

HAZARD ALERT

Falls from Ladders

Fatal injuries

There is a pressing need to address the serious problem of ladder-related falls to reduce the resulting injury and death.

Ladder Statistics

In the United States, more than 500,000 people per year are treated and more than 300 people die from ladder-related injuries.

Fatal Events

Falls to lower level and exposure to electricity.

Nonfatal Events

Falls to lower level as a result of tip overs.
Falls from ladder losing footing after insecure ladder placement.
Collapse of ladder from damaged spreader.
Falls from losing grip while climbing.
Exposure to electricity.

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Ladder Safety Awareness

Falls are the leading cause of death in construction and every year falls from ladders make up nearly a third of those deaths. Workers who use ladders risk permanent injury or death from falls and electrocutions. These hazards can be eliminated or substantially reduced by following good safety practices. This hazard alert examines some of the hazards workers may encounter while working on ladders and explains what employers and workers can do to reduce injuries. OSHA's requirements for ladders are in Subpart X–Stairways and Ladders of OSHA's Construction standards.



PLAN Ahead to Get the Job Done Safely

Use a ladder that can sustain at least four times the maximum intended load, except that each extra-heavy duty type 1A metal or plastic ladder shall sustain at least 3.3 times the maximum intended load. Also acceptable are ladders that meet the requirements set forth in Appendix A of Subpart X. Follow the manufacturer’s instructions and labels on the ladder. To determine the correct ladder, consider your weight plus the weight of your load. Do not exceed the load rating and always include the weight of all tools, materials and equipment. A competent person must visually inspect all extension ladders before use for any defects such as: missing rungs, bolts, cleats, screws and loose components. Where a ladder has these or other defects, it must be immediately marked as defective or tagged with “Do Not Use” or similar language. Allow sufficient room to step off the ladder safely. Keep the area around the bottom and the top of the ladder clear of equipment, materials and tools. If access is obstructed, secure the top of the ladder to a rigid support that will not deflect, and add a grasping device to allow workers safe access. Set the ladder at the proper angle. When a ladder is leaned against a wall, the bottom of the ladder should be one-quarter of the ladder’s working length away from the wall. For access to an elevated work surface, extend the top of the ladder three feet above that surface or secure the ladder at its top. Before starting work, survey the area for potential hazards, such as energized overhead power lines. Ladders shall have nonconductive side rails if they are used where the worker or the ladder could contact exposed energized electrical equipment. Keep all ladders and other tools at least 10 feet away from any power lines. Set the base of the ladder so that the bottom sits securely and so both side rails are evenly supported. The ladder rails should be square to the structure against which it is leaning with both footpads placed securely on a stable and level surface. Secure the ladder’s dogs or pawls before climbing. When using a ladder in a high-activity area, secure it to prevent movement and use a barrier to redirect workers and equipment. If the ladder is placed in front of a door, always block off the door.

Common Hazards

- Standing on the top step of step ladders
- Using a step ladder that is not the right size for the job (height or rated capacity)
- Not inspecting ladders before use, resulting in the use of damaged ladders
- Using step ladders on loose or uneven ground
- Ladders on slippery or unstable surface
- Overreaching while on a ladder, causing center of gravity to shift beyond the ladder side rails
- Not using three points of contact when ascending or descending the ladder
- Not facing the ladder when descending
- Skipping ladder rungs/steps when descending
- Unlocked ladder spreaders
- Ladders in high-traffic location
- Ladders in close proximity to electrical wiring/equipment

Type	Duty Rating	Use	Load
1AA	Special Duty	Rugged	375 lbs.
1A	Extra Heavy Duty	Industrial	300 lbs.
1	Heavy Duty	Industrial	250 lbs.
II	Medium Duty	Commercial	225 lbs.
III	Light Duty	Household	200 lbs.

Source for Types IA, I, II, III: Subpart X—Stairways and Ladders, Appendix A (American National Standards Institute (ANSI) 14.1, 14.2, 14.5 (1982)) of OSHA’s Construction standards. Source for Type IAA: ANSI 14.1, 14.2, 14.5 (2009), which are non-mandatory guidelines.

Safe Ladder Use—DO:

Maintain a 3-point contact (two hands and a foot, or two feet and a hand) when climbing/ descending a ladder. Face the ladder when climbing up or descending. Keep the body inside the side rails. Use extra care when getting on or off the ladder at the top or bottom. Avoid tipping the ladder over sideways or causing the ladder base to slide out. Carry tools in a tool belt or raise tools up using a hand line. Never carry tools in your hands while climbing up/down a ladder. Extend the top of the ladder three feet above the landing. Keep ladders free of any slippery materials.

Safe Ladder Use—DO NOT:

Place a ladder on boxes, barrels, or unstable bases. Use a ladder on soft ground or unstable footing. Stand on the top rung. Tie two ladders together to make them longer. Ignore nearby overhead power lines. Move or shift a ladder with a person or equipment on the ladder. Lean out beyond the ladder’s side rails. Use an extension ladder horizontally like a platform.