

Fall Prevention ¹

WORKSHOP PROPOSAL

October 2017

¹ This material was produced under a Susan Harwood Grant SH-31247- SH7 from the Occupational Safety and Health Administration, U.S. Department of Labor. It does not necessarily reflect the views or policies of the U.S. Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement by the U. S. Government. The U.S. Government does not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed.

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Workshop Overview

Workshop Length: Approximately 3 hours

Target Audience: —day laborers with varying experience in common day labor activities

Workshop Location:

Learning Objectives:

1. The recognition among day laborers of the dangers of falls from roofs, ladders, and scaffolds.
2. The identification of risk factors and common mistakes that can occur while working from heights in day labor and janitorial work.
3. The identification of preventive measures and the correct use of tools and equipment to reduce likelihood of falls and resulting injuries.

Equipment & Materials Required:

Technology: -Computer, projector, speakers

Props: -Ladders (3 kinds), harnesses

Other: -PowerPoint presentation slides
-Pre and Post evaluation materials
-Laminated pictures of scaffolds
-Erasable pens
-Ladder work scenarios description handouts
-Information card handouts
-Butcher paper or flip chart paper
-Markers
-Tape

Workshop Plan

1. INTRODUCTION

1.1. Welcome, Objectives, and Agenda

Activity Duration: 10 minutes

Purpose: -Welcome participants
-Inform participants what to expect from the workshop
-Address basic needs

Materials: -PowerPoint presentation
-Computer
-Projector

Procedure:

Facilitators welcome participants to the workshop. Facilitators introduce themselves and their role as facilitators, emphasizing they are not experts but instead will help guide the participants' learning.

Facilitators review the learning objectives for the workshop (as stated in Workshop Overview).

Facilitators present the day's agenda.

Facilitators encourage participants to take stretch and bathroom breaks as they need. The 3-hour workshop will also include two 5-minute breaks.

1.2. Ice-breaker Activity: Job Mimic with Heights

Activity Duration: 10 minutes

Purpose: -Foster a supportive and relaxed learning environment
-Learn names
-Provide participants a chance to connect with the topic

Materials: -Whiteboard marker

Procedure:

Participants introduce themselves to the group, one by one. As participants introduce themselves, facilitators write their names on the whiteboard. The activity finishes when everyone has introduced themselves.

Facilitators ask participants to:

1. Say your name.
2. Say where you are from.
3. Act out a job they currently do or have done that requires a ladder. Group guesses what type of job it is.

Facilitator concludes the ice breaker with noting how common it is that people have to work from heights, even in different kinds of jobs. This is why it is dangerous and accidents are prevalent.

1.3. Participation Agreements

Activity Duration: 5 minutes

Purpose: -Agree on guidelines to foster an atmosphere in which all participants feel comfortable participating

Materials: -Flip chart
-Marker
-Tape

Procedure:

Facilitator informs participants that because the workshop relies on participation and communication, the facilitators would like to propose guidelines to facilitate everyone's ability to participate.

Facilitator and participants brainstorm a list of guidelines for effective and respectful communication and participation. Facilitator writes them on a flip chart. Agreement examples are:

- Put cell phone on vibrate
- Raise hands to speak
- Respect all opinions

Participants show a thumbs-up sign if they agree to these guidelines. Facilitators tape agreements in a visible place in the room.

1.4. Pre- Evaluation

Activity Duration: 15 minutes

- Purpose: -Record participants' prior knowledge of the topic.
- Materials: -Handouts for each participant of pictograms showing both correct and incorrect uses of ladder, harness, and scaffold
- Procedure:

Facilitator explains that the purpose of the pre-evaluation is to gauge what participants know about the topic. Participants will take a similar evaluation at the end of the workshop in order to assess the effectiveness of the workshop. They will not receive a grade and the results do not impact their participation in Casa Latina in any way.

The pre-evaluation will use pictograms to illustrate different job situations that involve heights (use of ladder, harness, and scaffold.). Each question will have three different options for performing that job, highlighting both safe and unsafe approaches. Participants will be asked to choose the option that represents the safest way to use the equipment.

Facilitator explains the format of the evaluation and gives participants a chance to ask questions before beginning the test.

