CAL / OSHA: PREVENTING SLIPS, TRIPS AND FALLS
FACT SHEET

LENGTH: 12 MINUTES

PROGRAM SYNOPSIS:
Our workplace is full of hazards, hazards that can hurt us or kill us. Controlling these hazards and preventing injuries is the purpose of our program. Workplace falls are a leading cause of injury and even a small fall can have very serious consequences. Knowing how to fix and prevent slip, trip and fall hazards is the first step in ensuring you have a safer work environment.

PROGRAM OBJECTIVES:
After watching the program, the participant will be able to explain the following:
- The common causes of slip hazards;
- How to safely work around potential trip hazards that are unable to be fixed;
- How both friction and momentum aid in keeping us balanced and how they play a factor in falls;
- How correct training and PPE will help prevent slips, trips and falls.

INSTRUCTIONAL CONTENT:

BACKGROUND
- Our workplace is full of hazards, hazards that can hurt us or kill us. Controlling these hazards and preventing injuries is the purpose of our safety and health program.
- One such hazard is the risk of falling due to a slip or trip.
- Workplace falls are a leading cause of injury and even a small fall can have very serious consequences.
- Identifying and correcting fall hazards combined with paying close attention to our paths of travel can prevent fall related injuries and save lives.
- In 2015 alone, California OSHA reported that there were over 20,000 injuries caused by slips, trips, and falls. This number accounted for over 20 percent of the total injuries reported.
- Wet and slippery floors, cluttered work areas, extension cords, improper footwear, running and not paying attention as we travel through the workplace are all hazards that increase the potential for a slip, trip and fall.

HOW FALLS OCCUR
- Employers must be committed to preventing slips, trips and falls. For this effort to be effective, all employees must develop an understanding of how falls can occur in the first place.
- Simply put, you will fall when you lose your balance as your center of gravity shifts beyond its base of support.
- When standing, your base of support is your two feet, while your center of gravity is located near your lower back.
- These three points continuously change position when you walk or run. If your center of gravity extends past your feet, you will lose your balance.
- Unless you move your center of gravity back over your feet or move your feet back under your center of gravity, you will fall.
- When you walk, you momentarily lose your balance with each step. Your center of gravity shifts forward, beyond the base of support.
- However, while walking, this momentary loss of balance is corrected by moving a foot forward with each step.
- Many falls occur when some type of hazard or obstruction prevents you from moving a foot forward while walking. This results in a loss of balance and a fall.
- For employees to remain balanced and avoid falling they must have an understanding of the three main factors that contribute to a loss of balance: gravity, friction and momentum.
- Gravity accelerates objects downward at the rate of 32 feet per second squared or 9.8 meters per second squared.
- When a loss of balance occurs, gravity is the force that drives you into the ground.
- Friction is the force that resists the movement of one solid object relative to another.
- When you step, turn or stop while walking or running, it is the friction, sometimes called traction, between the sole

of your footwear and the traveling surface that prevents you from slipping or sliding.
- When friction is significantly reduced or lost, your feet can slide, causing your base of support to move out from under your center of gravity, leading to a fall.
- Momentum is the force that tends to keep a moving object in motion. When that object is a person, the amount of momentum depends on their weight and the speed at which they are moving.
- The more momentum you have when traveling, the more difficult it is to stop or change directions when encountering a slip or trip hazard.
- The more momentum you are carrying, the more friction is required to secure the soles of your shoes to the walking surface.
- When momentum overpowers friction, a slip and fall will occur.
- And finally, when your feet are suddenly stopped, while carrying increased momentum, your center of gravity will continue moving forward beyond your base of support resulting in a trip and fall.

PREVENTING FALLS
- To prevent falls, we must control all of the factors that contribute to falling. Let's start with friction or traction.
- To help maintain good traction, workers must wear footwear with a sole composition appropriate for the walking surfaces on which they travel.
- Certain types of soles provide better traction on specific surfaces and under specific conditions.
- The California Division of Occupational Safety and Health mandates that appropriate footwear, such as slip-resistant shoes, be worn by employees who are required to work in abnormally wet locations.
- If you have any questions about the appropriate footwear for your work area, ask your supervisor.
- You should periodically check the condition and treadwear of the sole of your boots or shoes. Be sure to pay particular attention to the heels.
- Most slips occur when there is not enough friction between the heel of your shoe and the traveling surface.
- Also check the soles of your shoes for any accumulation of mud or other slippery substances. For maximum traction, footwear soles must be kept clean.
- Even if you are wearing the proper footwear for your working environment, there are various types of slip hazards that may be encountered which can cause a loss of traction and result in a fall.
- To prevent slips, employees should always be on the lookout for leaks and spills of water, chemicals, oil and other substances.
- Be aware that slipping hazards are not always a liquid. Metal shavings, sawdust, and similar byproducts of work processes can also cause a loss of traction leading to a slip and fall.
- Avoid slip hazards by paying close attention to the traveling surface when moving about the workplace.
- Pay extra attention to the entrances into buildings and restrooms. In these areas, floors are often wet and slippery.
- Proceed with caution to prevent a slip and fall. If you encounter any hazard that could cause a slip, clean it up right away if you are able.
- "Wet Floor" signs can be an effective way of letting others know that slip hazards are present in the area.

