



Training Solutions, Delivered!

FALL FACTORS:

***Understanding & Preventing
Slips, Trips & Falls (Concise)***

**Leader's Guide, Fact Sheet
& Quiz**

Item Number: 4213

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This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation.

PREPARING FOR THE MEETING

Here are a few suggestions for using this program:

- a) Review the contents of the Fact Sheet that immediately follows this page to familiarize yourself with the program topic and the training points discussed in the program. The Fact Sheet also includes a list of Program Objectives that details the information that participants should learn from watching the program.
- b) If required by your organization, make an attendance record to be signed by each participant to document the training to be conducted.
- c) Prepare the area and equipment to be used for the training. Make sure the watching environment is comfortable and free from outside distractions. Also, ensure that participants can see and hear the TV screen or computer monitor without obstructions.
- d) Make copies of the Review Quiz included at the end of this Leader's Guide to be completed by participants at the conclusion of the presentation. Be aware that the page containing the answers to the quiz comes before the quiz itself, which is on the final page.

CONDUCTING THE PRESENTATION

- a) Begin the meeting by welcoming the participants. Introduce yourself and give each person an opportunity to become acquainted if there are new people joining the training session.
- b) Introduce the program by its title and explain to participants what they are expected to learn as stated in the Program Objectives of the Fact Sheet.
- c) Play the program without interruption. Upon completion, lead discussions about your organization's specific policies regarding the subject matter. Make sure to note any unique hazards associated with the program's topic that participants may encounter while performing their job duties at your facility.
- d) Hand out copies of the review quiz to all of the participants and make sure each one completes it before concluding the training session.

4213 FALL FACTORS: Understanding & Preventing Slips, Trips & Falls (Concise) FACT SHEET

LENGTH: 9 MINUTES

PROGRAM SYNOPSIS:

Slips, trips and falls result in more than 15 million workplace injuries each year; and unfortunately, injuries related to falls are the second leading cause of on-the-job fatalities. Falls are also the third leading cause of disability among employees. The good news is that these mishaps can be prevented. By understanding how “fall factors” such as balance, gravity, friction and momentum contribute to these incidents, we can take preventative measures to prevent falls. That’s the purpose of this program—to prevent fall-related incidents by providing viewers with an understanding of the factors involved in every fall as well as the common hazards and unsafe actions that make a fall much more likely. Also reviewed are the techniques and safe work practices that we can use to control the factors that contribute to slip, trips and falls.

PROGRAM OBJECTIVES:

After watching the program, participants should be able to explain the following:

- How controlling our center of gravity helps us maintain our balance;
- How gravity, friction and momentum contribute to slips, trips and falls;
- What precautions to take to prevent falls resulting from slips;
- Why it is important to wear proper footwear for the traveling surface;
- What measures to take to avoid falls resulting from trips;
- What types of unsafe acts contribute to fall-related incidents.

PROGRAM OUTLINE

THE BODY’S CENTER OF GRAVITY’S ROLE IN MAINTAINING BALANCE

- So exactly why do we fall? The simple answer is we lose our balance. One key to maintaining balance is to control the location of the body’s center of gravity relative to its base of support.
- When our center of gravity is directly over our base of support, in this case the feet, we will be stable and balanced.
- Once we lean forward or backward and allow our center of gravity to move beyond our base of support, we will quickly lose our balance and fall unless we move our center of gravity back over our base, or we move our base of support so that it remains under our center of gravity.
- Unfortunately, it doesn’t take much to interfere with this process, preventing us from regaining stability and leading to a fall.

FALL FACTORS

Gravity

- Another fall factor is gravity. Gravity is a constant force that pulls us downward and gravity is not gentle.
- Gravity accelerates objects towards the ground at a rate of 32 feet per second squared. With the force of gravity always pulling us downwards, it’s no wonder that even a small fall can cause big injuries.

Friction

- In addition to balance and gravity, another fall factor is friction, or more specifically a lack of friction. Friction is the force which resists the movement of one solid object relative to another.
- For example, friction prevents this block from sliding down the slope; however, adding a slippery substance reduces friction and allows the brick to slide easily.
- We depend on friction between the sole of our footwear and the traveling surface to prevent our feet from sliding.
- A loss of friction, also called a loss of traction, can cause our feet to slip. When this occurs, our base of support is no longer under our center of gravity leading to a loss of balance and a possible fall.

Momentum

- The last fall factor we will discuss is momentum. Momentum is a function of an object’s mass and speed. An object’s momentum determines how much force is required in order to bring the object to a stop.
- One way to think about momentum is to remember Sir Isaac Newton’s first Law of Motion: An object in motion tends to stay in motion.
- When our base of support, our feet, are stopped suddenly, our center of gravity will tend to stay in motion and may extend too far past our base of support, causing a loss of balance and a fall.

