

**Loss Control Services: SAFETY TOPIC OF THE MONTH**

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**# 0914: Ladder Safety****Facilitator Outline**

**Purpose:** Monterey Educational Risk Management Authority - Loss Control Services provides these monthly topics to promote safety awareness, injury prevention and regulatory compliance for member districts. These topics may be adapted specifically to the needs of your district by editing and reformatting. If desired, the topic may be expanded with video/DVD, Powerpoint, or other media.

**Instructions:** Make copies of the handouts and quiz for those attending. As the facilitator for this training – please keep track of attendance in accordance with your district recordkeeping requirements. Thirty minutes should be allocated to allow for review/discussion of the handouts and the quiz – it is possible to condense the topic time to 15 minutes or less if time constraints are severe. You may use the quiz as a pre or post discussion topic; using it as a pre-quiz and then discussing the answers after review of the materials is a good way to assure an interactive session in a minimal amount of time.

**Answers to Handout #2: Ladder Safety**

1. OSHA regulates the design of ladders, but not their use. True **False** *OSHA regulates both design and use.*
2. Ladders with any missing or broken parts should be removed from use. **True** False
3. Ladders are rated by how much human and equipment weight they can hold safely. **True** False
4. The heaviest-duty ladder, I-A, can hold 1,000 pounds. True **False** *300 pounds is correct.*
5. A ladder should be set up on a level surface with its feet parallel to the surface it rests against. **True** False
6. A ladder should extend at least 3 feet above its top support. **True** False *OSHA requirement.*
7. While climbing up or down a ladder, you should face it and hold the side rails with both hands. **True** False
8. You should carry tools up or down a ladder in your hands. True **False** *Carry them on a belt or use a rope or hoist.*
9. The “3 Point Rule” means three points of the ladder should be secured. True **False** *Refers to keeping hands and feet in contact with the ladder – 2 hands and 1 foot or 1 hand and 2 feet.*
10. You shouldn't move a ladder while you're on it. **True** False
11. The “bonus” question adds extra feedback and interactive discussion from the group.

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## **Ladder Safety Handout #1 – “Look Out Below!”**

### **A: Introduction/Overview**

Ladders are pretty uncomplicated devices. But, unfortunately, they are involved in more than their share of accidents. That's not the ladders' fault. These accidents happen when people select the wrong ladder for the job, don't inspect it before using it, or get careless about how they use it.

The basics of ladder safety are a combination of a little bit of knowledge and a lot of common sense. Today we're going to go over the knowledge aspects of ladder safety so that you can apply your own common sense when you use them.

### **B: General Hazards**

People often fall off ladders, resulting in injuries that can range from bruises to broken bones. Occasionally, the result is death. Falls account for almost 13 percent of workplace deaths and over 16 percent of workplace injuries, and ladders are involved in many of those accidents.

There are several potential hazards when you work with a ladder:

- Poor condition. If a ladder is missing parts or has parts that are not intact, it's not going to be able to support a person safely. Frequent inspections are a key part of ladder safety.
- Improper selection. Not every ladder is right for every use. You should be aware of a ladder's weight and height limits. It's also critically important to never use a metal ladder near live electrical wires. Since metal conducts electricity, you could be electrocuted.
- Improper use. Ladders are designed to get you to a higher level. They are not platforms, scaffolds, skids, or braces and should be used only for their purpose.

**In addition, when you have to climb, use a ladder and not a chair, box, or other substitute.**

### **C: Ladder Selection and Use**

1. The way you use a ladder can also promote safety or cause accidents. Always inspect a ladder before you use it and include ladders in any general safety inspection. Whether the ladder is wooden or metal, check that:

- ✓ Steps and rungs are all in place, intact, free from grease or oil, have slip resistant surfaces, and are firmly attached.
- ✓ Support braces, bolts and screws are all in place and tight.
- ✓ Metal parts are lubricated.
- ✓ Rope is not worn or frayed.
- ✓ Spreaders or other locking devices are in place.
- ✓ Splinters or sharp edges are removed.
- ✓ Safety feet are in place.
- ✓ Metal ladders are not dented or bent.

