SAFETY TRAINING

Training Solutions, Delivered!

WALKING AND WORKING SURFACES

Leader's Guide, Fact Sheet & Quiz

Item Number: 4787

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.

4787 WALKING AND WORKING SURFACES
FACT SHEET

LENGTH: 17 MINUTES

PROGRAM SYNOPSIS:
Slips, trips and falls continue to make up the majority of on-the-job accidents. They cause almost 20 percent of disabling occupational injuries, and thousands of fatalities every year. And most of these accidents could have been prevented. That's why the Occupational Health and Safety Administration (OSHA) developed regulations focusing specifically on "walking and working surfaces." The principles and practices behind these rules can help workers get the job done and avoid the hazards of slips, trips and falls. This program reminds employees that if they understand the slip, trip and fall hazards associated with walking and working surfaces in their workplace, they can take action to avoid them.

PROGRAM OBJECTIVES:
After watching the program, the participant should be able to:
- Identify common types of walking and working surfaces in their workplace.
- Understand the slip, trip and fall hazards associated with walking and working surfaces.
- Discuss specific procedures they can use to avoid slip, trip and fall hazards on the job.
- Discuss how good housekeeping and "guarding" can reduce slip, trip and fall hazards.
- Recognize how unsafe behavior can cause accidents on stairways.
- Discuss how to properly inspect and set up a portable ladder.
- Understand how personal fall protection can reduce the risk of a fall from a fixed ladder or scaffold.

PROGRAM OUTLINE:

THE NEED FOR REGULATIONS FOR WALKING & WORKING SURFACES
- When it comes to safety, the floor beneath our feet might be the last thing we think about.
- Floors, platforms and scaffolds, aisles, passages, stairways and ladders…it's easy to take the surfaces we walk and work on for granted. But that would be a big mistake.
- Whether we're standing, walking or climbing, we depend on these surfaces to provide the support we need to position ourselves properly, use our muscles efficiently, keep our balance and do our work safely.
- Yet slips, trips and falls continue to make up the majority of on-the-job accidents. They cause almost 20 percent of disabling occupational injuries, and thousands of fatalities every year.
- Most of these accidents could have been prevented. That's why OSHA (the Occupational Health and Safety Administration) developed regulations focusing specifically on "walking and working surfaces".
- The principles and practices that are behind these regulations can help you get your job done and go home safe at the end of the day.

CAUSES OF SLIPS & TRIPS
- You might never have given a thought to the floor in the entrance to your facility until one stormy day you discover the hard way that rainwater on tile can turn it into a skating rink.
- Water and other liquids will make many surfaces more slippery. Grease, oil and process wastes, even dry materials like sawdust, metal shavings and common dirt, can do it, too.
- Just about anything that comes between the sole of your shoe and the floor can make you slip. Even simple litter like scraps of paper, cardboard or discarded packing material can do it.
- Trips are caused by things that get in front of your foot unexpectedly, such as a pallet someone left on the walkway, an extension cord stretched across the floor or building materials scattered around a construction site.
- These are only a few ways a trip and fall can begin. But all of these can be prevented by good housekeeping. An orderly workplace with clean walking and working surfaces creates a safer environment for everyone.
- There are some hazards that you can't just clean up or put away. Ditches, open pits, tanks, vats, and other equipment that can create potential slip or fall problems must be covered or surrounded by a railing.

FLOOR HAZARDS

- The process of using actual physical barriers to reduce the risk of a slip, trip, or fall is called "guarding." It's another effective way to keep you and your coworkers safe.
- Speaking of floor hazards, how can you determine how strong a floor is? You can't tell just by looking at it.
- If you're installing large equipment, storing heavy materials, or driving a loaded forklift across it, you need to know how much weight is too much.
- Fortunately, a floor's load-bearing capacity, or "load rating limit", is not something you normally have to guess at. Where floor-stressing activities take place, it should be clearly marked, and posted conspicuously.
- With all that's going on at floor level, getting safely from point A to point B in a busy workplace can often be a challenge. In addition to the folks who are just passing through, you can have people working, equipment running, and materials being moved. It can add up to a lot of hazards, so it's important for aisles and passageways to be clearly marked. That way everyone knows where it's safe to walk.
- Marking off these areas also indicates where there shouldn't be any clutter or other obstacles. It's easier to see the things that don't belong, so they can be cleaned up or moved out.