2. Raising Awareness

2.1. OSHA Statistics

Activity Duration: 10 minutes

- Purpose:
- Communicate the prevalence and severity of workplace falls
 - Introduce and highlight important workshop content
 - Start to engage participants' own workplace experiences

- Materials:
- PowerPoint presentation
 - Computer
 - Projector
 - Charting paper and markers

Procedure:

Facilitators will show a PowerPoint presentation with important statistics about the prevalence of fall related injuries and fatalities in Washington State. Information may include:

- In Washington State in 2015, falls were the leading cause of fatalities with 30% of all work related deaths.

- One third (33%) of those falls were from ladders, 28% from roofs, and 15% from scaffolds².
- 63 construction workers died from falls in Washington State between 2010-2015. Of those who died:
 - o 52% happened on residential construction sites
 - o 17% of the workers who died were Hispanic
 - o 16% were self employed
 - o Over one third were age 50 or older
 - o 59% of those fatal falls happened from 25 feet or less
 - o 1 in 5 were from 10 feet or less
 - o 48% of fatal falls were from a building or structure
 - o 25% from a ladder
 - o 16% from scaffold

After showing the OSHA statistics, facilitators will engage participants in a brief reflection activity. As a whole group, invite participants to share their reactions to the information:

- Did any of this information surprise you? If so, what?
- Do you know someone who has experienced a fall at work?
- What do you think are some causes of the accidents?

Facilitators take notes on the participant's reflections and transition to the next section by noting that the workshop will add to the participant's own knowledge and experience.

2.2. L&I Video

Activity Duration: 15 minutes

Purpose: -Engage participants with multimedia learning
-Introduce and highlight important workshop content

Materials: -Projector and laptop
-Video

Procedure:

Facilitators queue up the video featuring Pedro and his accident at the job site with scaffolding. Before showing the video, participants are told to watch for this information:

- What error did Pedro commit?

² [Top 10 OSHA standards](#)

- What could Pedro have done to prevent the accident?
- What are the rights of the worker in this case?

After the video, facilitators lead a plenary session with the participants and discuss the learning questions. As participants make observations about the learning questions, facilitators add to the notes on the charting paper.

3. Analyzing Risks and Ideas for Solutions

3.1. Scaffolds

Activity Duration: 20 minutes

Purpose:

- Identify potential risks associating with work on and around scaffolds
- Promote the importance of operating equipment safely
- Learn to use the equipment correctly in the workplace

Materials:

- Laminated posters that show incorrect and correct ways to use scaffolds
- Erasable markers
- Projector and laptop
- PowerPoint presentation

Procedure:

In groups of 2-4 people, participants receive a laminated poster that shows use of scaffolds. Each group will follow the instructions provided to analyze the risks presented in the poster. Each group should brainstorm what they identify as potential risks or hazards and write them on their laminated posters. Each group then discusses what possible solutions might be to rectify those hazards.

After the groups have evaluated their poster, they will share their conclusions with the rest of the class. Facilitators will ask the rest of the participants if they have any additional ideas for solutions for each scaffolding scenario.

After all the groups have presented, the facilitators summarize the risks and solutions and use pictures to reinforce with a visual. Facilitators add key information, this information may include:

- Each worker more than 10 feet above a lower level shall be protected from falls by guardrails or a fall arrest system

- The height of the top rail for scaffolds must be between 36 in and 45 in;
- (a) At least 36 inches (0.9 m) and not more than 45 inches (1.2 m) above the platform surface for scaffolds manufactured or first placed in service **before January 1, 2000;**
- (b) At least 38 inches (0.97 m) and not more than 45 inches (1.2 m) above the platform surface for scaffolds manufactured or first placed in service **after January 1, 2000.**
- When the cross point of crossbracing is used as a toprail, it must be between 38 and 48 inches above the work platform.
- Midrails must be installed approximately halfway between the toprail and the platform surface. When a crosspoint of crossbracing is used as a midrail, it must be between 20 in and 30 in above the work platform.
- Support scaffold footings shall be level and capable of supporting the loaded scaffold. The legs, poles, frames, and uprights shall bear on base plates and mudsills or other firm foundations such as concrete or dry, compacted soil.
- Supported scaffold platforms shall be fully planked or decked.
- Scaffolds and scaffold components must support at least 4 times the maximum intended load.
- Before each work shift and after any occurrence that could affect the structural integrity, a competent person must inspect the scaffold and scaffold components for visible defects.
- Erecting and Dismantling -- When erecting and dismantling supported scaffolds; a competent person must determine the feasibility of providing a safe means of access and fall protection for these operations.