CORRECTING TRIP HAZARDS
- Correcting unsafe conditions is critical to prevent injuries.
- Report slip and trip hazards to your supervisor if they cannot be immediately addressed.
- Don't assume someone else will handle the situation.
- There may be times when you cannot avoid walking across a wet or slippery surface.
- When this is the case, using a wide stance with your feet pointed outward slightly, while taking short steps, can help you maintain your balance.
- As we learned earlier, a trip occurs when your center of gravity moves beyond your base of support after one or both of your feet are obstructed.
- One way to prevent trips is to avoid contact with obstructions that may become tripping hazards.

SLIP, TRIP AND FALL HAZARDS
- Just about any item has the potential to be a tripping hazard. This includes extension cords, air hoses, tools, boxes and pallets, just to name a few.
- Usually what makes an ordinary object become a tripping hazard is poor housekeeping.

- If the floor of your work area is cluttered with tools and supplies, the potential for a trip and fall greatly increases.
- Prevent this by keeping your work area organized so that these items won't be in your path of travel and do not allow materials to obstruct marked aisleways used by other workers.
- Many tripping incidents occur in stairwells and doorways. Don't use these areas for storage, even if you only plan to leave the items there a short time.
- To prevent trips, employees must always be on the lookout for potential trip hazards.
- Make a point of scanning your intended path before traveling. Continue scanning for hazards while traveling and travel at a pace that allows you to avoid any hazards that may be encountered.
- If you discover a tripping hazard, move it yourself if you are able; otherwise, mark it if possible and notify the proper authority.
- Damaged floor tiles, torn or loose carpet and defective floor mats are other common tripping hazards.
- While you may be unable to repair these yourself, you should mark them if possible and report them immediately.
- Lower file cabinet drawers are the cause of many trip and fall injuries, especially in office environments. They should be closed immediately after each use.
- Many fall injuries also occur when workers trip over extension cords. If you must use an extension cord in areas of pedestrian traffic, make sure to secure it to the floor and mark the hazard. Be sure to remove the cord as soon as you have finished using it.
- Trips can also be prevented by traveling at a slow, safe pace. Recall that increased momentum contributes to trips by allowing the upper body to continue forward after the feet become obstructed.
- This is why you should never run in the workplace. Running greatly increases the chance of a serious injury.
- Running can increase the force with which you could hit the floor or strike objects should a fall occur. In addition, running hinders your ability to scan your travel path and gives you less time to react to changing conditions.
- Also, always turn on the lights when preparing to walk through dark areas in order to see any hazards.
- And when possible travel in designated aisle ways and other approved areas intended for pedestrian traffic.
- Stay focused on your path of travel and avoid distractions such as daydreaming, reading, texting and any other activity that shifts your eyes from the path of travel.
- Similarly, never carry a load that obstructs your forward view. This makes it impossible to see any hazards in your path.

FALL CLASSIFICATIONS

- California OSHA classifies falls in two categories:
    1) Falls from height
    2) Falls on the same level
- The typical slips and trips we have been discussing are considered same level falls.
- Preventing falls from height requires additional training on items such as guardrails, personal fall arrest systems, the use of ladders or elevated work platforms.
- If your job requires you to work from height, your employer will provide you with additional training.
- In this program, we have reviewed the common causes of falls related to slips and trips and pointed out how fall hazards can be controlled to prevent injuries and fatalities.
- Preventing same level slips, trips and falls is a critical part our safety program and requires the full participation of all employees.

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ANSWERS TO THE REVIEW QUIZ

1. b
2. e
3. a
4. c
5. b
6. a
7. b
8. a
9. a

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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. Small falls do not have serious consequences.

a. True
b. False

2. Which of the following is considered a slip, trip or fall hazard?

a. Wet and slippery floors
b. Cluttered work areas
c. Extension cords
d. Running and not paying attention
e. All of the above

3. When walking, you momentarily lose your balance with each step.

a. True
b. False

4. Gravity accelerates objects downward at the rate of ____ feet per second squared.

a. 15
b. 47
c. 32
d. 88

5. To prevent falls, only management can control factors that contribute to falling.

a. True
b. False

6. Metal shavings, sawdust and similar byproducts of work processes can also be slipping hazards.

a. True
b. False

7. Always assume that someone else will address a slip and trip hazard if you do not.

a. True
b. False

8 To prevent trips, you should always be on the lookout for potential trip hazards.

a. True
b. False

9. Never carry loads that obstruct your forward view.

a. True
b. False