GUARDING OPENINGS & PLATFORMS

- It may be natural to assume that a floor will be where you expect it to be… but assumptions can be dangerous! Large holes like openings for stairways or ladders are big enough for you to fall through. They have an odd way of appearing underfoot at just the wrong time.
- But these surprises can be prevented by guarding openings with a "standard railing". This barrier consists of top rail 42 inches high, with a mid-rail half that height, and vertical uprights to support them. Installing these around the perimeter of an opening effectively keeps people safe.
- But tools and materials can fall through holes and other openings, too, and injure the people working below. Falling objects that land in machinery or on energized equipment may create secondary hazards, as well.
- That's why "toe boards" should be added to railings wherever falling objects can be a problem. These four-inch-tall barriers along the floor guard the edges of openings, so that tools and materials can't get through.
- Openings in walls can pose just as great a hazard as those in floors. Wall openings that are big enough for someone to fall through, and drop more than four feet, must have barriers installed across them.
- "Catwalks" and other open-sided platforms are another potential fall hazard. If you lose your balance near the edge of one of these, there's nothing to keep you from falling off, unless railings have been put up.
- Standard railings must be installed whenever these platforms and catwalks are four feet or more off the ground. To protect people or equipment beneath the platform, toe boards are required, too.
- All platforms must be fully guarded, regardless of their height, when they are above or next to dangerous equipment, such as pickling or galvanizing tanks, degreasing units, "choppers" or similar machinery.

PREVENTING FALLS FROM STAIRS

- Slipping, tripping and falling down or off of stairs is always a serious problem. It can be especially dangerous in the workplace, where you may be carrying tools or materials, or where there might be hazardous equipment operating nearby.
- But if you do have a problem, it's not usually the stairway's fault! Studies have shown that more than 90 percent of stairway falls actually result from the unsafe behavior of the people who use them.
- If you run on stairs, skip steps or carry things that are so big you can't see where you're putting your feet, you're pretty likely to take a tumble sooner or later.
- However, there are some requirements stairs must meet that minimize the risk of a slip, trip or fall as much as possible. For example, because accidents are more likely to occur on stairs that have uneven steps or other irregularities, riser height and tread depth must be uniform.
- All stairways with four or more vertical risers must also be guarded with handrails fastened to a wall or stairway rails supported by uprights. These help people to keep their balance and prevent themselves from falling.
- To be effective, standard railings must be 30 to 34 inches above the surface of the stair tread, and the handrails must have at least 3 inches of clearance around them, so you can get a good grip.
- "Heavy duty" permanent stairways that are used routinely by workers in machinery spaces and elsewhere have their own safety requirements. They have to be able to carry at least five times their expected load (a minimum of 1,000 pounds).
- Many of these stairs are made of metal, and if they can't carry this much weight, they can bend. Even a slight bend can create the kind of irregularity that causes falls.
- If you notice damaged treads on these types of stairs, tell your supervisor so that repairs can be made before they cause any problems.

FIXED LADDERS

- "Fixed ladders" are another type of ladder that have special safety requirements. They are permanently attached to equipment, a building or other structure, and can often be very long.
- Fixed ladders that are more than 20 feet in length are required to be guarded by "cages" or "wells." While these can cut down on potential hazards and provide a nice sense of security, to really be safe on fixed ladders a climber should also use a form of personal fall protection called a "ladder safety device." These typically consist of a body harness that is linked to a ladder-mounted braking mechanism or a self-retracting lifeline.
- If your job requires you to climb fixed ladders, you'll need to know how to inspect and maintain your fall protection, as well as how to put it on correctly and use it safely.
- If you have questions, talk to your supervisor.

PORTABLE LADDER INSPECTION

- But you don't always find a fixed ladder or stairway right where you need it. That's why portable ladders are so convenient. You can carry them to the job and climb right up to get it done.
- This convenience comes at a price. You have to inspect portable ladders and set them up correctly every time you use them, or you could be in for a nasty fall.
- First, make sure the ladder is in good condition. Inspect it carefully for defects. Look for any sharp edges or splinters.
- Make sure there are no broken, loose or missing steps, rungs, cleats or other components. Check that the feet are in good shape, so the ladder won't slip. Be sure to clean off any grease, oil or other type of substance that may have accumulated on the rungs or rails.
- Any ladder that fails your inspection should be taken out of service. You should mark or tag it "Dangerous: Do Not Use."