**If a ladder has anything missing or broken, don't use it. Tag it as defective and remove it from service.**

2. Don't try to fix a ladder yourself. Often they can't be fixed and have to be destroyed, but leave that for experts to decide. A ladder that has been exposed to fire or corrosive chemicals is also a candidate for destruction. Don't use it. Make sure that ladders are stored correctly, too. They should be kept in dry areas with moderate temperatures and good ventilation. It's best to store them standing up. But if they have to be stored lying down, make sure they're supported at both ends and in the middle so they won't sag or warp. Nothing should be kept on a stored ladder either, or it will warp.

## D: Protection Against Hazards

The first step in protection from safety hazards with ladders is to select the right ladder for the job. First, ladders are rated by how much weight they can safely hold. The weight limits include both you and any equipment you are carrying.

- I-A means it can hold 300 pounds (heavy duty)
- I holds 250 pounds (heavy duty)
- II holds 225 pounds (medium duty)
- III holds just 200 pounds (light). These are generally not for use on the job.

Check the ratings before you select a ladder. You should also be aware that there are limits on ladder length.

- A stepladder should be no more than 20 feet high.
- A one-section ladder should be no more than 30 feet.
- An extension ladder can go to 60 feet, but the sections must overlap.

## E: Ladder Setup

Although you've used ladders numerous times, you may not be aware that there is a correct way to set one up. Following this procedure will go a long way toward preventing accidents:

- ✓ Place ladder on level surface; use wide boards under it if you're on soft ground.
- ✓ Set the feet so they're parallel with the surface the ladder rests against.
- ✓ Extend the ladder so there's at least 3 feet above the top support.
- ✓ Anchor the top and either tie the bottom or have someone hold it.
- ✓ Don't rest the ladder on a window or window sash or place it in front of a door unless it's locked or blocked.
- ✓ Position the ladder so that the distance from the ladder base to the wall is one-fourth the length of the ladder.
- ✓ Position an extension ladder before you extend it.

## F: Safety Procedures

Once the ladder is set up properly, it's up to you to use it properly so you don't get hurt. As a starter, you shouldn't use a ladder at all if you have a real fear of heights or a tendency toward dizziness or fainting. With that in mind, here are the guidelines for safe ladder use:

- Only have one person on a ladder at a time.
- Wear shoes with clean, nonskid soles.
- Face the ladder while climbing up or down and hold the side rails with both hands.
- Carry tools up or down on a belt or with a rope or hoist, not in your hands.
- Work with one hand on the ladder, keeping your tools in a hanger or holder.
- Don't step on the top two stepladder steps or top four ladder rungs.
- Keep your body centered on the ladder so your belt buckle is between the side rails.
- Don't move a ladder while you're on it.
- **Apply the three-point rule:** Keep at least both feet and one hand or both hands and one foot on the ladder at all times.
- Keep your own movements on a ladder slow and cautious.

One other safety hint: It is best to have two people carry a ladder. If, however, you have to carry one by yourself, balance the center on your shoulder. Position it so the front end is above your head and the back end is near the ground but not hitting the ground – watch where the projecting part of the ladder is in relation to obstacles.

**Handout #2: PRE -QUIZ - Ladder Safety**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Department \_\_\_\_\_ Job Title \_\_\_\_\_

Instructions: Please provide the best answer for each question – the “best” answer may be open to discussion during review of the quiz!

1. OSHA regulates the design of ladders, but not their use. True False
2. Ladders with any missing or broken parts should be removed from use. True False
3. Ladders are rated by how much human and equipment weight they can hold safely. True False
4. The heaviest-duty ladder, I-A, can hold 1,000 pounds. True False
5. A ladder should be set up on a level surface with its feet parallel to the surface it rests against. True False
6. A ladder should extend at least 4 feet above its top support. True False
7. While climbing up or down a ladder, you should face it and hold the side rails with both hands. True False
8. You should carry tools up or down a ladder in your hands. True False
9. The “3 Point Rule” means three points of the ladder should be secured. True False
10. You shouldn't move a ladder while you're on it. True False
11. Bonus Question: Do you have something to add to the discussion regarding your experience with situations involving ladder safety? The pictures below are not staged – just real bad ideas:

