



Safety

## Ladder Safety Tips: What You Need to Know to Protect Your Workers

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Ladders are crucial work tools in manufacturing facilities and in many other industries. If they are not used correctly, however, they can lead to severe worker injuries and cost your company both time and money. Here's what you need to know about using ladders safely.

How dangerous can a ladder be?

Probably more dangerous than you think.

Accidents related to ladders currently rank sixth on the *top 10 list of safety violations* issued by the Occupational Safety and Health Administration (OSHA). The list, which comes out each year, is compiled from thousands of workplace inspections by federal OSHA employees.

**A ladder that has been discarded “must be destroyed in such a manner as to render it useless,” because “another person must not be given the opportunity to use a ladder that has been deemed unsafe.”**

American Ladder Institute

In fact, falls are one of the most common types of job-site injuries in the U.S., and each year more than 500,000 people are treated—and *more than 300 people die*—because of ladder-related injuries, according to *the National Institute for Occupational Safety and Health (NIOSH)*. Those injuries cost an estimated \$24 billion annually, the institute also finds, given the financial impact from lost worker time, plus medical, legal, liability, and pain and suffering costs.

## 5 Common Causes of Ladder Falls

Falls from ladders are an ongoing hazard in workplaces. According to NIOSH, there are five major causes of ladder fall incidents:

- 1. Incorrect extension ladder setup angle:** A ladder sliding out at the base due to an incorrect setup angle is a cause of ladder falls in about 40 percent of cases. Ladder users tend to set extension ladders at shallower angles than the optimal desired angle, which is 75 degrees.
- 2. Inappropriate ladder selection:** Many ladder users lack knowledge of proper ladder selection, according to NIOSH. Selecting a ladder with the appropriate duty rating is important to avoid structural failure.
- 3. Insufficient ladder inspections:** The possibility of a ladder's structural failure can be reduced by practicing regular inspection and maintenance.
- 4. Using ladders inappropriately:** Actions such as overreaching, carrying objects, applying excessive force, slips and missteps are some of the causes of ladder-related fall injuries.
- 5. Lack of access to ladder safety tools and information:** Ladder users such as small businesses and individual users often cannot access the required training for safe use of portable ladders. This means they generally lack the resources to develop or follow an effective ladder safety program.

## OSHA's Ladder Regulations

Ladder safety is clearly no small matter. The question is: How can employers avoid the related injuries and costs?

If your business is covered by OSHA on the federal or state level and your workers use ladders, it's your responsibility to follow ladder training and safety standards. Doing so can help you protect your workers and avoid costly workplace injuries.

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OSHA's general industry requirements for employer ladder safety are covered in ***standard 1910.23***, which describes the physical attributes and restrictions on use for various types of ladders. The standard offers general requirements for all ladders, and specific requirements for portable ladders, fixed ladders and mobile ladder stands and platforms.

The standard also describes how to set up these ladders and how to use them, such as avoiding placing ladders on boxes or other unstable bases to obtain additional height.

Separately, the American National Standards Institute (ANSI) issues ***safety standards for the ladder industry***. technical specifications that prescribe rules governing the safe construction, design, testing, care and use of various types of ladders.

Ladder safety begins with ***selecting the correct ladder for the job at hand***, inspecting the ladder for any

defects, setting it up correctly, and then using the ladder appropriately (using proper techniques for climbing and standing), and finally, employing the correct care and storage practices.

In addition to the general safety rules outlined by OSHA and others, ladder users should rely on common sense when using ladders on a job site. Here are some tips to keep in mind that can help minimize the risk of most ladder accidents:

### **Tip No. 1: Inspect and Maintain Your Ladders**

Keeping your ladders in good shape is vital for ensuring your employees remain safe. According to OSHA, ladders should be "*maintained free of oil, grease, and other slipping hazards.*" They should also be inspected "by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe use."

Ladders with structural defects (such as missing rungs, cleats or steps, or loose parts) or other faulty components should be marked as defective or tagged as "not usable" or "dangerous—do not use" until repaired or destroyed, OSHA says. A ladder should only be used again after it has been restored to its original condition.

In fact, the *American Ladder Institute (ALI)* notes that "no attempt shall be made to repair a ladder with a defective side rail" and that "ladders with bent or broken side rails must be destroyed." The ALI adds that a ladder that has been discarded "must be destroyed in such a manner as to render it useless," because "another person must not be given the opportunity to use a ladder that has been deemed unsafe."

### **Tip No. 2: Keep Your Employees Informed**

OSHA's rules governing ladder use can be complicated and difficult to remember. For example, OSHA requires that an employer place ladder rungs, steps and cleats no less than 10 inches and not more than 14 inches apart, as measured between the centerlines of the rungs, cleats and steps.

OSHA's requirements for ladder height, angle and spacing are very technical, too, and for this reason you should make sure all the relevant rules and regulations about ladders are readily available to your workers. It's also important to update employees about any changes to the rules, or how to locate that information if they need it.

Being informed is half the battle won when it comes to ladder safety. So making information about safe ladder use available to your workers is an important step in ensuring their risk of injury is minimized.

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### **Tip No. 3: Respect Ladder Limitations**

While a ladder is often the only practical tool for performing certain work tasks, it has its limitations.

For example, placing a ladder in certain high-traffic areas—passageways, doorways or driveways—can lead to its accidental dislocation and likely injuries to users. OSHA notes that ladders in use should not be moved, shifted or extended, and that the "top or top step of a stepladder shall not be used as a step"—all actions that would likely put the user at greater risk of injury.

And a ladder is only capable of withstanding a certain amount of weight before it could fail. OSHA

stipulates that ladders should not be “loaded beyond the maximum intended load for which they were built, nor beyond their manufacturer’s rated capacity.”

Each ladder should have a “duty rating” that can be found on its specifications label. This is the maximum weight that a ladder can safely carry, and it should be greater than the total amount of weight your ladder will be supporting, including the worker’s weight, the weight of any clothing and protective equipment he or she is wearing, the weight of the worker’s tools and supplies, and any tools that may be attached to the ladder itself.

Ladder users should consider their own limitations, too. Some workers may not feel strong enough to easily move up and down a ladder, while others may behave in a risky manner that puts themselves (and others) at greater risk of injury.

OSHA’s conditions for ladder use can mitigate these dangers: When ascending or descending a ladder, users should face the ladder itself to retain stability, and they should “use at least one hand to grasp the ladder when moving up or down.” Workers should also avoid carrying any object or load that could cause him or her to lose balance and fall.

Knowing how to properly and safely use ladders is key to minimizing risk of injury. Employers are required to train workers to use equipment that may cause harm, such as ladders. But workers have the responsibility of following the correct safety guidelines. Doing so can literally save lives.

*How are you making sure employees who use ladders do so safely? Have you increased your training budget to keep them informed of dangers? What strategies have you found most successful? Share your thoughts in the comments below.*

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