

# Ladders Quiz



## QUESTION

When placing or setting up the ladder for use what are two important rules that you must be aware of'

## ANSWER

The two rules are:

- Extend the ladder three feet above the landing ' the 3 foot rule.
- Move the base of the ladder out one foot for every four feet of ladder height'the 4'to'1 rule.

## WHY IS IT RIGHT

## GENERAL PREVENTION

## OSHA Rules For All Ladders

1. Maintain ladders free of oil, grease, and other slipping hazards.
2. Do not load ladders beyond their maximum intended load nor beyond their manufacturer's rated capacity.
3. Use ladders only for their designated purpose.
4. Use ladders only on stable and level surfaces unless secured to prevent accidental movement.
5. Do not use ladders on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental movement. Do not use slip resistant feet as a substitute for exercising care when placing, lashing, or

holding a ladder upon slippery surfaces.

6. Keep areas clear around the top and bottom of ladders.
7. Do not move, shift, or extend ladders while in use.
8. Use ladders equipped with nonconductive side rails if the worker or the ladder could contact exposed energized electrical equipment.
9. Face the ladder when moving up or down.
10. Use at least one hand to grasp the ladder when climbing.
11. Do not carry objects or loads that could cause loss of balance and falling.
12. Secure ladders placed in areas, such as hallways and doorways, or where they can be displaced by workplace activities or traffic to prevent accidental movement.

### **Prevent Stepladder Accidents**

1. Do not stand on the top two steps of a stepladder. If you must go higher to perform your work, use a taller ladder.
2. Make sure that all four legs of the stepladder are on even footing, and that the spreader is fully opened.
3. Use the best tool for the job. Don't use a stepladder as a straight ladder. The legs are not designed for this, which can result in the base kicking out.
4. Make sure that stepladder is set in the best position to perform the work. If you must reach or bend excessively, stop and reposition the ladder.
5. Do not use a metal ladder near electrical conductors.
6. Face the ladder when working. Do not straddle the top or stand with your back to the rungs.
7. Inspect stepladders for damage daily. Cracked steps and uprights or loose or missing parts can cause the ladder to collapse.
8. If a stepladder is broken, remove it from service or destroy it to prevent future use. Do not attempt to repair a broken stepladder.

### **TRAINING**

Proper training in ladder use is paramount. Without training, the best ladders in the world not prevent injuries and even fatalities.

Under the provisions of the OSHA standard 1926.1060(a), employers must provide a training program for each employee using ladders for construction activities. The program must enable each employee to recognize hazards related to ladders and to use proper procedures to minimize these hazards. For example, employers must ensure that each employee is trained by a competent person in the following areas, as applicable:

- The nature of fall hazards in the work area;
- The correct procedures for erecting, maintaining, and disassembling the fall protection systems to be used;
- The proper construction, use, placement, and care in handling of all ladders; and
- The maximum intended load-carrying capacities of ladders used. In addition, retraining must be provided for each employee, as necessary, so that the employee maintains the understanding and knowledge acquired through compliance with the standard.

### **Inspect Before Using a Ladder**

Determine if a ladder is the correct device to use for the situation. Your assessment will include the physical condition of both the ground and the area being reached, the height of the work, the type of work being done, and if other hazards are present.

Determine which type of ladder will be best. Always inspect the ladder before use, and set the ladder up correctly. This document discusses climbing up and down the ladder.

### **What to do when climbing up or down a ladder**

Always make sure the ladder is tied or secured correctly before using. When climbing up or down, always:

- Face the stepladder.
- Keep your body centered between side rails.
- Maintain three-point contact by keeping two hands and one foot, or two feet and one hand on a ladder always.
- Keep a firm grip.
- Make sure that footwear is in good condition.
- Clean your footwear by removing mud, water, snow, ice or grease.
- Place feet firmly on each rung.
- Wearing footwear with heels can help to stop the foot from slipping forward.
- You have climbed too high if your knees are above top of the ladder or if you cannot maintain a handhold on the ladder.
- Rise or lower tools and materials using a hoist, hand-line, bucket or other device.
- If using an extension ladder, be careful when stepping or gripping near the locks as the locks will obscure part of the rung.
- In most cases, only allow one person on a ladder at a time. Wait until the other person has stepped off the ladder before another person uses it.
- Have a second person hold the bottom of a long ladder, especially when tying or untying an extension ladder.
- Use the appropriate safety devices when needed (e.g., safety belt, fall restraint, etc.). Check with your jurisdiction for requirements when working at heights near or above 3 metres (10 feet).
- Make sure that any harnesses or ties do not interfere with safe travel when on the ladder.

### **What NOT to do when climbing up or down a ladder**

- Do not hurry up or slide down a ladder.
- Do not jump from a ladder. Check footing before descending a ladder.
- Do not carry tools or materials in your hand while

climbing.

### **Other tips when working on or near ladders**

- If working near electricity, do not use an aluminum ladder. Follow your jurisdiction's guidelines on the distances recommended for each level of electrical voltage that may be present.
- Set up warning signs, barricades, lock the door, etc. as necessary to prevent other employees from bumping into the ladder.
- Work from the center of the ladder. If you cannot reach, climb down and move the ladder.
- Do not "shift" or "walk" a stepladder when standing on it.
- Do not use tools that require a lot of leverage (such as a pry or pinch bar) as this motion may cause you to be unbalanced or fall.
- Do not stand, climb, or sit on the stepladder top or pail shelf.
- Do not stand on or above the top two rungs or steps of the ladder.
- Do not allow another person to work below the ladder.

