure of so much participation, give them more time to do the action plans at the end of each module.

## Instructional Media/Program Materials—continued

### Tips for Using Your PowerPoint Presentation

When using an LCD projector and PowerPoint slides, you may find the following tips helpful. Except for starting the slide show, all commands must be performed while running the slide show in full-screen mode. For additional information on PowerPoint, visit <http://www.microsoft.com/powerpoint>.

To ...	Do ...
Start the slide show	<ul style="list-style-type: none"> <li>■ Select Slide Show on menu bar, then select View Show, or</li> <li>■ Press F5</li> </ul>
Perform next animation <b>or</b> advance to next slide	<ul style="list-style-type: none"> <li>■ Press N, or</li> <li>■ Enter, or</li> <li>■ Page Down, or</li> <li>■ Right Arrow, or</li> <li>■ Down Arrow, or</li> <li>■ The Space Bar</li> </ul>
Perform previous animation <b>or</b> return to previous slide	<ul style="list-style-type: none"> <li>■ Press P, or</li> <li>■ Page Up, or</li> <li>■ Left Arrow, or</li> <li>■ Up Arrow, or</li> <li>■ Backspace</li> </ul>
Go directly to any slide in show	<ul style="list-style-type: none"> <li>■ Press the number of the slide you want, then press Enter</li> </ul>
Display black or white screen <b>or</b> return to slide show from a black or white screen (helpful if you want to stop slide show temporarily)	For Black Screen: <ul style="list-style-type: none"> <li>■ Press B, or</li> <li>■ Press Period</li> </ul> For White Screen: <ul style="list-style-type: none"> <li>■ Press W, or</li> <li>■ Press Comma</li> </ul>
Change pointer from arrow to pen (lets you use the mouse to write directly on a slide—notes disappear when you stop the show)	<ul style="list-style-type: none"> <li>■ Press Control P, or</li> <li>■ Right click mouse, select Pointer Options, select Pen</li> <li>■ Hold down left mouse button to write whatever you want</li> <li>■ Press E to erase on-screen annotations</li> </ul>
Change pen color (see above)	<ul style="list-style-type: none"> <li>■ Press Control P, or</li> <li>■ Right click mouse, select Pointer Options, then select Pen</li> <li>■ Select Pen Color, then select desired color</li> </ul>
Change pointer from a pen back to an arrow	<ul style="list-style-type: none"> <li>■ Press Control A, or</li> <li>■ Right click mouse, select Pointer Options, then select Arrow</li> </ul>
Display shortcut menu during the show	<ul style="list-style-type: none"> <li>■ Press Shift F10, or</li> <li>■ Right click the mouse</li> </ul>
Get help	<ul style="list-style-type: none"> <li>■ Press F1</li> </ul>
End slide show	<ul style="list-style-type: none"> <li>■ Press Esc, or</li> <li>■ Press Ctrl + Break, or</li> <li>■ Press Hyphen. or</li> <li>■ Right click mouse, then select End Show</li> </ul>

## Preparing for the Program

The facilitator is responsible for carrying out the following preparation activities before delivering the training program. In some cases, depending on how Chapters are structured for training delivery, an administrative staff person may be responsible for certain activities.

**Reminder:** When facilitating a program or portion of a program for the first time, begin preparing far enough in advance so that you have adequate time to resolve questions, concerns, or problems. Review all program content in the entire Facilitator Guide and Participant Guide and PowerPoint slides.

- Ensure that all materials, training aids, and training sites are prepared.
- Read the entire Facilitator Guide. Be sure to read carefully the informational presentations and review instructional activities. Make appropriate content notes or write special reminders directly in the Facilitator Guide. Review all corresponding PowerPoint slides.
- If there are content areas with which you are unfamiliar, obtain and read appropriate materials. Additional reading includes resources listed on the *Tools and Resources* CD-ROM that accompanies the Participant Guide. Based on your need and interest, pursue additional learning related to occupational safety and health, especially that regarding the prevention of slips, trips and falls. It is important to have a strong base of knowledge about the content being presented, especially when participants have questions.
- Read the entire Participant Guide so that you are prepared to refer to corresponding material, especially activities, during program delivery.
- Rehearse key introductions, transitions, and conclusions, including the corresponding visual aids.
- Arrange to have the necessary equipment in the training room(s). Check all equipment before starting the training. Make sure it is operating properly and is set up the way you want it. For example, the overhead projector should be set up near the front of the room and all electrical cords should be out of your way and taped to the floor if necessary.
- Load the entire Facilitator CD-ROM that came with this program onto your C (hard) Drive. This will ensure that your PowerPoint presentations will run efficiently.
- Make sure that participant evaluations are printed and ready to distribute.
- Have a class roster prepared/available for each participant. The roster should include information that may be used for future networking purposes (name, address, phone number, e-mail address, etc.).

## Preparing for the Program—continued

- Have completion certificates prepared/available for each participant. A certificate template can be found on the CD-ROM that came with this training program.
- Be sure you are familiar with the facility and classroom. Check the following:
  - Emergency evacuation procedures.
  - Fire extinguishers.
  - Entrances/exits.
  - No smoking policy and approved smoking areas.
  - Light switches.
  - Rest rooms.
  - Drinking fountains.
  - Telephones.
  - Heating/air conditioning controls.
- Arrive at the training site at least an hour early on the first day of the training. This will give you sufficient time to make final changes to the room set-up and check the equipment. If you have never trained in that location, it will give you time to become acquainted with the room and facility.
- Take 10 minute breaks as indicated in the training program—approximately every 50-60 minutes. Participants need breaks to stretch and relax during a very full day of learning.
- Invite your OSHA representative to attend this training program. This person may even be willing to answer questions relating to ergonomics.
- Other:*
- Other:*

## Materials and Equipment List

Each facilitator is responsible for ensuring that the following materials and equipment are available/prepared prior to delivering the *Preventing Slips, Trips and Falls* training program. In some cases, depending on how Chapters are structured for training delivery, an administrative staff person may be responsible preparing materials and equipment.

- One Participant Guide* for each participant and facilitator (plus 2 extra copies for guests)
- All registration materials, including name tags or tents and a participant roster
- 2 rolls of masking tape
- Scissors
- Flipchart with flipchart paper
- Flipchart markers (mainly black, blue, green, purple, and brown—bring a few red and/or orange markers for accent)
- Electrical plug strip with surge protection
- Trip protection for electrical cord
- Watch, clock, and/or timer (for timing activities, breaks, and lunches)
- Laptop or computer station with projection unit to display PowerPoint slides; PowerPoint 97 or higher must be loaded on the computer
- Screen
- Evaluation forms
- Course completion certificates
- PowerPoint slides; 5 separate files
- The OSHA Handbook for Small Businesses, U. S. Department of Labor, Occupational Safety & Health Administration, #2209, 1996
- National Safety Council book titled Small Business Safety & Health Manual
- Optional:** A slipmeter for demonstration
- Optional:** One or more pairs of shoes that are appropriate for preventing slips and trips

## At-a-Glance Training Schedule

The training schedule below is recommended for use in delivering the *Preventing Slips, Trips and Falls* training program.

Module #	Module Title	Time
	Program Introduction	8:00 - 8:30 AM (30 minutes)
1	Module 1: Introduction to Preventing Slips, Trips and Falls	8:30 - 9:30 AM (60 minutes)
<i>Break</i>		9:30 - 9:40 AM (10 minutes)
2	Module 2: Recognizing Slip, Trip and Fall Hazards	9:40 - 11:20 AM (100 minutes)
<i>Lunch</i>		11:20 AM - 12:20 PM (60 minutes)
3	Module 3: Evaluating Slip, Trip and Fall Hazards	12:20 - 1:45 PM (85 minutes)
<i>Break</i>		1:45 - 1:55 PM (10 minutes)
4	Module 4: Controlling Slips, Trips and Falls	1:55 - 3:40 PM (105 minutes)
<i>Break</i>		3:40 - 3:50 PM (10 minutes)
5	Module 5: Action Planning and Using Program Materials in Your Business	3:50 - 4:15 PM (25 minutes)
		Total = 405 minutes (6.75 hours of instruction)

**Note:** This schedule reflects 6.75 instructional/training hours, including 10 minute breaks to address adult learning needs. If modified, facilitators **must** ensure that all training hours are accounted for in the program. Participant competence is based on completion of the entire training.

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# PROGRAM INTRODUCTION

## **Purpose**

The purpose of this *Program Introduction* is to acquaint participants with the facilitator, the training facility, the National Safety Council, the sponsoring Chapter and the other participants with whom they will share their learning goals. It provides a preview of the program purpose, content and materials.

## **Objectives**

After completing this *Program Introduction*, participants will be able to:

- Identify the goals of this *Preventing Slips, Trips and Falls* training program.
- Recognize the other participants who are attending the program.
- State their own learning goal for this program.

## **Time**

30 minutes: 8:00 to 8:30 AM

## 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. Facilitator Introduction and Course Logistics—Presentation (5 minutes)
2. Participant Introductions—Activity (20 minutes)
3. Course Materials, Modules and Goals—Presentation (5 minutes)

## Key Terms and Concepts

- Introductions
- Course logistics
- Learning goal
- Course goals

## Materials and Equipment

To prepare for delivering this *Program Introduction*, you will need the following:

- Participant Guide and Facilitator Guide.
- Name tents.
- Flipchart, markers, and tape.
- Laptop computer (PC) and LCD projector with wireless remote or overhead projector.
- Plug strip and cord protector.
- PowerPoint slides: Intro-1 through Intro-9.

## Suggestions for Time Management

- Start promptly on time.
- Don't stop to brief latecomers.
- Announce your expectations of punctuality.
- Set an example for the introductions by going first. When you introduce yourself, quickly give your name, your organization, what you do and an example of a slip, trip or fall that you commonly encounter.

**Cues****PPT Intro-1****5 Minute  
Presentation****PPT Intro-2 and  
Intro-3****Presentations and Activities****1. Facilitator Introduction and Course Logistics—Presentation  
(5 minutes)**

- Start the program promptly at the scheduled time.
- Show PPT Intro-1.
- Present a 5 minute general introduction to the program and training site.
- Introduce the name of the training program and yourself. Allow time for an introduction of a second facilitator, if applicable.
- Show PPT Intro-2 and Intro-3 to present safety/emergency and site/logistics information.
- Cover the following information:
  - Emergency evacuation procedures.
  - Starting and ending times.
  - Breaks and lunch.
  - Smoking policy.
  - Location of rest rooms, break room, telephones, emergency exits.
  - Electronic devices.
  - Messages.
  - Medical concerns.
  - Participation.
- Emphasize that you will take 10-minute breaks throughout the day, and that there will be a 1-hour lunch at approximately 12:20 p.m.
- The course will end at 4:15 p.m.
- Tell participants that they will receive a certificate for completion of this program, but they must be in attendance for the entire day.