3.2. Fall Restraint

Activity Duration: 20 minutes

Purpose: -Identify potential risks associated with incorrect use of fall restraint equipment
-Learn to use the equipment correctly in the workplace

Materials: -Full body harnesses, one for each group
-PowerPoint presentation
-Computer, projector

Procedure:

To introduce the concept of fall restraint, facilitators ask the group to raise their hand if they have experience wearing a harness while working on a roof or a high place. Facilitators then ask the group to raise their hand if they have experience wearing a harness and attaching the harness to an anchor. The facilitators then have an idea of the level of experience in the room.

Participants will form groups of 3 or 4 and each group will receive a full body harness. In the groups participants decide who will be the “model” and practice wearing the harness. The rest of the group members give directions to the “model” on how to put on and anchor the harness.

Once each group has had a chance to try putting on the harness, facilitators present the ABC's of fall protection³:

- Anchorage
- Body Support
- Means of Connection

Anchorage is a secure point of attachment for lifelines or lanyards. Anchorages must be a fixed structural component such as beam, girder, column, or floor. This anchoring point must be strong enough to support a body that is falling, or 5,000lb per person. The anchorage point must also be high enough so that a worker who falls avoids contact with a lower level.

Body support is someone worn on or around the torso. A full body harness is a common type of body support. Full body harnesses are the only piece of equipment that is acceptable for fall arrest. A harness that is worn correctly distributes the fall arrest forces across the shoulders, thighs, and pelvis.

Means of Connection is what connects the body support device to the anchorage. This can be an energy-absorbing lanyard, fall limiter, self-retracting lanyard, rope grab, or retrieval system.

After some key information is presented on the correct way to use and attach a harness, each group has a chance to modify how they chose to wear and anchor their harness. Once adjustments have been made, the facilitators summarize the risks and solutions and use pictures to reinforce with a visual.

3.3. Ladders

Activity Duration: 20 minutes

³International Safety Equipment Association's Personal Fall Protection Equipment; page 8-10.

Purpose:

- Identify potential risks associated with working from heights on ladders
- Promote the importance of operating on and around ladders safely
- Learn to use the equipment correctly in the workplace

Materials:

- Written work scenarios involving working on a ladder (4)
- Three types of ladders: step, extension, and
- PowerPoint presentation
- Computer, projector

Procedure:

In groups of 2-4 people, participants choose one of the job scenarios that they've experienced. The scenarios were chosen from among common jobs dispatched at Casa Latina's Day Worker Center: cleaning gutters, exterior and interior painting and cleaning cabinets. Each group will follow the instructions of their given scenario to identify possible hazards of completing those jobs and possible ways to prevent injury. Groups should also identify which type of ladder is most appropriate for that job. Participants will answer the following questions:

- What are the potential hazards to doing this job?
- What can this worker do to help prevent injury?
- What is the most appropriate ladder to use to complete this job and why?

After the groups have evaluated their scene and answered the questions, they will share their scenario and answers with the rest of the class. Facilitators will ask the rest of the participants if they have any additional ideas for solutions for each work scenario.

Groups will then go outside where three different ladders are: step ladder, straight ladder, and extension ladder. One person from each group will demonstrate how to correctly and safely use the type of ladder they identified as being best suited to their work scenario. Facilitators will offer key information and corrections as needed, including:

For safer use of a step ladder⁴:

- Always maintain a 3 point connection with the ladder (two feet and one hand, or one foot and two hands)
- Avoid electrical hazards; look overhead for power lines
- Inspect ladder before use

⁴ OSHA Quick Cards: Portable Ladder Safety: <https://www.osha.gov/Publications/OSHA3903.pdf>

- Don't step on top rung unless ladder is specifically designed for that purpose
- Use on level, stable surface
- Don't add height to ladder by placing on top of boxes, barrels, or other unstable bases
- Don't move or shift ladder when someone is on it

For safer use of an extension ladder:

- Position ladder at proper angle from the wall: base should be one quarter of the working length of the ladder from the wall (or other vertical surface)
- Extend the ladder at least 3 feet above the point of support.
- Do not stand on top three rungs of extension ladder.
- Properly engage all locks as needed
- Do not exceed maximum loading rate; including weight of any tools or equipment in addition to persons.