PREVENTING FALLS RESULTING FROM SLIPS

- Slips occur when a lack of friction between our feet and the surface on which we are standing or walking results in our feet sliding. This can easily cause us to lose our balance and fall.
- There are many substances which can reduce friction and become slip hazards, including water, oil, grease, sawdust or metal shavings, ice and snow.
- If you discover any of these hazards in your workplace, follow your company's policy for having the situation remedied. This could be as simple as cleaning up the hazard yourself or placing a warning sign next to the hazard and reporting it to the proper authority to have the hazard corrected.
- Of course, to avoid hazards, you must first be aware of them. Whenever traveling through the workplace, pay attention to the walking surface ahead.
- Be aware that entrance ways into buildings, as well as bathroom floors, are frequently slippery. Always proceed carefully in these types of areas. Wet, slippery floors are a frequent source of slips and falls.
- If you must walk across an area that could be slippery, taking short steps helps to keep your center of gravity over your base of support. Also, using a wider stance and pointing your feet slightly outward can help you remain balanced.

IMPORTANCE OF WEARING PROPER FOOTWEAR

- We've seen the importance that traction plays in preventing slips. One way to maintain proper traction is to wear the proper footwear for the traveling surface.
- Many types of safety footwear are equipped with slip-resistant soles. Certain types of soles are designed to provide traction on specific surfaces and under specific conditions.
- Be sure you understand which type of shoes or boots have the appropriate sole composition for the areas in which you work and always wear them when required.
- Be aware that slippery substances can become stuck on the bottom of our footwear. This can also cause a reduction in friction and a slip and fall. Inspect the soles of your footwear for mud, grease or other slipping hazards and clean them off before proceeding to your work area each day.
- Pay special attention to the condition and the tread wear of the heels, as most slips occur due to the lack of friction between the walking surface and the heel of your shoe.

PREVENTING FALLS RESULTING FROM TRIPS

- Tripping occurs when one or both of our feet are impeded while traveling. This can cause our center of gravity to move beyond our base of support, leading to a loss of balance; and, if we are traveling with too much momentum, we will be unable to recover quickly enough to avoid a fall.
- There are many items which can become trip hazards, including tools, electric cords, hoses and similar objects.
- To prevent trips, all workers must constantly be on the lookout for these types of objects so they can be avoided and corrected if necessary.
- If you discover a trip hazard in your workplace, especially one that is in a designated walkway, follow your company's policy for having the situation remedied.
- This could be as simple as moving the object yourself or marking it so others are aware of the hazard and reporting it to the proper authority so it can be corrected.
- Of course, to avoid trip hazards, you must first be aware of them. Whenever traveling through the workplace, pay attention to the walking surface ahead. Scan your path of travel for hazards and move at a pace which allows you to stop easily or change direction when necessary.
- One of the main contributors to the presence of tripping hazards is poor housekeeping. When we allow our work area to become cluttered with tools, supplies and other debris, we greatly increase the chance of a tripping incident and injury.
- Also, don't use stairwells for storage and don't leave tripping hazards near doorways, even if you only intend to leave them there for a short period of time.
- When injuries related to trips and falls are investigated, there are certain types of trip hazards which seem to show up more frequently than others. One such hazard is extension cords.
- Extension cords are frequently involved in trip and fall incidents. They are particularly hazardous because they often slope down from the receptacle and then up again, creating the perfect place for a foot to become entangled. In addition, unsecured cords can move unexpectedly when pulled by the user.
- If you must use an extension cord in an area where pedestrians travel, make sure to secure it to the floor, and mark the hazard in some way. Be sure to remove the cord as soon as you no longer need it.
- Another common tripping hazard, especially in an office setting is open drawers, especially the lower drawer of filing cabinets.
- When opening drawers, get in the habit of closing them right away, even if you plan on coming back soon. An open drawer is hard to see and presents a serious hazard.
- Finally, faulty floor mats, loose carpeting and damaged floor tiles are frequently cited as the cause of tripping incidents. While we typically can't fix these items ourselves, we can report them to the proper authority so they can be repaired.

UNSAFE ACTS

- There is another factor which contributes to many falls which we have not yet discussed: unsafe acts committed by employees.
- We've already discussed the importance of scanning our path of travel for hazards while walking. Anything that prevents us from doing so is a distraction and should be considered an unsafe act.
- Shouting at co-workers across the facility, taking part in intense conversations, and of course reading, texting or using any type of device that takes your eyes away from your path of travel is unsafe and must be avoided.
- No matter what the circumstances are, never run at work. Make no mistake; running at work is committing a very unsafe act. When we run, we have much less time to scan our path of travel for hazards. When we run, we have less time to react to changing conditions.
- Running increases our momentum, not only making it much easier to fall, but also increasing the force with which we hit the floor or strike objects. This can greatly increase the severity of injury.

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ANSWERS TO THE REVIEW QUIZ

1. b

2. c

3. b

4. a

5. b

6. b

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REVIEW QUIZ

The following questions are provided to determine how well you understand the information presented in this program.

Name _____ Date _____

1. Falls are the _____ leading cause of on-the-job fatalities.
 - a. First
 - b. Second
 - c. Third

2. At which rate does gravity accelerate objects toward the ground?
 - a. 8 feet per second squared
 - b. 16 feet per second squared
 - c. 32 feet per second squared

3. When walking across slippery areas, using a wider stance and pointing your feet slightly _____ can help you remain balanced.
 - a. Inward
 - b. Outward

4. Most slips occur due to the lack of friction between the walking surface and the heel of your shoe.
 - a. True
 - b. False

5. You should only use stairwells for storage when you plan to remove the stored items before your shift ends.
 - a. True
 - b. False

6. Running at work is not considered an unsafe act.
 - a. True
 - b. False