### **Employees need to do to use a ladder safely**

After choosing the right ladder, inspect it to make sure it's in good working condition. If the inspection shows any defects, take the ladder out of service and tag it as damaged.

When putting the ladder in place, follow these two important rules:

- Extend the ladder three feet above the landing'the 3-foot rule.
- Move the base of the ladder out one foot for every four feet of ladder height'the 4-to-1 rule.

### **DONTS**

- Do not stand on the top cap of the ladder or the step below.
- Do not try to 'walk' a ladder by jerking or rocking while you are on it.
- Do not move, shift, 'hop the ladder', or extend the ladder while in use.
- Do not tie or fasten together ladders to create longer sections unless they are specifically designated for such use.
- Do not use ladders as platforms, runways, or scaffolds. Use a ladder, not the walls to reach a higher level.
- Do not jump off a ladder.
- Do not use a ladder if your physical or mental condition could create a hazard (e.g. poor health, dizziness, or under the influence of drugs, alcohol or medication that could affect balance or judgment).
- Do not use a ladder where alternative methods of working at heights such as using a scaffold, man lift, scissor lift, forklift, or an elevated work platform with railings maybe better.

## **WHY IS EVERYTHING ELSE WRONG**

### **LADDER INJURIES**

Ladders are one of the leading sources of workplace injury. The Centers for Disease Control (CDC) report eight-in-10 construction injuries treated in emergency rooms nationwide involve ladders. Most ladder injuries are the result of falls. Either a worker loses balance and falls off a ladder, or it's unstable and tips over with a worker on it. Your employees are at risk of ladder injuries each time they set foot on one. However, most of those injuries are preventable.

### **FIVE MAJOR CAUSES FOR LADDER FALL INJURIES**

#### **1. Using the Wrong Ladder Type**

Ladders are typically constructed of wood, aluminum, and

fiberglass. Using a metal ladder in an environment that has electrical energy could result in electrical shock and cause the user to be thrown off the ladder.

Operating a ladder that is too short for the task is a fall hazard. Extension ladders should extend 3-feet past the height needed to ensure stability.

Using a ladder with the wrong duty rating for the task could result in failure of the ladder. Ladders are assigned a duty rating to ensure that they are used with the appropriate load capacity. The duty rating of a ladder can be found on the manufacturer's label on the side of the ladder.

## **2. Worn/damaged ladders or ladders with custom modifications.**

Ladder rungs can become loose, cracked and lose their non-slip layer over time which could cause a fall-from-height injury. Ladders should be inspected daily prior to using them to ensure structural integrity. Locks and ropes on extension ladders should be in working order and free of cracks.

Modifying ladders outside of the manufacturer's guidelines is not recommended due to the potential of reducing the integrity of the ladder and impacting the duty rating. Any ladder that has a structural defect must be tagged immediately as 'Dangerous Do Not Use' until repairs or replacement of the ladder is completed.

## **3. Use and placement of ladders.**

Always read and follow all labels, markings and instructions. Ladders should be placed on a base that is level, firm and stable. The ladder should be firmly set and at a proper angle prior to climbing. Never use boards or other materials to increase the height or improve the base. Several ladders have built-in indicator devices to increase stability.

The proper angle for setting up a straight or extension ladder

is to place its base,  $\sim$  of the working length of the ladder from the wall or other vertical surface. Never use a stepladder leaned against a building or object. Stepladders must be opened to the full extent of the spreader and firmly set on level and stable surfaces.

Always maintain 3 points of contact when on a ladder (two hands and a foot, or two feet and a hand). While ascending and descending, always face the ladder and always maintain the 3 points of contact. You cannot maintain 3 points of contact while carrying items.

Among workers, approximately 20 percent of fall injuries involve ladders, and among construction workers, an estimated 81 percent of fall injuries treated in hospital emergency rooms involve a ladder.

' Activities such as overreaching, carrying objects, applying excessive force, slips, and missteps are also frequent causes of ladder-related fall injuries.

#### **4. Lack of access to ladder safety tools and information**

Small companies that account for up to 80% of all construction companies, and individual ladder users, such as homeowners, do not typically receive the required training for safe use of portable ladders. Such ladder users are difficult to reach, often do not have access to safety information, and generally lack the resources to develop or follow an effective ladder safety program.

#### **5. Insufficient Ladder Inspection**

You can reduce the likelihood of ladder structural failure by practicing regular inspection and maintenance.

#### **HAZARDS HI ' LITES**

- Reaching or leaning too far rather than moving the ladder.

- Placing the ladder on boxes or pallets to gain height.
- Climbing the ladder while carrying items.
- Standing on the very top step or rung when the ladder is too short for the task.
- Placing an extension ladder at the wrong angle.
- Using a worn or damaged ladder.
- Throwing tools to a worker who is on the ladder
- Using metal ladders in areas where it can come in contact with electrical wires.
- Exceeding the ladders weight limit.
- Placing the ladder on an uneven or unstable surface.