After the demonstration with the ladders, the facilitators summarize the risks and solutions and use pictures to reinforce with a visual the solutions for common work situations.

4. CLOSING

4.1. OSHA Information & Resources

Activity Duration: 10 minutes

Purpose: -Reinforce key information from the workshop
-Give participants something concrete to take from the workshop

Materials: -Whiteboard marker
-Copies of small paper handout with best practices and OSHA information

Procedure:

Facilitators explain what OSHA is: Occupational Safety and Health Administration and its mission: "to assure safe and healthful working conditions for working men and women and enforcing standards and by providing training, outreach, education and assistance".

Various laws under OSHA address fall protection and state the responsibilities of employers and rights of workers, including:

[Scaffolds CFR 1926.451 subpart L](#)

[Fall protection CFR 1926.502 subpart M](#)

[Stairways and Ladders CFR 1926.1053 subpart X](#)

The Whistleblower Protection Law is designed to protect workers from retaliation from their employers if they lodge a complaint (according to OSH Act Section 11C). More information [here](#):

Each participant receives a small square of paper with crucial information to remember. Facilitator can suggest that participants keep the paper in their wallet, in case they need to refer to it while working.

4.2. Post- Evaluation

Activity Duration: 15 minutes

Purpose: -Record participant knowledge of the topic after the workshops to compare to pre-workshop evaluations

Materials: -Handouts for each participant of pictograms showing both correct and incorrect uses of ladder, harness, and scaffold

Procedure:

Facilitator should remind participants of the purpose and format of the evaluation and give participants a chance to ask questions before participants begin the test.

Just like the pre-evaluation, the post-evaluation will use pictograms to illustrate different job situations. Each question will have three different options for performing that job, highlighting both safe and unsafe approaches. Participants will be asked to choose the option that represents the safest way to do the job.

After individuals finish their post evaluation, the facilitators will go through each question with the group and confirm the right answers.

4.3. Impact Evaluation

Activity Duration: 5 minutes

Purpose: -Elicit feedback from participants to gauge their experiences from the workshop and learn areas for improvement or change in the future

Materials: -Butcher paper & marker
-Ball

Procedure:

Facilitators lead participants in a round-robin activity, in which participants can share brief reflections about the workshop:

- One thing they learned.
- One thing they liked about the workshop.
- One suggestion to change or improve it.

Facilitators record participant responses on butcher paper or other paper.

Facilitators thank participants for their participation and remind them to take the handouts with them.