**Participant  
Reminder**

- Tell participants that you are committed to ending on time, but they must be committed to returning to class on time after lunch and breaks.

**Participant Guide**

- Refer participants to their Participant Guides. Ask them to turn to Page 1 of the section called *Program Overview*.

**PPT Intro-4**

- Show PPT Intro-4 to introduce the National Safety Council by presenting its mission. Acknowledge OSHA and the Susan B. Harwood Grant Award to NSC, emphasizing the support for small businesses.
- Encourage participants to review the rest of this section on their own time.
- Now refer participants to the section called *Program Introduction*. Quickly review Pages 1 and 2. Highlight one or two key points from the *Welcome* on Page 2.

**20 Minute Large Group Activity****PPT Intro-5****Facilitator Note****PPT Intro-6****2. Participant Introductions—Activity (20 minutes)**

- Refer participants to Page 3. Tell them they are now going to introduce themselves to the group.
- Show PPT Intro-5 as you explain that you will be going around the room, and each person will introduce himself or herself by providing the following information:
  - Name.
  - Where they work.
  - What they do.
  - A common trip or fall in their organization.
- Tell participants that if they want to take notes, they can do so in the space provided on Page 3.
- Start the introductions by introducing yourself.
- Set an example by quickly giving your name, your organization and job, and a brief description of a slip, trip or fall you frequently encounter.
- Allow about 15 minutes for the introductions.
- As participants introduce themselves and their common type of slip, trip or fall, jot down a few notes. Plan to integrate this information as it is relevant in later activities.
- When introductions are complete, refer participants to the bottom of Page 3.
- Allow participants time to write down a learning goal. Show PPT Intro-6 while participants are writing their goals.
- As time permits, ask participants to share their learning goals and make comments about how their learning goals relate to the training program.
- Allow about 5 minutes for the writing and disclosing of learning goals.

**3. Course Materials, Modules and Goals—Presentation  
(5 minutes)**

**5 Minute  
Presentation**

**PPT Intro-7 and  
Intro-8**

**PPT Intro-9**

- Refer participants to Page 4. Tell them you will now review the goals and agenda for the program.
- Show PPT Intro-7 and Intro-8 and review the course goals. Emphasize the importance of these major areas in creating a proactive system for preventing slips, trips and falls.
- Show PPT Intro-9. Tell participants that the program is organized by an introduction (that is being presented now) and five modules.
- Briefly review the course content by presenting 1-2 key points about each module/section listed on the agenda. Draw a few relationships between participant learning goals and the course goals and content.
- Have participants locate the CD-ROM that came with their Participant Guides. Tell them this CD-ROM contains tools and resources they can use back on their jobs.
- The CD-ROM replaces the *Tools and Resources* section that has been part of the Participant Guide in previous years' programs.
- Present an overview of program testing and evaluation.
  - Facilitator will provide assistance to you during the program as activities are completed to ensure your success. No formal testing is a part of the program, but you are expected to complete all activities and actively participate in this training program.
  - You will be asked to complete an evaluation that will provide us with your feedback on program quality at the end of the program.
- Ask participants: What questions do you have before we begin Module 1?
- Tell participants that they will learn the key concepts and definitions relating to slips, trips and falls in Module 1.

**Question**

**Transition**

# INTRODUCTION TO PREVENTING SLIPS, TRIPS AND FALLS

## Purpose

In order to create a comprehensive system for preventing slips, trips and falls, participants need a basic understanding of the problem. This module begins with some facts and statistics relating to slips, trips and falls. Participants will learn about the number of deaths and disabilities caused by these injuries and about the associated costs. They will learn the various OSHA regulations and other standards. The module also explores the different types of slips, trips and falls. Finally, participants will be introduced to the components of effective trip, slip and fall prevention: recognize, evaluate, and control.

## Objectives

After completing this module, participants will be able to:

- Identify the impact of slips, trips and falls on the workplace.
- Recognize key slip, trip and fall terminology.
- Recognize OSHA regulations and other standards relating to slips, trips and falls.
- Identify the various types of slips, trips and falls.
- State the three components of effective trip, slip and fall prevention.

## Time

60 minutes: 8:30 to 9:30 AM

Followed by a 10 minute break, 9:30 to 9:40 AM

## 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. Facts about Slips, Trips and Falls—Quiz and Debrief (15 minutes)
2. Definitions Relating to Slips, Trips and Falls—Presentation (10 minutes)
3. Regulations and Standards for a Safe Workplace—Presentation (10 minutes)
4. Types of Slips, Trips and Falls—Activity (20 minutes)
5. Components of a Proactive Slip, Trip and Fall Prevention System—Activity (5 minutes)

## Key Terms and Concepts

- Facts about slips, trips and falls
- Slip, trip and fall terminology
- Regulations and standards for a safe workplace
- OSHA Sub Part D, Standards for Walking and Working Surfaces
- Types of slips, trips and falls
- Components of a proactive slip, trip and fall prevention system

## Materials and Equipment

To prepare for delivering *Module 1*, 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: 1-1 through 1-27

## Suggestions for Time Management

- Keep short the discussion of the quiz on Page 2.
- Keep your presentation of the terminology on Page 3 short and to the point.
- Select the most important ideas from Pages 5-7 to discuss. Don't discuss every single point on these pages.
- When participants are working in small groups, call out the time to keep them on track.

**Cues****Presentations and Activities****1. Facts About Slips, Trips and Falls—Quiz and Debrief (15 minutes)****PPT 1-1**

- Start this module by showing PPT 1-1.
- Refer participants to Page 1 of Module 1, *Introduction to Preventing Slips, Trips and Falls*.

**PPT 1-2**

- Show PPT 1-2 to introduce the module objectives.

**5 Minute Quiz**

- Refer participants to Page 2. Facilitate a 5 minute quiz. Introduce the quiz with the following points:
  - Let’s begin our discussion of slips, trips and falls by looking at some related facts and statistics.
  - Test your slip, trip and fall IQ by taking this quiz.

**PPT 1-3**

- Show PPT 1-3 as you allow participants time to take the quiz.

**10 Minute Debrief**

- Lead a 10 minute debriefing to present the quiz answers. To do this, first get participant responses to a quiz item, then show the corresponding PowerPoint slide with the answer.

**PPT 1-4**

- Use PPT 1-4 to present the answer to Question 1.

**PPT 1-5**

- Use PPT 1-5 to present the answer to Question 2.

**PPT 1-6**

- Use PPT 1-6 to present the answer to Question 3.

**PPT 1-7**

- Use PPT 1-7 to present the answer to Question 4.

**PPT 1-8**

- Use PPT 1-8 to present the answer to Question 5.
- Tell participants that the statistics for this quiz were obtained from the National Safety Council’s research department and they represent the most recent information available.
- Answer participant questions.

**10 Minute Presentation**

**2. Definitions Relating to Slips, Trips and Falls—Presentation (10 minutes)**

**PPT 1-9**

- Lead a 10 minute presentation in which you cover the information on Pages 3 and 4. Spend about 5 minutes on each page.

**PPT 1-10**

- Refer participants to Page 3 and introduce it as follows:
  - There are many terms relating to slips, trips and falls.
  - These definitions will acquaint you with the terminology we will be using in this course.

**PPT 1-11**

- Show PPT 1-9 to review the definitions of *slip* and *trip*.

**PPT 1-12**

- Show PPT 1-10 to review the definition of *fall*.

**PPT 1-13**

- Show PPT 1-11 to review the definition of *friction*.

**PPT 1-14**

- Show PPT 1-12 to review the definitions of *tribology* and *tribometer*.

**PPT 1-15**

- Show PPT 1-13 to review the definition of *foot candle*.

**PPT 1-16**

- Show PPT 1-14 to review the definition of *lumen*.
- Show PPT 1-15 to review the definitions of *slip resistance* and *high traction*.
- Show PPT 1-16 to review the definition of *coefficient of friction*.
- Refer participants to Page 4. Make the following statements:
  - The coefficient of friction (COF) is a ratio between two forces.
  - It is determined by dividing the horizontal force (from the floor’s resistance) by the vertical force (from the foot or shoe).

- There is no formal industry or government standard for COF, however floor experts agree that a safe range is 0.5 to 0.6.
  - Tell participants that you are going to demonstrate some examples of calculating coefficient of friction.
- PPT 1-17**
- Show PPT 1-17 and discuss how to calculate the COF if it takes 6 pounds of force to move a 10 pound object.
  - Point out that a COF of 0.6 is considered by floor experts to be safe.
- PPT 1-18**
- Show PPT 1-18 to show the calculation of the COF when it takes 2 pounds of force to move a 10 pound object.
  - Point out that a COF of 0.2 is considered by floor experts to be unsafe and slippery.
- PPT 1-19**
- Show PPT 1-19 to show the calculation of the COF when it takes 15 pounds of force to move a 10 pound object.
  - Point out that any coefficient above 0.1 is considered to be a trip hazard. A COF of 1.5, as in this example, is rare.
- PPT 1-20**
- Refer participants to the middle of Page 4. Show PPT 1-20 and point out that there are two ways to measure coefficient of friction.
  - Refer participants to the four points at the bottom of Page 4. Have participants review these points individually.
  - Close the presentation by answering participant questions.

**10 Minute  
Presentation**

**PPT 1-21**

**3. Regulations and Standards for a Safe Workplace—  
Presentation (10 minutes)**

- Lead a 10 minute presentation. Begin by telling participants that a number of regulations and standards can help them to create a hazard-free workplace.
- Show PPT 1-21 and make the following points:
  - OSHA’s regulatory requirements are mandatory. An organization must comply with them.
  - There are other standards that are voluntary. Although organizations are not required to comply with them, they are good for setting benchmarks for a safe workplace.
  - Organizations must also be aware of individual state building codes.
- Quickly review Pages 5 through 7 by making the following points about each of the regulations or standards.
- OSHA General Duty Clause
  - A clause from the 1970 OSH Act
  - It states that employers must provide a safe working environment for employees
- OSHA Sub Part D, 1910.21-1910.30, Standards for Walking and Working Surfaces
  - An important and comprehensive standard
  - Includes specifications for everything relating to walking and working surfaces
  - If there is only one standard for you to become familiar with, this is the one.
  - A copy of this standard is on the *Tools and Resources* CD-ROM that came with your Participant Guide.

- OSHA Guidelines for Occupational Foot Protection (1910.136)
  - Part of the Sub Part D Standard
  - Addresses appropriate footwear
- NFSI Standards for Walkway Safety
  - Standards from the National Floor Safety Institute that help property owners reduce slips, trips and falls
  - Provide organizations with an opportunity to have their floors assessed and certified
- ANSI Standard for the Provision of Slip Resistance on Walking/Working surfaces (A1264.2-2001)
  - From the American National Standards Institute
  - Guidelines for slip resistant floors
- ASTM Standard Practice for Safe Walking Surfaces (F1637.95)
  - From the American Society for Testing and Materials
  - Provides standards for walking and working surfaces
- ANSI Z41
  - From the American National Standards Institute
  - Guidelines for footwear
- NFPA 101 Life Safety Code
  - From the National Fire Protection Association
  - Addresses light and signage criteria for evacuations

**PPT 1-22**

- Individual State Building Codes
  - It is important for you to be familiar with the building codes in your state.
  - These codes can guide you in reducing slip, trip and fall hazards in your workplace.
- Refer participants to Page 8. Use PPT 1-22 to review the points on this page.
- Answer participant questions.

**20 Minute Activity****4. Types of Slips, Trips and Falls—Activity (20 minutes)****PPT 1-23****PPT 1-23**

- Facilitate a 20 minute activity in which you will do the following:
  - Allow participants 2 or 3 minutes to complete Page 9 individually.
  - Allow 7 or 8 minutes for groups of 4-5 people to complete Page 10.
  - Allow 10 minutes to debrief the activity.
- Start the activity by referring participants to Page 9.
- Make the following points:
  - When you introduced yourself at the beginning of this course, you identified the most common type of slip, trip or fall in your organization.
  - Now review the lists on this page and check the boxes that correspond to incidents that are common in your workplace.
- After participants have completed Page 9, break the large group into several groups of 4-5 participants.
- Refer participants to Page 10. Use PPT 1-23 as you explain to them what they will be doing.
  - Work in your group to identify two types of slips, trips or falls from Page 9.
  - Determine one or two actions a person or organization can take to improve in each of the areas you identify.
- As participants work, leave PPT 1-23 on the screen.
- Walk around the room to get a sense of the issues they are addressing.
- Periodically announce the time so the groups can pace themselves.

**Facilitator Note**

- When time is up, call the groups back together and debrief by discussing the following:
  - What types of slips, trips and falls did you discuss?
  - What actions did you identify?
- As participants share the actions they identified, jot them quickly on a flip chart page.
- Close the activity by encouraging participants to follow a similar process for identifying hazards and potential actions at their workplaces.
- Emphasize that, when they do this on the job, they should consult the OSHA standard first to help them identify the corrective actions they should take.

## 5. Components of a Proactive Slip, Trip and Fall Prevention System—Activity (5 minutes)

### 5 Minute Activity

- Refer participants to Page 11. Facilitate an activity in which you introduce them to the three components of proactive slip, trip and fall prevention. Make the following points:
  - There are three components of effective and proactive slip, trip and fall prevention.
  - These components are the backbone of all safety and health management systems.

### Question

- Can anyone say what the first component is?
  - Get ideas from a few participants.
  - When someone says “Recognize the hazard,” congratulate that person.

### PPT 1-24

- Show PPT 1-24, then ask what the second component is.

### PPT 1-25

- When someone answers, “Evaluate the hazard,” show PPT 1-25, then ask what the third component is.

### PPT 1-26

- When someone answers, “Control the hazard,” show PPT 1-26, and congratulate participants for knowing their safety management system so well.

### PPT 1-27

- Refer participants to Page 12. Use PPT 1-27 as you explain that at the end of every module, there will be an action plan.
- This plan gives participants the opportunity to identify actions they will take when they go back to their workplaces.
- As time permits, allow participants to identify some actions.

### Transition

- Tell participants that after the break, they will learn how to recognize slip, trip and fall hazards at their worksites.

### 10 Minute Break

Take a 10 minute break.



# RECOGNIZING SLIP, TRIP AND FALL HAZARDS

## Purpose

This module prepares participants to recognize slip, trip and fall hazards in their organizations. It begins with an introduction to four risk factor categories. Next, it acquaints participants with the key areas in their organizations that contain slip, trip and fall hazards. They will learn about the various tools for identifying these hazards, and they will be introduced to a checklist that can help them identify slip, trip and fall hazards at their worksites.

## Objectives

After completing this module, participants 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 they can use for identifying slip, trip and fall hazards.
- Use a checklist to identify slip, trip and fall hazards at their workplaces.
- Recognize the slip, trip and fall hazards at their workplaces.

## Time

100 minutes: 9:40 to 11:20 AM

Followed by a 60 minute lunch, 11:20 AM to 12:20 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 Four Risk Factor Categories—Discussion (30 minutes)
2. Where Do Hazards Lurk?—Presentation (10 minutes)
3. Methods for Recognizing Hazards—Presentation (5 minutes)
4. Recognizing Hazards—Case study (35 minutes)
5. Checklist for Recognizing Slip, Trip and Fall Hazards—Individual Activity (20 minutes)

## Key Terms and Concepts

- Risk factors for slips, trips and falls
- Where to look for hazards
- Methods for recognizing hazards
- Checklist for recognizing slip, trip and fall hazards

## Materials and Equipment

To prepare for delivering *Module 2*, 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: 2-1 through 2-28

## Suggestions for Time Management

- Start on time after the break.
- When you present Pages 5 through 8, don't discuss every point on every page. Instead focus on the overall category of risk factor, and spend most of the time getting participant examples of each risk factor at their workplaces.
- When you do the case studies, you can do them as a large group discussion rather than in small groups. Simply go through the slides once, discussing the hazards with the group as you go.

## Cues

### PPT 2-1

### 30 Minute Discussion

### PPT 2-2 and PPT 2-3

### PPT 2-4

### PPT 2-5

## Presentations and Activities

### 1. The Four Risk Factor Categories—Discussion (30 minutes)

- Start this module by showing PPT 2-1.
- Lead a 30 minute discussion in which you cover the following information (the suggested times are in parentheses):
  - Module objectives (quick).
  - Reactive and proactive slip, trip and fall management (about 10 minutes).
  - The four risk factor categories (20 minutes)
- Refer participants to Page 1 of Module 2: *Recognizing Slip, Trip and Fall Hazards*.
- Show PPT 2-2 and PPT 2-3 to introduce the objectives for the module.
- Refer participants to Page 2. Use PPT 2-4 to point out that this module will cover the first step in proactive slip, trip and fall management: recognition.
- Refer participants to Page 3.
- Tell participants that there are two ways to manage slip, trip and fall prevention: reactive and proactive.
- Ask participants for ideas on the differences between reactive and proactive management.
- As you get ideas from participants, encourage them to take notes in the space provided on Page 3.
- After you have a few ideas from participants, show PPT 2-5 and point out any differences that participants didn't mention.

- Discuss the three questions at the bottom of Page 3. During the discussion, bring out the following points if no one else makes them.
- Question 1
  - It’s always best to be proactive.
  - It puts you ahead of the curve and makes you more likely to prevent incidents from occurring.
  - However, it is also important to be able to respond effectively to incidents that do occur.
  - An effective response to an incident is one that looks for the root cause and eliminates it, ensuring that the incident will not happen again.
- Question 2
  - Sadly, many organizations just don’t put much effort into proactively managing its safety systems.
  - Many organizations fail to see that prevention is the most cost-effective approach to safety.
- Question 3
  - If you feel that your organization is more reactive than proactive, don’t feel bad.
  - The purpose of this program is to help you become more proactive.
- Tell participants that one of the best ways to have proactive slip, trip and fall management is to recognize the hazards before an incident occurs.
- Refer participants to Page 4. Make the following points:

**Question**

- When it comes to recognizing hazards, there are four key categories of risk factors to consider.
- A good safety professional will always look for hazards in all four of these categories.
- Let's test your safety knowledge by identifying the four categories.

**■ Who can tell me what these four categories are?**

- Get ideas from a few participants.
- When someone says “Environment, Equipment, Work Practices, Individual,” congratulate that person.
- Encourage participants to take notes in the space provided on Page 4 while you give a brief overview of each of the four categories.

**PPT 2-6**

- Show PPT 2-6, and briefly explain environmental risk factors.

**PPT 2-7**

- Show PPT 2-7, and briefly explain equipment risk factors.

**PPT 2-8**

- Show PPT 2-8, and briefly explain work practice risk factors.

**PPT 2-9**

- Show PPT 2-9, and briefly explain individual risk factors.
- Tell participants that they are now going to learn about some of the specific risk factors in each category.
- Refer participants to Page 5. Spend about 5 minutes covering this page.
  - Discuss the risk factors relating to the environment, then address participant comments and questions.
  - Ask participants to identify some environmental risk factors in their workplaces.
  - Encourage participants to write their responses in the space provided at the bottom of Page 5.

- Refer participants to Page 6. Spend about 5 minutes covering this page.
  - Discuss the risk factors relating to equipment, then address participant comments and questions.
  - Ask participants to identify some equipment-related risk factors in their workplaces.
  - Encourage participants to write their responses in the space provided at the bottom of Page 6.
  
- Refer participants to Page 7. Spend about 5 minutes covering this page.
  - Discuss the risk factors relating to work practices, then address participant comments and questions.
  - Ask participants to identify some work practice risk factors in their workplaces.
  - Encourage participants to write their responses in the space provided at the bottom of Page 7.
  
- Refer participants to Page 8. Spend about 5 minutes covering this page.
  - Discuss the risk factors relating to the individual, then address participant comments and questions.
  - Ask participants to identify some individual risk factors in their workplaces.
  - Encourage participants to write their responses in the space provided at the bottom of Page 8.
  
- Close the discussion by telling participants that they should always be aware of all four categories of risk factor when they work to prevent slips, trips and falls.
  
- Before advancing, answer any participant questions.

**10 Minute  
Presentation****PPT 2-10****2. Where Do Hazards Lurk?—Presentation (10 minutes)**

- Lead a 10 minute presentation in which you talk about where participants should look for hazards.
- Refer participants to Pages 9 and 10.
- Introduce these pages by showing PPT 2-10, and saying the following:
  - Slip, trip and fall hazards have a tendency to lurk in plain sight.
  - They are there, but because employees get so used to seeing them day after day, the hazards become invisible.
  - Therefore, it is especially important to build awareness of where the hazards are lurking.
- As you present Pages 9 and 10, get participants involved by doing one or more of the following:
  - Ask participants to visualize their workplaces. Do they have hazards that are lurking?
  - Have participants use a highlighter pen to mark the hazards on Pages 9 and 10 that they would like to address when they get back to the job.
  - Ask participants to share any additional hazards they can identify.
- Before moving on, answer any participant questions or concerns.

**5 Minute  
Presentation**

**3. Methods for Recognizing Hazards—Presentation  
(5 minutes)**

- Lead a 5 minute presentation in which you introduce the various methods that can be used to recognize hazards.
- Refer participants to Page 11. Introduce with the following:
  - Point out that proactive management of slips, trips and falls does not happen automatically.
  - Organizations must have methods for recognizing hazards.
  - This page lists a variety of methods.
- Use your presentation time to introduce the four categories of methods they can use:
  - Proactive safety systems.
  - Analysis of incidents.
  - Measure against published standards.
  - Constant vigilance.
- As you introduce each method, give participants some time to check the boxes to indicate:
  - Which methods they are currently using.
  - Which methods they will use in the future.
- As you present this page, bring out the following points.
  - Of the four categories presented on this page, the proactive safety systems are the most important.
  - If they use proactive safety systems, they will have fewer incidents to evaluate.
  - However, when they do have incidents, it is important to spend some time analyzing them.

- By doing so, they may be able to identify and eliminate a hazard that they previously missed.
  - When they analyze data, they should look for the root cause. Too often organizations analyze incidents by looking at injury type, which doesn't help them determine how to fix the problem.
  - Measuring against standards is another proactive method and it helps an organization to comply with regulations.
  - Measuring against standards helps take the guesswork out of safety management.
  - Constant vigilance requires discipline, training and effort, but is worthwhile if you can change your organization's culture.
  - If an organization uses surveillance cameras, they should require someone to look at the images regularly. The idea behind the surveillance is to clean up a spill immediately after it happens. The cameras won't clean up the spills, they will only show when they happen.
- Close the presentation with a brief discussion. Use the following to get the discussion started:
- How many of you currently use some of these methods in your organization?
  - Which ones?
  - What results do you get from using this method?
  - How many of you will start using some of the methods listed on Page 11?
  - Which one(s)?
  - Do you anticipate any problems? If so, describe them.

**35 Minute Case Study**

**4. Recognizing Hazards—Case Study (35 minutes)**

- Facilitate a 35 minute case study, in which you will show 16 slides to participants, and they will identify the slip, trip and fall hazards.
- Allocate the time as follows:
  - Introduce the activity, then break the class into small groups of 4-5 participants (about 3 minutes).
  - Show each of the 12 slides for about one minute each. During each minute, the small groups will identify the slip, trip and fall hazards they see in the slide (about 16 minutes).
  - Show each of the slides a second time, again for about one minute each. Lead a discussion in which participants share their answers and you add your own comments (about 16 minutes).
- Refer participants to Pages 12 through 15. Tell them they will get practice identifying slip, trip and fall hazards.
- Break the large group into smaller groups of 4-5 participants.
- Tell the groups that you are now going to show them a series of slides.
- For each slide, the groups will spend about one minute identifying the slip, trip and fall hazards.
- They can write the hazards they identify in the appropriate spaces on Pages 12 through 15.
- Show PPT 2-11 through PPT 2-26, leaving each slide on the screen for approximately one minute.
- It is okay to advance a slide early if the participants are finished identifying the hazards before the minute is up.
- After participants have identified the hazards on all of the slides, show each slide again.

**PPT 2-11 through PPT 2-26**

**Facilitator Note**

**Facilitator Note**

- You can quickly return to PPT 2-11 by pressing “11” on the keyboard, then pressing “Enter”.
- Debrief by doing the following:
  - Have participants share which hazards they identified.
  - Add any additional hazards that participants did not mention.
  - Periodically ask participants if the hazard recognition system at their organizations would catch a similar hazard.
- Although participants might derive different answers, following is a summary of the hazards in each slide:

**PPT 2-11**

- Case Study 1
  - No rail to protect people walking on upper sidewalk.
  - No signage or other visual markers to warn people who are walking perpendicular to the steps.
  - Picnic table obstructs the sidewalk.
  - Grate holes are large enough to catch heels.

**PPT 2-12**

- Case Study 2
  - Loose gravel on the ramp could cause a slip or slide.
  - Uneven surface.
  - Minor change in elevation could cause stumble.
  - Far side of ramp is blocked by something with a sharp metal foot.

**PPT 2-13**

- Case Study 3
  - Mat not secured to floor properly.
  - Mat appears to be poorly maintained.

**PPT 2-14**

- Mat is too close to the stair landing.
- On the positive side, the beveling around the mat edges is good.
- Mats at entrances are good for preventing outside precipitation from making the floor slippery.

■ Case Study 4

- Open drawer could cause trips.
- Tangled wires under desk could cause trip if foot becomes tangled while the person is sitting.

**PPT 2-15**

■ Case Study 5

- Pallet juts out into the walkway.
- Floor is cracked and uneven.
- Sharp edges are on the objects that jut out.
- “Keep area clear” tape has been ignored.

**PPT 2-16**

■ Case Study 6

- No hand rail on the right side of stairwell.
- Lighting at bottom of stairs is poor.
- There is a lack of contrast between stairs.
- Depending on how worn the carpeting is, it may be slippery.
- Cooler stored at the bottom of stairs is a trip hazard.
- On the positive side, the rail on the left side of the stairwell is good.

**PPT 2-17**

■ Case Study 7

- Hose in front of stairs is tripping hazard.

**PPT 2-18**

- Uneven floor surface.
- Hose means water is being used—floor will be slippery if wet.
- Metal stairs will be particularly slippery when wet.

**■ Case Study 8**

- Nothing to hold on to.
- Foot surface is small in contrast to the width of the bookcase—fall hazard if user stretches to reach.

**PPT 2-19****■ Case Study 9**

- Clutter—bad housekeeping.
- Boxes and chair are trip hazards.
- Back step stool has nothing to hold on to.
- On the positive side, the front step ladder appears to have a tall rail to hold on to.

**PPT 2-20****■ Case Study 10**

- The clutter is a tripping hazard.
- Open cabinet doors can be a bumping/stumbling hazard.

**PPT 2-21****■ Case Study 11**

- The clutter is a tripping hazard.
- The grate by the eyewash station is depressed and could cause a trip.
- Hose is a tripping hazard.

**PPT 2-22**

- To the left is a hot furnace. Imagine a person coming to the eyewash station with something in the eye. The person can't see to begin with. S/he may not see the hose, may stumble over it right into the hot furnace. Very dangerous.

■ Case Study 12

- Drain cover bent down is a tripping hazard.
- In fact, hole in grate is big enough for a foot, which could create a fall.
- Appears to be an oil leak by the grate, which could be slippery.

**PPT 2-23**

■ Case Study 13

- This is a platform.
- The hose and stepladder are tripping hazards.
- The only way to get from one side of the platform to the other is by walking through clutter.
- Note that the hose winds into the background to a flight of stairs. A trip over the hose on the stairs could lead to a fall down the stairs.

**PPT 2-24**

■ Case Study 14

- Inspection hatch cover is left off, creating a fall hazard.
- This is probably a 2-3 foot drop.
- A person walking from the foreground to the background must step over the hatch or walk around it and could trip over the hatch cover or the pipe on the other side.
- No protective railing to guard against a fall from the platform.

**PPT 2-25**

■ Case Study 15

**PPT 2-26**

- This is a raised working platform.
- Clutter could cause an array of trips.
- A person coming up the stairs could step on the grounding rods, causing the rods to roll, which could cause a slip or a fall.
- A foot could get caught in the respirator straps, causing a slip or fall.
- There is oil/lubricant on the grate, which could cause a slip.

**■ Case Study 16**

- Bad design. The lubricant is spilling onto the standing platform and out onto the floor and could cause a slip.
- Bad housekeeping.
- The standing platform is too small. A person could fall off of it.

**Question**

- After you have discussed all the slides, tell participants that they did a great job of recognizing hazards in the slides.
- Ask participants: As we went through these slides, did you recognize similar hazards at your worksites?
- Close by saying that the more they work to recognize hazards, the more they will see the “invisible” hazards all around them.

**20 Minute Individual Activity**

**Question**

**5. Checklist for Recognizing Slip, Trip and Fall Hazards— Individual Activity (20 minutes)**

- Facilitate a 20 minute individual activity in which you introduce participants to a checklist for recognizing slip, trip and fall hazards.
- Refer participant to Pages 16 through 23. Introduce these pages with the following.
  - On Page 11, you learned about the various methods for recognizing slip, trip and fall hazards.
  - One of the most effective methods is the safety inspection.
- Ask: How many of your organizations regularly conduct safety inspections?
- Get a show of hands, then say the following:
  - If you do safety inspections, you probably use a list similar to the one found on Pages 16-23.
  - This is a comprehensive list to help you remember everything you need to look for.
- Tell participants that they can use this checklist in a number of different ways.
  - They can use it when they conduct safety inspections.
  - Even if their organization does not conduct formal safety inspections, they can use this list to help them recognize hazards.
  - They can use it as a tool to evaluate themselves in slip, trip and fall prevention.
  - They can use it as a template to develop a safety inspection or slip, trip and fall prevention initiative.

**Facilitator Note**

- They can use it as a training tool to teach employees how to be constantly on the lookout for slip, trip and fall hazards.
- They can use it as a “menu” for tailgate or coaching topics.
- Get participant ideas on how else they might use this checklist.
- Now tell participants that they will have a chance to familiarize themselves with this checklist.
- Have them visualize their organizations, then work through the checklist.
  - If they think their organization does a good job with an item, they should check the OK space.
  - If they think their organization needs work on a specific item, they should write down a corrective action they will take.
- Remind participants that they won’t have time to work through the entire worksheet, but they will have a chance to work on it again in Module 3.
- Allow participants to work individually on their worksheets.
- As participants work, walk around the room to see if they have any questions.
- When time is up, call the large group back together and allow a few minutes for discussion.
- Ask them if they found working through the checklists helpful.
- Ask if anyone is willing to share what they have learned about their organization.
- Encourage participants to continue to work on their checklists once they return to their jobs.

**PPT 2-27**

- Let them know that there are blank copies of all of these checklists on the *Tools and Resources* CD-ROM that came with their Participant Guides.

**PPT 2-28**

- Show PPT 2-27 as you explain that participants can use these checklists as they are, or use them as a guideline to develop their own checklists for their organization.
- Refer participants to Page 24. Use PPT 2-28 as you tell them that, once again, this page gives them the opportunity to identify actions they will take when they go back to their jobs.

**Transition**

- As time permits, allow participants to identify some actions.
- Tell participants that, after lunch, they will learn how to evaluate the slip, trip and fall hazards at their worksites.

**60 Minute Lunch**

Take a 60 minute lunch.

# EVALUATING SLIP, TRIP AND FALL HAZARDS

## Purpose

This module introduces participants to the evaluation of slip, trip and fall hazards. They will learn about the three types of evaluation. They will learn how to evaluate the slipperiness of floors and the level of light in their organizations. Finally, they will review the critical inventory method for evaluating hazards, and you will lead a discussion of how severity, exposure and probability factor into slips, trips and falls.

## Objectives

After completing this module, participants will be able to:

- Identify the three types of evaluation they can perform in their organizations.
- Identify the factors that influence the slipperiness of floors.
- Identify the different floor types and their level of slip resistance.
- Understand how coefficient of friction can be used to determine the slipperiness of a floor.
- Identify the lighting standards for both general and emergency illumination.
- Use the critical inventory method for evaluating slip, trip and fall hazards.

## Time

85 minutes: 12:20 to 1:45 PM

Followed by a 10 minute break, 1:45 to 1:55 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. Introduction to Evaluating Slip, Trip and Fall Hazards—Presentation (5 minutes)
2. Evaluating Floors—Interactive Presentation (35 minutes)
3. Evaluating Light—Interactive Presentation (15 minutes)
4. Critical Inventory Method—Presentation and Case Study (30 minutes)

## Key Terms and Concepts

- Three types of evaluation
- Evaluating floor slipperiness
- Slipmeters
- Evaluating light
- Critical inventory method

## Materials and Equipment

To prepare for delivering *Module 3*, 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: 3-1 through 3-26

## Suggestions for Time Management

- Start on time after the break.
- When discussing content on individual pages, don't discuss every point on the page. Instead let participants' questions and comments guide an interactive discussion of the key points on each page.
- Keep the *Introduction to Evaluating Hazards* (Pages 1-3) presentation crisp and brief.
- If you run short on time, omit the discussion of Page 9. Instead, encourage participants to read the page on their own.
- If you run short on time when you present Pages 17-23, omit the second example.

## Cues

### 5 Minute Presentation

### PPT 3-1

### PPT 3-2 and PPT 3-3

### PPT 3-4

### PPT 3-5

### PPT 3-6

### PPT 3-7

## Presentations and Activities

### 1. Introduction to Evaluating Slip, Trip and Fall Hazards— Presentation (5 minutes)

- Lead a 5 minute presentation in which you introduce participants to the evaluation of slip, trip and fall hazards.
- Show PPT 3-1 and refer participants to Page 1 of Module 3, *Evaluating Slip, Trip and Fall Hazards*.
- Show PPT 3-2 and PPT 3-3 to introduce the module objectives.
- Refer participants to Page 2. Show PPT 3-4 to point out that this module will cover the second step in proactive slip, trip and fall management: evaluation.
- Refer participants to Page 3. Tell participants that there are three types of evaluation they can perform.
- Show PPT 3-5 and tell participants that the first type of evaluation is to assess individual parts of the organization.
- Review the points on PPT 3-5 then say that this type of evaluation is proactive because they are actually assessing their organization to find hazards before an incident occurs.
- Ask participants to share examples of this type of evaluation that they use in their organization.
- Show PPT 3-6 and tell participants that the second type of evaluation is to assess an existing or known hazard.
- Review the points on PPT 3-6, then say that this type of evaluation is helpful when a known hazard exists and an organization is trying to figure out what to do about it.
- Ask participants to share examples of this type of evaluation that they use in their organization.
- Show PPT 3-7 and tell participants that the third type of evaluation is to assess the entire organization.

- Review the points on PPT 3-7, then say that organizations should strive to do this type of evaluation systematically.
- Ask participants to share examples of this type of evaluation that they use in their organization.
- Address any participant comments or questions.

### 35 Minute Interactive Presentation

## 2. Evaluating Floors—Interactive Presentation (35 minutes)

- Lead a 35 minute interactive presentation in which you introduce participants to the concepts involved in the evaluation of floors.
- You will be presenting while also giving participants a chance to answer questions, contribute content and complete a quick checklist.
- Following is a suggested time allocation:
  - Page 4—Causes of Slips, Trips and Falls (5 minutes)
  - Page 5—Evaluating Floors (10 minutes)
  - Pages 6-8—Floor Type, Slip Resistance, Floor Treatments and Contaminants (5 minutes)
  - Pages 9-11—Friction and Slipmeters (10 minutes)
  - Page 12—Checklist (5 minutes)
- Refer participants to Page 4. Show PPT 3-8 to introduce the pie chart showing the causes of slips, trips and falls.
- Point out that since flooring causes such a large percentage of incidents, it is important for them to know how to evaluate the safety of their floors.
- Do not cover the information at the bottom of Page 4 in class. Instead, encourage participants to review it on their own.
- Refer participants to Page 5. Show PPT 3-9 as you introduce the factors of floor slipperiness.
- As you introduce each factor, ask participants if that factor is something they can control.
- Once participants have shared their comments, add the following points if they haven't already been made.
- Floor material:

**PPT 3-8**

**Facilitator Note**

**PPT 3-9**

- The only time you really have control over floor material is if you have input into selecting the floor in the first place.
- If you are building a new facility or if you are replacing an existing floor, be sure to select a floor that has strong non-skid properties.

■ Floor finish:

- Generally you will not be in the position of selecting new floors and you need to live with the floors that your organization already has.
- However, you can adjust a floor’s slipperiness by changing its finish.
- Whether or not you have floors that are inherently slippery, you should consider using a treatment that adds roughness to the floor’s surface.

■ Floor texture and pattern:

- If a floor is visually confusing, it can obscure defects or changes in elevation.
- For example, a complicated tile or carpet pattern might make it difficult to see an upcoming step.

■ Floor slope:

- A change in slope creates a change in foot pressure, which might decrease the COF.
- An unusually steep floor could cause a loss of balance.

■ Floor contaminants:

- Here you have indirect control.
- Policies and procedures that outline correct methods for keeping a floor free of contaminants will only be followed to the extent that your organization’s housekeeping policy is supported and reinforced.

- Floor condition:
  - Consider replacing floors that are broken, chipped or uneven.
  - The extent of your control depends on your ability to budget for floor replacement.
- Environmental conditions:
  - It is important to be aware of floor changes during inclement weather.
  - Plan to monitor more closely when conditions create water and slush.
  - It is also important to monitor the cleanliness of your floors and to clean them regularly.
- A person's footwear:
  - Sometimes you have control here, sometimes you don't.
  - You can specify or require that employees wear a certain type of footwear when they work.
  - However, if your business is open to the public, you can't control your customers' footwear.
- A person's footstep or gait:
  - Sometimes you have control here, sometimes you don't.
  - You can have a "no running" policy.
  - However, you can't control individual walking styles or a person who is inherently clumsy.
- Refer participants to Pages 6 and 7. Discuss these pages by doing the following:

- Ask participants to share what type of flooring their organization has in its lobby.
- What do they like/dislike about that flooring?
- Ask participants to share what type of flooring their organization has in the main workshop.
- What do they like/dislike about that flooring?
- Emphasize the point on the bottom of Page 7.
- Refer participants to Page 8. Discuss this page by doing the following:
  - Point out that they may not have much control over the type of floor their organizations have.
  - However, they certainly can influence how their existing floors are treated and maintained.
  - Point out that this page gives them a number of questions they can ask regarding their organizations’ floor treatment and maintenance programs.
  - Get discussion by asking participants what types of floor treatments they use and their experience with them.
  - Ask them what types of floor contaminants concern them.
  - Close by encouraging participants to get a handle on their organizations’ floor treatment and maintenance programs.

**PPT 3-10**

**Question**

- Show PPT 3-10.
- Ask participants: What makes a floor safe?
- Get some participant responses. Congratulate the participant who says that the appropriate amount of friction makes a floor safe.

**Question**

- Ask participants: But how can you tell whether your floors have the appropriate amount of friction?
- Get some answers. Congratulate the participant who says that the floors have to be measured for slipperiness.
- Point out that the slipmeter is the instrument that is used to measure floor slipperiness.
- Refer participants to Page 9. Point out that the first slipmeter was invented by Leonardo DaVinci.
- If time permits, share the historical information on this page.
- Refer participants to Page 10. Point out that modern day slipmeters have come a long way since the DaVinci days and that there are many different types.

**PPT 3-11**

- Show PPT 3-11 as you quickly review the key points relating to the James Machine.

**PPT 3-12**

- Show PPT 3-12 as you quickly review the key points relating to the Horizontal Drag Meter.

**PPT 3-13**

- Show PPT 3-13 as you quickly review the key points relating to the BOT-3000.

**PPT 3-14**

- Show PPT 3-14 as you quickly review the key points relating to the Portable Inclinable Articulated Strut.

**PPT 3-15**

- Show PPT 3-15 as you quickly review the key points relating to the English XL.

**PPT 3-16  
(Video Clip)**

- Tell participants that they will now have an opportunity to see how a slipmeter works. Show PPT 3-16, which is a short video clip that demonstrates the use of a slipmeter.
- Refer participants to Page 11. Point out that this page has additional information about slipmeters.
- Lead a brief discussion by asking participants if anyone has any knowledge of or experience with any of the slipmeters that were introduced.
- Allow as much discussion as time permits.

- Refer participants to Page 12. Allow participants time to complete this page, including time to answer the question at the bottom.
- Ask participants to share some of the actions they identified.
- Tell participants that there is a blank copy of this checklist on the *Tools and Resources* CD-ROM that came with their Participant Guides.
- Address participant questions and comments.

**15 Minute  
Interactive  
Presentation****3. Evaluating Light—Interactive Presentation (15 minutes)**

- Lead a 15 minute interactive presentation in which you introduce participants to the concepts involved in the evaluation of light.
- You will present and give participants a chance to answer questions, contribute content and complete a quick checklist.
- You will be using Pages 13 through 16. Allocate about 3-4 minutes per page.
- Begin the discussion by saying the following:
  - We’ve just completed a discussion of how you can evaluate the slipperiness of your floors.
  - Another factor that plays a role in causing slips, trips and falls is light.
  - Let’s now turn our attention to evaluating light.
- Refer participants to Page 13 and tell them that there are two types of poor lighting that can be hazardous.
- Show PPT 3-17 to discuss how poor general lighting can cause slips, trips and falls.
- Show PPT 3-18 to discuss how poor emergency lighting can cause slips, trips and falls.
- Point out that the standards for lighting are generally expressed in terms of foot candles.
- Remind participants that they learned what a foot candle was earlier in the day. Ask if anyone can remember the definition.
- When a participant correctly identifies a foot candle, show PPT 3-19 to reinforce the definition.
- As you discuss foot candles, encourage participants to take notes on the bottom of Page 13.

**PPT 3-17****PPT 3-18****PPT 3-19**

- Refer participants to Page 14. Explain that OSHA has standards for lighting.
- Review the key OSHA requirements on this page.
- Point out that section 1910 of OSHA has no standard for lighting, so these standards are from 1926.56(a) and they provide some guidelines for participants.
- Refer participants to Page 15. Explain that another organization, the National Fire Protection Association, publishes the Life Safety Code, which, among other things, specifies lighting requirements for emergencies.
- Allow participants time to read Page 15 and to respond to whether their organization conforms to the illumination standards of the code.
- Tell participants that there is a blank copy of this checklist on the *Tools and Resources* CD-ROM that came with their Participant Guides.
- Refer participants to Page 16. Point out that if they are interested in purchasing a light meter for their organization, the information on this page can help them determine their criteria.
- Address participant questions and comments.

**30 Minute  
Presentation and  
Case Study****Question****PPT 3-20****4. Critical Inventory Method—Presentation and Case Study  
(30 minutes)**

- Lead a 30 minute presentation and case study in which you introduce participants to the critical inventory method for evaluating hazards. Allocate the time as follows:
  - About 10 minutes to introduce the concept and to work through a class example (Pages 17-21).
  - About 20 minutes to complete and debrief the case study (Pages 22-24).
- Ask participants: Is it possible to correct *every single* hazard in your business?
- Get some responses from participants, then lead the discussion to the following conclusions:
  - It's probably not possible to correct every single hazard in a company and it would probably be too expensive.
  - Therefore, it is important to be able to look at all hazards, and then address the ones that are the most dangerous.
  - One way to do this is to have a systematic method to evaluate hazards. Let's look at one such method now.
  - It's called the critical inventory method.
- Refer participants to Page 17 and point out that the method evaluates three factors.
- Show PPT 3-20 to introduce the first factor: severity.
  - Tell participants that this measure helps determine how serious or severe the consequences would be if the hazard caused an incident.
  - Get participant examples of both a severe and a non-severe consequence.

**PPT 3-21**

- ◆ For example, a severe consequence might be a serious head injury.
- ◆ A non-severe consequence might be a stubbed toe.

- Show PPT 3-21 to introduce the second factor: exposure.
  - This measure helps evaluate the number of employees who are exposed to the hazard.
  - It also helps evaluate the number of times they are exposed.

**PPT 3-22**

- Show PPT 3-22 to introduce the final factor: probability.
- Tell participants that this measure assesses how likely it is that the hazard will result in an incident.

**Question**

- Ask participants: Are you ready to try an example?

**PPT 3-23**

- Use PPT 3-23 as you work through Pages 18-21 with participants.
- Using the top of Page 18, quickly review the severity rating scale by saying the following:
  - You can rate severity on a four-point scale.
  - The lowest rating is the least severe and the highest rating is the most catastrophic.

**Facilitator Note**

- Do not spend time going over each rating and its description.

**PPT 3-23**

- Show PPT 3-23 and ask participants to recall this scenario from Module 2.

**Question**

- Ask participants: Does anyone remember what the hazards were in this picture?
- Get their ideas. Some might include the following:
  - Someone could bump into the picnic table.
  - Someone could fall from the ledge.

**Write Rating on Flipchart**

- A woman could get her heel caught in the grate.
- Pick one hazard and ask participants to rate its severity.
- Get participant ideas, then quickly select the rating that most participants agree on. Write that rating on a flipchart and encourage participants to write it at the bottom of Page 18.
- Refer participants to the top of Page 19, and quickly review the exposure rating scale by saying the following:

- You can rate exposure on a three-point scale.
- The lowest rating is minimal exposure and the highest rating is high exposure.

**Facilitator Note****PPT 3-23**

- Do not spend time going over each rating and its description.
- Call participants' attention to PPT 3-23. Tell them that they will now rate the level of exposure in this scenario.

**Question**

- Ask participants: To rate the exposure in this slide, what additional information do you need to know?
- As participants state what they need to know, provide additional information.
- Following is some additional information you can provide:
  - This company has about 150 employees.
  - Most employees enjoy eating their lunches on the picnic tables provided by the company.
  - Employees frequently get their exercise by running on the walkway, which extends into a biking/jogging path.
  - The company has a casual dress code and a standard for safe shoes.

**Question**

- Ask participants: Given this information, how would you rate the level of exposure for the hazard we have identified?

**Write Rating on Flipchart**

- Get participant ideas, then select the rating that most participants agree on, and write it on the flipchart page underneath the first rating.
- Encourage participants to write the rating in the space provided on Page 19.
- Refer participants to the top of Page 20, and quickly review the probability rating scale by saying the following.
  - Probability is also rated on a three-point scale.
  - The lowest rating means there is minimal chance of an incident occurring and the highest rating means there is a high probability.

**Facilitator Note**

- Do not spend time going over each rating and its description.

**PPT 3-23**

- Once again, direct participants’ attention to PPT 3-23. Tell them that they are now going to rate the probability that this hazard will become an incident.

**Question**

- Ask participants: What is the probability that the hazard we’ve identified could create an incident?

**Write Rating on Flipchart**

- Get participant ideas, then select the rating that most participants agree on, and write it on the flipchart page underneath the previous ratings.
- Encourage participants to take notes on Page 20.
- Refer participants to Page 21. Quickly review the rating scale on this page.

**Add the Ratings on the Flipchart**

- Add the three sets of numbers from the flipchart page, and encourage participants to write results of the ratings in the space at the bottom of Page 21.

**PPT 3-23**

- Redirect participants’ attention to PPT 3-23.

**Question**

- Ask participants: If this were the outdoor area in your organization, how seriously would you take the hazard that we’ve just evaluated?

**PPT 3-24**

- Get some ideas, then close the discussion by reminding participants that this assessment is not an official OSHA or NIOSH formula. It is intended as a guide to help them set priorities for hazards.
- The important thing is that this instrument helps them approach hazards consistently and systematically.
- Refer participants to Pages 22-23. Tell participants that they are now going to practice on their own.
- Divide the large group into smaller groups of 4-5 people.
- Show PPT 3-24 and ask participants to recall what some of the hazards were in this picture. The following are some of the hazards they might remember:
  - Someone might trip on the hose.
  - Someone might slip on the wet stairs.
- Tell the groups to identify one hazard, then evaluate it using the critical incident method.
- Provide the following additional information:
  - This is a high traffic area.
  - The stairs are used numerous times every day by 20 stock clerks who work on an inventory platform.
  - The hose is used to clean grease from a leaking forklift.
  - When the forklift is not being used, it is parked at the end of the aisle that the hose leads into.
- Allow the groups 10 minutes to analyze the picture and rate their chosen hazard using the critical inventory method.
- While participants are working, walk around the room to get a sense of what they are saying and to answer their questions.
- Announce to participants when they have 2 minutes left so they can pace themselves.

**PPT 3-25**

- When time is up, bring the large group back together and discuss their conclusions.
  - Learn which hazard each group evaluated and how they rated it.
  - Ask participants what corrective actions they might take.
  - Get as many responses as time permits.
- Tell participants that there is a blank copy of this risk assessment on the *Tools and Resources* CD-ROM that came with their Participant Guides.
- Refer participants to Page 24. Show PPT 3-25 and explain:
  - There is a tendency for slips and trips to be frequent, but not severe.
  - On the other hand, the tendency of falls is to be infrequent and severe.
- Ask the question at the bottom of the page and get some responses.
- Close the discussion by reminding participants that even though slips and trips are not severe, they can cost plenty because they occur so frequently. While falls are not as common, they are devastating when they occur.
- The answer to the question is that all organizations should strive to eliminate slips, trips, **and** falls.

**PPT 3-26**

- Refer participants to Page 25. Use PPT 3-26 to remind participants that this page gives them the opportunity to identify actions they will take when they return to their jobs.
- As time permits, allow participants to identify some actions.

**Transition**

- Tell participants that, after break, they will learn how to control the slips, trips and falls at their worksites.

**10 Minute Lunch**

Take a 10 minute break.

# 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**

**PPT 4-17**

**PPT 4-18**

**PPT 4-18**

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

- Refer participants to Page 18. Facilitate a 15 minute presentation and activity that introduces participants to the criteria for choosing a slip-resistant shoe.
- 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.
- 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)****PPT 4-19****PPT 4-20****Question**

- 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.
- 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.
- 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.
- 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.



# ACTION PLANNING AND USING PROGRAM MATERIALS IN YOUR BUSINESS

## Purpose

This module provides participants with the opportunity to identify some actions they will take to prevent slips, trips and falls when they return to their jobs. Using the materials and concepts from today's class, participants will create an action plan. They will also be introduced to the tools and resources available to help them implement their plan. In a final assessment activity, they will compare their learning goal to their learning experience and evaluate the program.

## Objectives

After completing this module, participants will be able to:

- Identify some actions they will take to prevent slips, trips and falls.
- Use on their jobs the tools, resources and guidelines provided in this program.
- Evaluate their learning experiences and this program.

## Time

25 minutes: 3:50 to 4:15 PM

End of Day

## 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. Action Planning—Individual Activity (15 minutes)
2. Evaluation of Learning Goal and Course Evaluation—Individual Activity (10 minutes)

## Key Terms and Concepts

- Action planning
- Tools and resources section
- Evaluation of learning goal

## Materials and Equipment

To prepare for delivering *Module 5*, 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: 5-1 through 5-6

## Cues

PPT 5-1

PPT 5-2

### Individual Activity

PPT 5-3

PPT 5-4

## Presentations and Activities

### 1. Action Planning—Individual Activity (15 minutes)

- Start this module by showing PPT 5-1.
- Refer participants to Page 1 and quickly review the module purpose and objectives. Show PPT 5-2 when you review the objectives.
- Refer participants to Page 2. Lead an individual activity in which participants will identify some actions they will take when they return to the job. Make the following points.
  - Now that you have learned the basics of proactively managing slips, trips and falls, it's time to think about what you will do when you return to your job.
  - At the end of each module we studied today, there was a page called *Planning for Your Small Business*.
  - Each of these pages listed suggestions that you could implement on the job.
- Show PPT 3 to indicate the page numbers for the action plans, then state the following:
  - Take some time to review the four planning pages from each module, then use Page 3 of this module to write 2-4 actions you will take when you return to the job.
  - In addition to identifying the action, write down any barriers to implementation you might encounter.
- As participants do their planning, show PPT 5-4 as a visual reminder.
- Walk around the room to address participant questions and comments.
- Periodically announce the time so participants can pace their work.

**PPT 5-5**

- When participants are finished planning, bring the large group back together.
- Show PPT 5-5 and emphasize that their businesses wouldn't be normal if they didn't experience some barriers to implementing their plans.
- Ask participants to share some of the barriers they identified, then seek ideas from the group about how to overcome the barriers.
- Discuss as many barriers as time permits.
- Refer participants to the *Tools and Resources* CD-ROM they received with their Participant Guides.
- Inform them that this disk was created for their use back on the job and contains the following:
  - The OSHA standard for walking and working surfaces.
  - The forms, applications, assessments and checklists that were presented throughout the day.
  - A comprehensive listing of books, periodicals, videos and websites that contain relevant information.

**Individual Activity****PPT 5-6****Course Evaluations****Adjourn****2. Evaluation of Learning Goal and Course Evaluation—  
Individual Activity (10 minutes)**

- Facilitate a 10 minute individual activity in which participants will do the following:
  - Compare their learning goal to their learning experience.
  - Set a new learning goal.
  - Evaluate the program.
- Refer participants to Page 4. Remind them that, at the beginning of the program, they identified a learning goal.
- Refer participants back to Page 3 of the *Program Introduction* so that they can locate their learning goal.
- Ask participants to copy their learning goal onto Page 4 of Module 5, then allow time to write what they learned relating to that goal.
- Refer participants to the bottom of Page 4. Show PPT 5-6 and state that even as they implement their action plans from today's class, they should continue to learn about slips, trips and falls.
- Allow time for participants to identify a new learning goal, and to write down what they will do to achieve that goal.
- Hand out the course evaluations and reinforce to participants that their feedback is important because the information they provide helps to improve future courses.
- Allow participants time to complete the evaluation.
- Collect the evaluations before participants leave.
- Thank participants for attending and participating.
- Adjourn the class.



## Checklist for Evaluating Floor Safety

Use the following checklist to determine if the floors in your organization are safe.

- |    | YES                      | NO                       |   |
|----|--------------------------|--------------------------|---|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | Has your organization selected a floor material that is appropriate for the environment in which it will be used? |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | Do adjacent walking surfaces in your organization have similar COFs?  |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | Is the wet SCOF of your floors rated 0.6 or higher?   |
| 4. | <input type="checkbox"/> | <input type="checkbox"/> | Does your organization have a program for regularly cleaning its floors? Is your floor cleaner NFSI Certified?    |
| 5. | <input type="checkbox"/> | <input type="checkbox"/> | Does your organization use different mops for cleaning and disinfecting?  |
| 6. | <input type="checkbox"/> | <input type="checkbox"/> | Are floors in your organization treated with a high-traction finish?  |
| 7. | <input type="checkbox"/> | <input type="checkbox"/> | Does your organization strip an old finish following the manufacturer's instructions before applying a new one?   |
| 8. | <input type="checkbox"/> | <input type="checkbox"/> | Does your organization require employees to wear appropriate footwear?  |

Based on the above assessment, what actions or corrective actions should your organization take?

## Checklist for Recognizing Slip, Trip and Fall Hazards

**Work Area:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**ITEM**

**1. General Work Environment**

**OK?      CORRECTIVE ACTIONS**

- |  |              |              |
|--|--------------|--------------|
| <ul style="list-style-type: none"> <li>● Documented, functioning housekeeping program in place</li> </ul>                                | <p>_____</p> | <p>_____</p> |
| <ul style="list-style-type: none"> <li>● All workstations clean, sanitary and orderly</li> </ul>   | <p>_____</p> | <p>_____</p> |
| <ul style="list-style-type: none"> <li>● Adequately lit</li> </ul>   | <p>_____</p> | <p>_____</p> |
| <ul style="list-style-type: none"> <li>● Work surfaces kept dry</li> </ul>   | <p>_____</p> | <p>_____</p> |
| <ul style="list-style-type: none"> <li>● Spills cleaned up immediately according to proper procedures</li> </ul>                         | <p>_____</p> | <p>_____</p> |
| <ul style="list-style-type: none"> <li>● Combustible scrap, debris and waste stored safely and removed from worksite properly</li> </ul> | <p>_____</p> | <p>_____</p> |
| <ul style="list-style-type: none"> <li>● Regulated waste discarded according to federal, state and local regulations</li> </ul>          | <p>_____</p> | <p>_____</p> |
| <ul style="list-style-type: none"> <li>● Accumulations of combustible dust routinely removed from elevated surfaces</li> </ul>           | <p>_____</p> | <p>_____</p> |
| <ul style="list-style-type: none"> <li>● Oily and paint-soaked waste disposed in metal waste cans</li> </ul>                             | <p>_____</p> | <p>_____</p> |
| <ul style="list-style-type: none"> <li>● Other: _____</li> </ul>   | <p>_____</p> | <p>_____</p> |
| <ul style="list-style-type: none"> <li>● Other: _____</li> </ul>   | <p>_____</p> | <p>_____</p> |
| <ul style="list-style-type: none"> <li>● Other: _____</li> </ul>   | <p>_____</p> | <p>_____</p> |

**Notes:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# 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: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 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: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# 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: \_\_\_\_\_

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# 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: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## 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: \_\_\_\_\_

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# 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: \_\_\_\_\_

_____	_____
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Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Controls for Risk Factors Relating to the Environment



- Light
- Floors
- Floor coverings
- Stairs and escalators
- Clutter
- Weather
- Sidewalks
- Ramps

---

### *Engineering Controls*

- Install adequate lighting in all walkways including high traffic areas, hallways, parking lots, sidewalks, stairs and ramps.
- Mark clearly aisles, passageways, stairs and escalators.
- Install floors that resist slipperiness under typical work conditions (e.g. if a work area typically has a wet floor, then the floor should resist slipperiness in wet conditions).
- Replace walkways when they start to crack, crumble and heave.
- Anchor carpeting and mats so that they lay flat and stay secure.
- Replace worn and frayed carpets.
- Install a high-traction floor.
- Apply a high-traction floor treatment, cleaner or coating.
- Design the workplace so that it is all on one level.
- Install stairs of uniform size and shape.
- Provide handrails for all stairs, stairwells, escalators and ramps.
- Provide lighting at top and bottom of escalators for visibility.
- Design stairs so that stair bottom is clear of swinging doors.
- Install covers or guard rails for floor and wall openings.
- Clearly mark surface changes such as door thresholds, minor changes in floor elevation, and speed bumps in parking lot.
- Install gutters where run-off will not freeze on walking surfaces.
- Install slip-resistant adhesive strips on slippery steps.

## Controls for Risk Factors Relating to the Environment—continued



- Light
- Floors
- Floor coverings
- Stairs and escalators
- Clutter
- Weather
- Sidewalks
- Ramps

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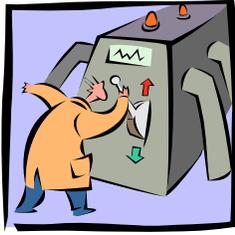
### *Administrative Controls*

- Establish a documented, scheduled program for checking lights.
- Replace broken and burned out lights immediately.
- Develop a floor cleaning and maintenance schedule.
- Keep walking surfaces clean and dry.
- Maintain sweep logs to ensure cleaning is done regularly and on schedule.
- Clean spills immediately.
- Form and use “spill watch” action teams.
- Install surveillance cameras to detect spills in high-spill areas.
- Have a documented, scheduled program for stripping floors and reapplying slip-resistant treatments.
- Keep walkways and stairwells free of clutter.
- Place signs and barriers around walking hazards.
- Audit floor surfaces regularly to monitor slip resistance levels.
- Hold supervisors and managers accountable for keeping their work areas free of hazards.
- Train custodial staff in the proper use of chemicals to clean and treat floors.

### *Personal Protective Equipment*

- Provide goggles to reduce glare in areas with intense light.
- Provide or require employees to wear slip-resistant shoes.

## Controls for Risk Factors Relating to Equipment



- Leakage
- Misuse
- Faulty equipment
- Position
- Stability
- Footwear
- Furniture

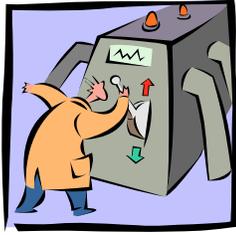
### *Engineering Controls*

- Fix or replace faulty equipment.
- Locate equipment in an area where it does not jut out into walkways.
- Provide the proper equipment for the job (e.g. provide ladders that are tall enough to reach the required heights without jury-rigging).
- Fix leaky pipes and clogged drains that may cause water to drip or spill onto walking surfaces.
- Locate in low traffic areas equipment that is likely to leak liquids.
- Locate equipment such as valves at ground level to prevent the need to work on them at height.
- Build escalators with low-friction sidewalls to prevent shoes from sticking on them.
- Install emergency shutoff switches at the top and bottom of every escalator.
- Install on escalators sensory devices that detect foreign objects and shut the escalator off automatically.

### *Administrative Controls*

- Provide education and training on the proper use of tools and equipment.
- Keep tools and equipment clean and well-maintained.
- Inspect equipment and tools regularly.
- Keep thorough records of your inspections and maintenance.

## Controls for Risk Factors Relating to Equipment—continued



- Leakage
- Misuse
- Faulty equipment
- Position
- Stability
- Footwear
- Furniture

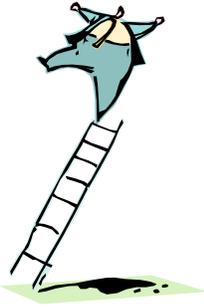
### *Administrative Controls* —continued

- Regularly move waste, debris and scrap that come from using and maintaining the equipment.
- Keep walkways free of cords, wires, cables, open drawers and other obstacles.
- Provide signs reminding employees of proper operation of equipment.
- Require employees to complete equipment maintenance checklists regularly.
- Provide barricades and warning signs to isolate equipment that may be a tripping or stumbling hazard.
- Provide sufficient containers throughout the organization so that trash and oily rags from equipment maintenance don't accumulate in walkways or on walking surfaces.
- Have written rescue procedures for employees who fall from ladders and scaffolding equipment.

### *Personal Protective Equipment*

- Make sure that mobile equipment has seat belts and roll bars.
- Ensure that extended ladders have safety platforms.
- Provide fall-arrest equipment to employees working on elevated equipment (e.g. cherry pickers, extended ladders, scaffolds).
- Install guard rail systems.
- Install toe boards.
- Use nets.

## Controls for Risk Factors Relating to the Individual



- Rushing
- Sloppiness
- Age
- Vision
- Choice of footwear
- Fatigue or stress
- Inattentiveness
- Failure to use safety equipment
- Opportunism

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### *Engineering Controls*

- Provide equipment that won't operate unless fall-protection guards are in place (e.g. a forklift cage that won't start until employee has fastened appropriate seat belts or fall protection).

- Provide enough space so that employees can avoid storing boxes and other obstacles in walkways.

### *Administrative Controls*

- Provide education and training on the importance of keeping workstations clean.

- Provide adequate work-rest periods so that employees stay alert and refreshed.

- Implement performance standards to require employees to keep their workstations clean, wear their PPE and use proper safety precautions.

- Keep thorough records.

- Reward employees for keeping a clean work area.

- Reward employees for wearing their PPE.

- Reward employees for following safety precautions.

- Post escalator safety procedures at every escalator.

### *Personal Protective Equipment*

- Establish procedures to ensure employees wear their PPE.

- Establish routine checks to ensure employees wear PPE.

- Apply consequences for employees not wearing PPE.

## Controls for Risk Factors Relating to Work Practices



- Emphasis on productivity at all costs
- Poor housekeeping procedures
- Cleaning methods
- Lack of training
- Lack of enforcement
- Lack of space
- Lack of signage

### *Engineering Controls*

- Change work processes to minimize the necessity of rushing.
- Automate tasks that require climbing to a higher elevation.
- Routinely inspect and maintain floor mats so that they retain their slip resistant quality and to ensure that they have not moved, buckled or curled.
- Promptly replace damaged mats so they do not become a tripping hazard in themselves.