PORTABLE LADDER SET UP

- When setting up a ladder, make sure both ends are firmly positioned. The feet should be level. If the ground is uneven, use boards or a ladder jack to even it out.
- Remember that nearby power lines or energized equipment can be very dangerous. If you must work near them, be sure to use a ladder made of fiberglass or wood, to reduce the risk of electric shock. Never use a metal ladder around electricity.
- Surrounding "traffic" can also be an issue. A ladder that's set up in a busy area is in danger of being run into and possibly displaced by passing people or equipment.
- To prevent this, put up warning cones, caution tape or other barriers to keep traffic clear. Never set up a ladder outside a door that opens outward, unless that door is locked, blocked, or guarded.
- The most stable angle for a ladder is 75.5 degrees, but such precise measurements aren't always practical on a worksite.
- You can get into the right ballpark by using the "four to one ratio". For every four feet of vertical height, place the bottom of the ladder one foot out from whatever it's leaning against.
- If you're setting up your ladder to climb to a roof, make sure the top of the ladder extends at least 3 feet above the roof's edge. This gives you something to hold onto, so you don't lose your balance as you get off.
- Never use a ladder in a way that wasn't intended, such as horizontally as a makeshift scaffold or work platform.

SCAFFOLDING SAFETY

- A scaffold is a temporary raised platform that's designed to support you and the tools and materials you need when you're doing a job off the ground. You need to be very careful when working on a scaffold.
- Although there are many types of scaffolds, they fall into two main categories. "Supported" scaffolds have the work platform supported from underneath. "Suspended" scaffolds are suspended from above.
- Working up high can be risky business, which is why regardless of the type of scaffold you're on, you must use fall protection.
- One type of fall protection that we've already talked about, guarding, is also used on scaffold work platforms. Scaffolds more than 10 feet off the ground are required to have their open sides protected by railings with mid rails and toe boards.
- If people work or pass underneath the scaffold, wire mesh must be installed between the toe board and guardrail as well, to provide added protection from falling objects.
- Another form of fall protection that is used on scaffolds is "personal." Like the "ladder safety device" we discussed earlier, its equipment that you wear. On a scaffold, personal fall protection usually consists of a body harness attached to a lifeline, either directly or with a lanyard.
- The lifeline's points of attachment are typically support members of the structure you're working on. "Vertical lifelines" hang down from a single point of attachment.

- "Horizontal lifelines" are stretched side-to-side, from one point of attachment to another. They must be able to support a minimum deadweight of 5400 pounds. In no case should a lifeline be secured to the scaffold itself.
- If you do wear personal fall protection on a scaffold, make sure you know how to inspect it, put it on, and work safely with it. See your supervisor if you have questions.
- Sometimes scaffold safety means not working on the platform at all, such as in stormy weather. Rain increases your chances of slipping or falling, and a strong wind can easily knock you off balance, especially when you're carrying materials.
- If there's ice or snow on a work platform, stay off until it has been cleared away and the planking sprinkled with sand for better footing.
- Don't remain on the platform of a scaffold that is going to be moved or altered in any way. You should stay off a scaffold when it's being loaded or unloaded as well. Remember to replace guardrails after the process is complete.
- Never climb the frame or braces to get to the platform of a supported scaffold. These shortcuts can be dangerous. Use the ladder or internal stairs.

WALKING AND WORKING SURFACES

ANSWERS TO THE REVIEW QUIZ

1. a
2. b
3. b
4. a
5. a
6. c

WALKING AND WORKING SURFACES
REVIEW QUIZ

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

Name_____Date_____

1. Scraps of paper, cardboard or discarded packing material can all cause you to slip and fall.

a. True
b. False

2. The use of actual physical barriers to prevent a slip, trip or fall is called _____.

a. Opening
b. Guarding
c. Reinforcing

3. Toe boards give you something to hold onto when you're on a scaffold, so you don't lose your balance.

a. True
b. False

4. Portable ladders should be inspected every time you use them.

a. True
b. False

5. What ratio should you use to determine the correct angle for setting up a portable ladder?

a. Four-to-one
b. Three-to-one
c. Two-to-four

6. Regardless of the type of scaffold you're working on, you must use…

a. Wind protection
b. Ear protection
c. Fall protection