APPENDICES

A. Pre and Post Evaluation Questions

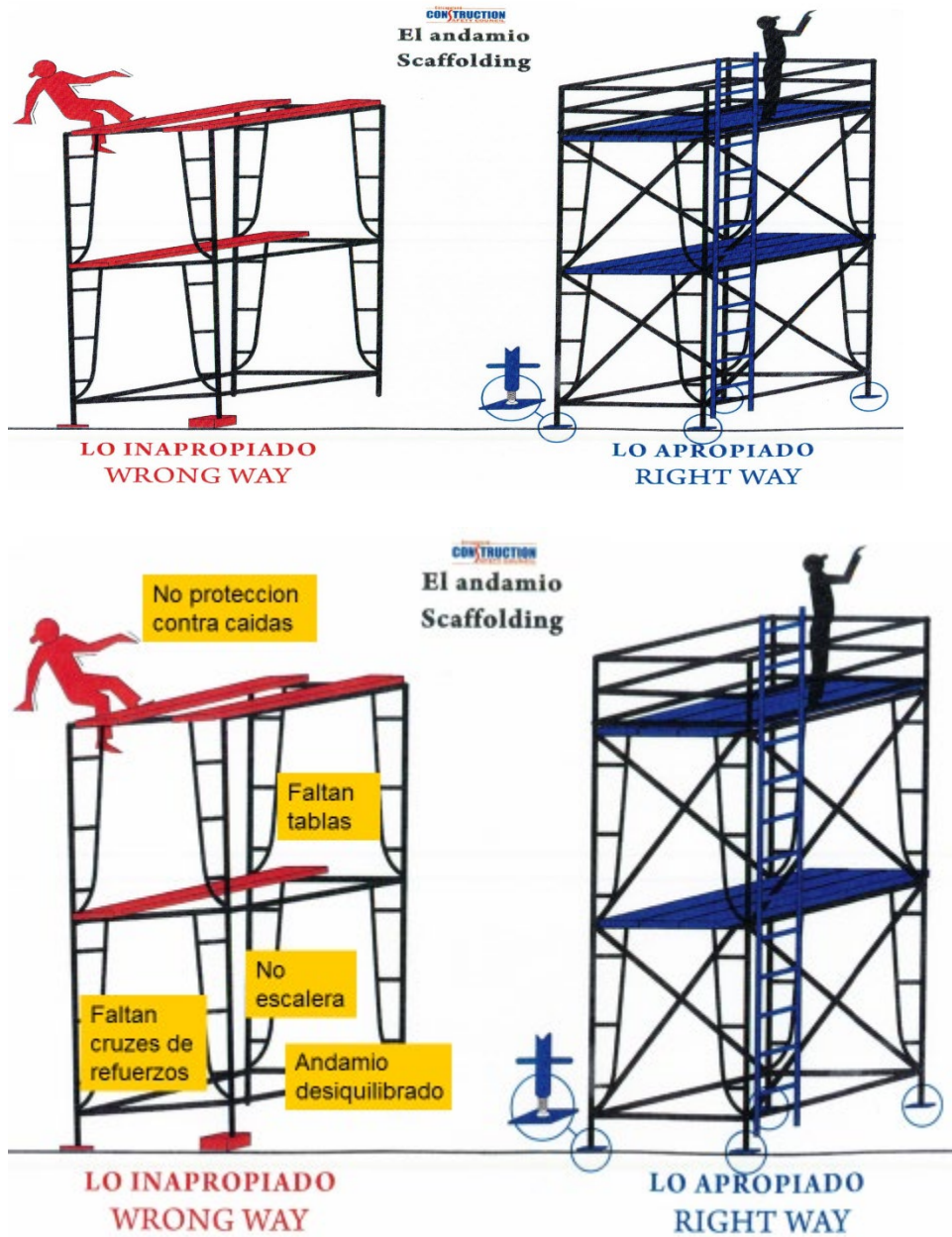
1. Proper use of a step ladder while painting
 - A) Standing on straight ladder, gripping bucket
 - B) Standing on step ladder, gripping paint bucket
 - C) Standing on step ladder, holding onto the ladder

2. Proper use of extension ladder while cleaning a roof
 - A) Standing on the ladder, stretching up
 - B) Climbing up on the roof
 - C) Standing on the ladder securely

3. Proper use of a harness while on a roof
 - A) Long length of attachment from anchor to harness
 - B) Harness attached to bag resting on roof
 - C) Harness is anchored to proper anchor in roof

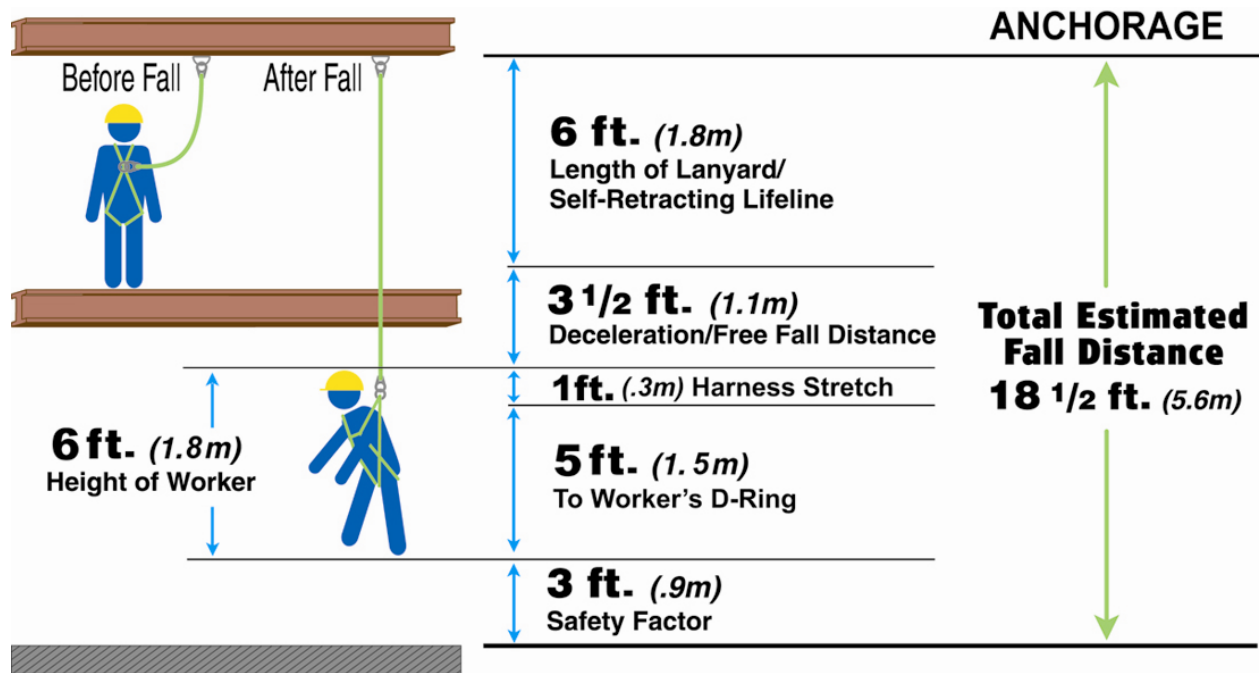
4. Proper use of Scaffolds
 - A) Scaffolding without boards to walk on
 - B) Short scaffold with ladder put on top
 - C) Scaffold at adequate height with railings