### *Administrative Controls*

- Have and use a documented housekeeping program.
- Provide education and training on proper housekeeping and floor safety.
- Provide education and training on the proper methods for floor cleaning, maintenance and inspections.
- Keep thorough floor maintenance and inspection records.
- Provide adequate work-rest periods to prevent employees from slipping or stumbling due to fatigue.
- Provide signage reminding employees to wear their PPE.
- Have spill kits and signs readily available.
- Recommend the use of slip-resistant footwear.

### *Personal Protective Equipment*

- Establish procedures to ensure employees wear their PPE.
- Establish routine checks to ensure employees wear PPE.
- Apply consequences for employees not wearing PPE.

## EMERGENCY ILLUMINATION STANDARDS

The following emergency illumination specifications are from NFPA Life Safety Code (101). Does your organization meet the standards?

**Conform?**  
**YES    NO**

1.            Exit routes, including stairs, aisles, corridors and ramps must have emergency lighting.
2.            When servicing the organization's lighting system, there must be a means for keeping illumination uninterrupted.
3.            Emergency lighting must last for at least 1½ hours after the power failure.
4.            Emergency lighting must emit 1 foot candle of light at any point in the building and 0.1 foot candle of light along the emergency exit path at floor level.
5.            At the end of the emergency illumination period (1½ hours), it is permissible for illumination to fade to 0.6 foot candle of light at any point in the building and .06 foot candle of light along the emergency path of exit at floor level.
6.            Maximum to minimum illumination uniformity cannot exceed a ratio of 40 to 1.
7.            Emergency lighting must be provided automatically in the event of a power failure.
8.            Exits must be marked with approved signs that are visible all the way along the evacuation path.
9.            The word EXIT must have letters that are at least 6 inches high and ¾ inch wide.
10.           Exit signs must be illuminated by a reliable light source—one that will stay lit when electricity fails.

## Floor Types and Treatments

Once you know what your floor requirements are, select the floor that best meets them. You have many choices. Here is a summary of the most common, as well as information about how to care for them.

Floor Type	When to Use	Safety Treatment	How to Clean/Maintain
<b>Ceramic tile</b>	<ul style="list-style-type: none"> <li>■ Commercial</li> <li>■ Office</li> <li>■ Entrances</li> <li>■ Retail</li> <li>■ Residential</li> </ul>	<ul style="list-style-type: none"> <li>■ Acid Etch</li> </ul>	<ul style="list-style-type: none"> <li>■ Neutral cleaner</li> <li>■ Mild acidic detergent</li> <li>■ Auto-scrubber</li> </ul>
<b>Porcelain tile</b>	<ul style="list-style-type: none"> <li>■ Commercial</li> <li>■ Offices</li> <li>■ Entrances</li> <li>■ Retail</li> <li>■ Residential</li> </ul>	<ul style="list-style-type: none"> <li>■ Acid Etch</li> </ul>	<ul style="list-style-type: none"> <li>■ Neutral cleaner</li> <li>■ Mild acidic detergent</li> <li>■ Auto-scrubber</li> </ul>
<b>Marble</b>	<ul style="list-style-type: none"> <li>■ Office</li> <li>■ Retail</li> <li>■ Residential</li> </ul>	<ul style="list-style-type: none"> <li>■ High-traction finish</li> </ul>	<ul style="list-style-type: none"> <li>■ Specialized cleaner</li> <li>■ Routine buffing/polishing</li> <li>■ Periodic grinding with diamond pads</li> <li>■ Commercial floor finish</li> </ul>
<b>Terrazzo</b>	<ul style="list-style-type: none"> <li>■ Commercial</li> <li>■ Hallways/corridors</li> </ul>	<ul style="list-style-type: none"> <li>■ High-traction finish</li> </ul>	<ul style="list-style-type: none"> <li>■ Neutral cleaner</li> <li>■ Commercial floor finish</li> <li>■ Auto-scrubber</li> </ul>
<b>Vinyl tile (VCT)</b>	<ul style="list-style-type: none"> <li>■ Retail</li> <li>■ Office</li> <li>■ Light manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>■ High-traction finish</li> </ul>	<ul style="list-style-type: none"> <li>■ Commercial floor finish</li> <li>■ Neutral cleaner</li> <li>■ Frequent buffing</li> <li>■ Periodic stripping</li> <li>■ Auto-scrubber</li> </ul>

## Floor Types and Treatments—continued

Floor Type	When to Use	Safety Treatment	How to Clean/Maintain
<b>Concrete</b>	<ul style="list-style-type: none"> <li>■ Industrial</li> <li>■ Commercial</li> <li>■ Retail</li> <li>■ Exterior walkways</li> <li>■ Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>■ High-traction hardener or densifier application along with grinding</li> <li>■ Acid etch</li> </ul>	<ul style="list-style-type: none"> <li>■ Cleaner degreaser</li> <li>■ Solvent based cleaner for industrial applications</li> <li>■ Auto-scrubber</li> </ul>
<b>Wood</b>	<ul style="list-style-type: none"> <li>■ Retail</li> <li>■ Office</li> <li>■ Residential</li> </ul>	<ul style="list-style-type: none"> <li>■ High-traction coating</li> </ul>	<ul style="list-style-type: none"> <li>■ Specialized cleaner</li> <li>■ Frequent dust mopping</li> <li>■ Commercial floor finish</li> </ul>
<b>Laminate</b>	<ul style="list-style-type: none"> <li>■ Retail</li> <li>■ Office</li> <li>■ Residential</li> </ul>	<ul style="list-style-type: none"> <li>■ N/A</li> </ul>	<ul style="list-style-type: none"> <li>■ Neutral cleaner</li> <li>■ Frequent dust mopping</li> </ul>
<b>Rubber</b>	<ul style="list-style-type: none"> <li>■ Commercial</li> <li>■ Industrial</li> <li>■ Hallways/corridors</li> <li>■ Light manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>■ N/A</li> </ul>	<ul style="list-style-type: none"> <li>■ Specialized cleaner</li> <li>■ Rubber is self polishing and can be buffed to increase gloss level</li> <li>■ Commercial floor finish</li> </ul>
<b>Carpet</b>	<ul style="list-style-type: none"> <li>■ Retail</li> <li>■ Office</li> <li>■ Hallways/corridors</li> <li>■ Residential</li> </ul>	<ul style="list-style-type: none"> <li>■ N/A</li> </ul>	<ul style="list-style-type: none"> <li>■ Vacuum frequently</li> <li>■ Periodically wet or dry extract</li> </ul>

**Note:** It is recommended that you select treatments, finishes, and cleaners that are NFSI Certified as “High-Traction.”

## Ladder Safety Checklist

To prevent falls from ladders, make sure you have the following controls in place:

- Use only ladders that are in good condition and designed to handle the climbing job that needs to be done.
- Train employees on proper ladder use.
- Make proper ladder use a performance requirement for the job.
- Require employees to complete a ladder inspection before each use.



### Criteria for Ladder Purchase and Care

- Check OSHA standards for the type of ladder you are using.
- Use only Underwriter's Laboratory approved ladders (will have the UL seal).
- Protect wood ladders with a clear sealer, such as varnish, shellac, linseed oil or wood preservative because paint can hide defects.

### Ladder Usage

- Be sure step ladders are fully open and locked before climbing them.
- Place ladder on a flat, secure surface.
- Place ladder on a hard surface as it will sink into a soft surface.
- Place ladder on non-movable base.
- Lean ladder against a secure surface, not boxes or barrels.
- Do not place ladder in front of a door.
- Position base of ladder one foot away for every four feet of height to where it rests (1:4 ratio).
- Ladder rails should extend at least three feet above top landing.
- Check shoes to ensure they are free of grease or mud.
- Mount the ladder from the center, not from the side.
- Face ladder when ascending or descending, and hold on with both hands.
- Carry tools in pockets, in a bag attached to a belt, or raised and lowered by rope.
- Don't climb higher than the third rung from the top.
- Work facing the ladder.
- Do not overreach, always keep your torso between the ladder rails.
- When using ladder for high places, securely lash or fasten the ladder to prevent slipping.
- Avoid outdoor ladder use on windy days.
- Avoid aluminum ladders if work must be done around electrical wires or power lines.

## Risk Classes

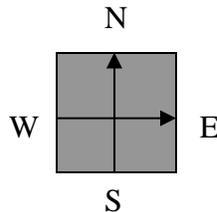
During your assessment of the facility, the auditor will need to classify all the areas in the facility into individual risk categories. This guideline recommends the use of three (3) risk classes. These classes have special meaning and will define the type of tribometry test methods used.

NOTE: Carpeted areas are not included in any risk class and are NOT to be tested. To date carpeting has no current standard for slip-resistance.

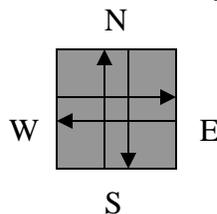
### Risk Class “A”: Walkways Normally Dry and Free of Contaminants

**Grain:** *A characteristic of natural flooring materials such as wood, that may exhibit directional bias as it relates to slip resistance.*

Test Method: Dry SCOF using a leather sensor (slider).  
Test in two directions (per diagram below) if no grain is apparent on the surface.



Test in four directions (per diagram below) if grain is present.



Criteria: SCOF  $\geq$ 0.50

#### Examples:

- Hallways
- Meeting rooms
- Auditoriums
- Offices
- Areas normally free of liquid spills
- Warehouse and Storage rooms

## **Risk Class “B”: Walkway Areas Occasionally Contaminated**

- Test Methods: #1 Perform test method for Risk Class “A” as above.
- #2 Perform wet SCOF test using a Neolite® sensor (slider).  
Test in two directions if no grain is apparent on the surface.  
Test in four directions if grain is present.

Criteria: SCOF  $\geq$  0.6 per NFSI Test Standard 101- A

Examples:

- Areas surrounding water or liquid portals
- Door entryways from the outside,
- Drinking fountains
- Restroom areas
- Kitchens/break-rooms
- vending machine areas,
- Dishwashing equipment
- Work areas where solvents, oils or greases are commonly used

## **Risk Class “C”: Walkway Areas Normally Wet and Where Shoes Are Normally Worn**

- Test Method: Perform wet SCOF test using a Neolite® sensor (slider).  
Test in two directions if no grain is apparent on the surface.  
Test in four directions if grain is present.

Criteria: SCOF  $\geq$  0.6 per NFSI Test Standard 101- A

Examples:

- Floors intended for use in wet areas
- Areas adjacent to showers, bathtubs, swimming pools, decks, spas and in locker rooms.

When diagramming your auditing approach, as mentioned previously, pay particular attention to the pedestrian and occupant usage of the facility. High traffic areas (entryways, corridors) should be first to document as they are the arterials to the rest of the building areas and statistically, have the greatest number of “foot to floor” transactions.

NOTE: the NFSI is currently developing new standards that will address issues of “bare foot” slip-resistant testing, and Dynamic Coefficient of Friction (DCOF); please refer to the NFSI website (<http://nfsi.org>) for further information.