B. Scaffold Images & Information



C. Harness Images & Information

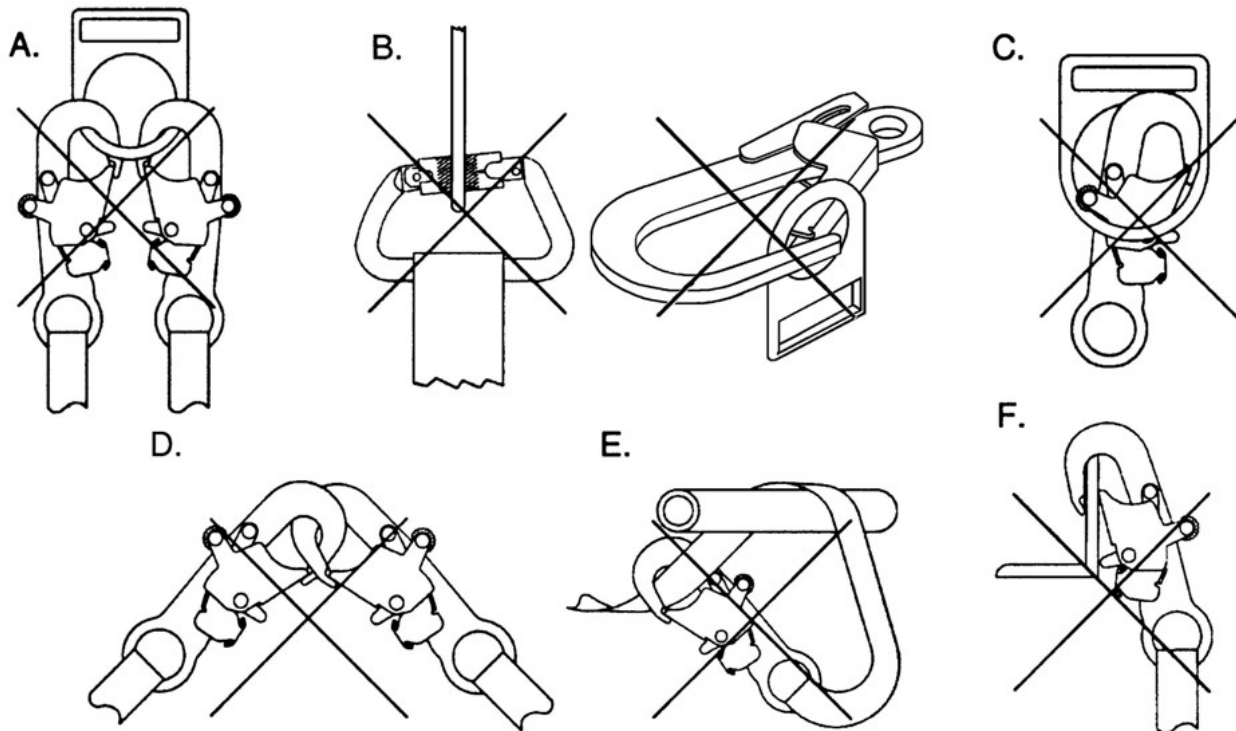




Examples of improper connections for fall restraint:

Just as a chain is only as strong as its weakest link, the integrity of a fall protection system depends on proper connection of all its components. The following are some examples of improper connections:

- A. Do not attach two or more snap hooks or carabiners to a single D-ring.
- B. Do not load a carabiner or snap hook at the gate.
- C. Ensure that connections are compatible and secure.
- D. Do not attach two snap hooks or carabiners together.
- E. Do not tie back on a lanyard unless specifically designed to do so by the manufacturer.
- F. Ensure that the snap hook is closed and locked



D. Ladder Images & Information

Common Day Laborer and Janitor work scenarios:

1. Gutter Cleaning

It is fall and José is hired to do some yard work for a homeowner. In addition to weeding the garden beds, the homeowner asks José to clean the leaves out of her house's gutters. The house is a two stories with a gabled roof.

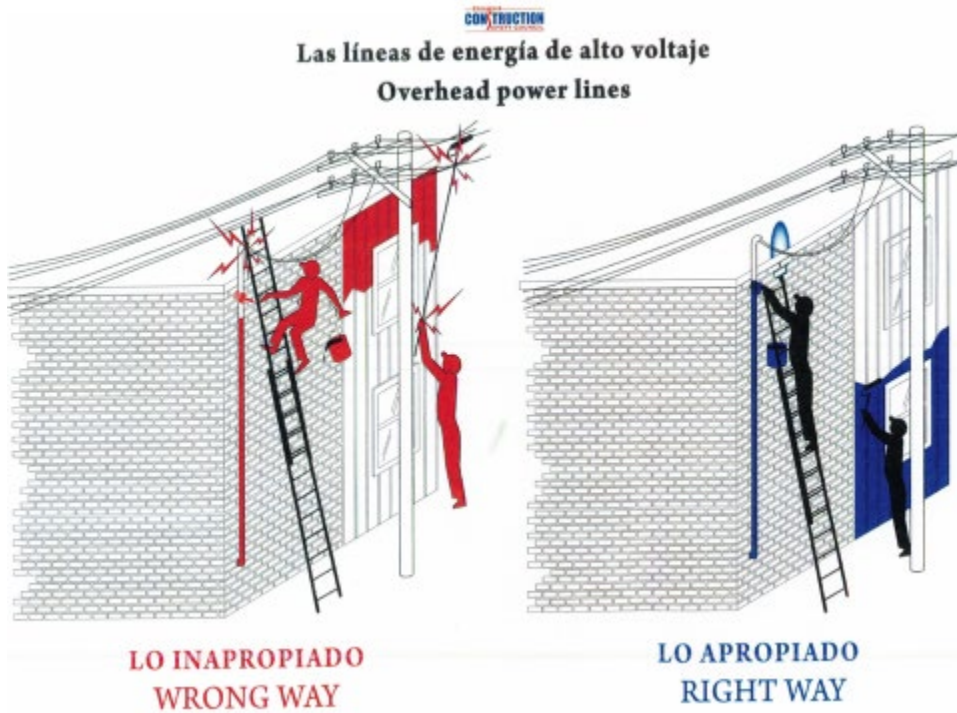
2. Exterior Painting

Santiago and Luis are hired to do some painting on a homeowner's garage. The garage fits two cars and has an interior attic space. The two workers will need to use multiple different paint colors, for the trim and the siding. The homeowner has provided several different types of ladders, roller brushes, and paint buckets, but no paint sprayer.

3. Cleaning Cabinets

Teresa and Juan are doing janitorial work in an office building. Their cleaning job requires them to reach high cabinets in the kitchen, wiping out the insides and cleaning the dust and grease off the tops.





E. Information Pamphlet: Best Practices of Fall Prevention

Potential ideas:

- Keep three points of contact on a ladder at all times.
- Attach a harness to an adequate anchor support that can support the weight of a fall.
- Use scaffolding with proper guardrails and secure footing.
- Review all equipment before using to make sure it is adequate.
- Call OSHA to report an unsafe work practice: 206-757-6700