

LADDER SAFETY

In California, Portable Ladder Safety is regulated by Title 8 California Code of Regulations (T8CCR) Section [1675](#), [3276](#), [3287](#), and [3413](#). All employees who use ladders must be trained on:

- a. Importance of using ladders safely including injuries due to falls from ladders. [3276\(f\)\(1\)](#)
- b. Selection of ladders, including types, proper length, maximum working loads, and electrical hazards. [3276\(f\)\(2\)](#)
- c. Maintenance, inspection, and removal of damaged ladders from service. [3276\(f\)\(3\)](#)
- d. Erecting ladders including footing support, top support, securing, and angle of inclination. [3276\(f\)\(4\)](#)
- e. Climbing and working on ladders including user's position and points of contact with the ladder. [3276\(f\)\(5\)](#)
- f. Causes of falls, including haste, sudden movement, lack of attention, footwear, and user's physical condition. [3276\(f\)\(6\)](#)
- g. Prohibited uses including climbing on cross bracing, uses other than designed, exceeding maximum lengths, and not meeting minimum overlap requirements. [3276\(f\)\(7\)](#)

The information and tips below will assist the safety training manager in complying with the requirements listed above.

Ladder Injury Statistics

- As per the Center to [Protect Workers' Rights](#), each year, about 50 construction workers are killed by falls from ladders. More than half of the deaths occur to people working from ladders. Twice as many falls occur stepping down compared to going up ladders. The main causes of falls from portable ladders are sliding of the ladder base and tipping sideways. A lot of workers carrying ladders hurt their backs, too.
- According to [The Bureau of Labor Statistics](#), 20% of the fatal falls were from ladders in 2009.
- The U.S. Consumer Product Safety Commission estimates that there are more than 164,000 emergency room-treated injuries in the U.S. relating to ladders every year.

Real Stories

- *Fatal Fall From Ladder*

A 59-year-old painter/independent contractor died of injuries after he fell while working from a metal extension ladder. The victim was working alone on a 90-foot by 20-foot addition to a farm equipment storage building. The building sat on a concrete slab. The victim was working from an aluminum extension ladder putting the finishing touches around the roof beams near the front of the building. The contractor and the ladder fell backwards to the concrete floor where he suffered massive head trauma.

- *Electrocution From A Ladder*

A 32-year-old worker was electrocuted when the metal ladder he was carrying contacted an overhead power line. As the co-workers were beginning to clean up the job site at the end of the work day, the victim picked up a metal ladder to carry it to the work van. While the victim was carrying the ladder upright to the van, the foreman and several co-workers verbally warned him about the overhead power line. Several seconds later, the victim's ladder made contact with the overhead power line and the victim fell to the ground.

- *Case Reports of falls investigated by OSHA*

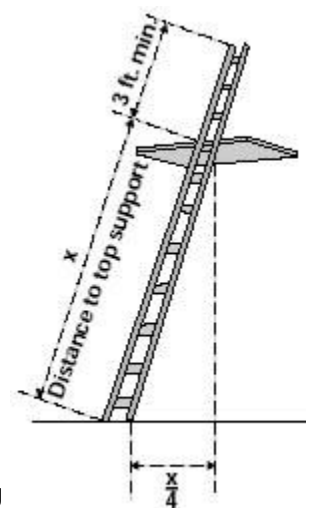
An employee was climbing a 10 foot ladder to access a landing which was 9 feet above the adjacent floor. The ladder slid down, and the employee fell to the floor, sustaining fatal injuries. Although the ladder had slip-resistant feet, it was not secured, and the railings did not extend 3 feet above the landing.

Ladder accidents are usually caused by:

- Workers not being trained adequately on ladder safety
- Ladder being in poor condition
- Improper selection, care or use including incorrect positioning
- Using unsafe work practices
- Using the wrong ladder for the specific job
- Using defective ladders

Ladder Safety Tips

- Read and follow all labels/markings on the ladder.
- Avoid electrical hazards! – Look for overhead power lines before handling a ladder. Avoid using a metal ladder near power lines or exposed energized electrical equipment. Use of metal ladders around electrical equipment is prohibited according to Section 3279(d)(11) of the California Code of Regulations.
- Always inspect the ladder prior to using it. If the ladder is damaged, it must be removed from service and tagged until repaired or discarded.
- Always maintain a 3-point (two hands and a foot, or two feet and a hand) contact on the ladder when climbing. Keep your body near the middle of the step and always face the ladder while climbing (see diagram).
- Only use ladders and appropriate accessories (ladder levelers, jacks or hooks) for their designed purposes.
- Ladders must be free of any slippery material on the rungs, steps or feet.
- Do not use a self-supporting ladder (e.g., step ladder) as a single ladder or in a partially closed position.
- Do not use the top step/rung of a ladder as a step/rung unless it was designed for that purpose.
- Use a ladder only on a stable and level surface, unless it has been secured (top or bottom) to prevent displacement.
- Do not place a ladder on boxes, barrels or other unstable bases to obtain additional height.
- Do not move or shift a ladder while a person or equipment is on the ladder.
- An extension or straight ladder used to access an elevated surface must extend at least 3 feet above the point of support (see diagram). Do not stand on the three top rungs of a straight, single or extension ladder.
- The proper angle for setting up a ladder is to place its base a quarter of the working length of the ladder from the wall or other vertical surface (see diagram).
- A ladder placed in any location where it can be displaced by other work activities must be secured to prevent displacement or a barricade must be erected to keep traffic away from the ladder.
- Be sure that all locks on an extension ladder are properly engaged.
- Do not exceed the maximum load rating of a ladder. Be aware of the ladder's load rating and of the weight it is supporting, including the weight of any tools or equipment.



- Wear proper footwear when climbing on a ladder (slip-resistant, flat soles.)
- Do not reach above your head to move heavy items on a ladder. Ensure that the ladder is tall enough to be able to handle items at waist level.
- Do not use short step stools, roller chairs, bar stools, or other objects not intended for climbing in place of a ladder.

LADDER SAFETY QUESTIONS

What types of ladders are available in your practice and when is each used?

How is each ladder properly set up, used, and stored?

Who is responsible for ladder inspections and safety training? Who are ladder problems reported to?

What are the maximum height and weight (load) capabilities of each ladder?

What are the most common injuries experienced in relation to ladder use?

ADDITIONAL TRAINING RESOURCES

Cal/OSHA Ladder Safety: <https://www.dir.ca.gov/dosh/etools/08-001/regs.htm>

OSHA Ladder Safety Quick Card: https://www.osha.gov/Publications/portable_ladder_qc.html

Portable Ladder Safety e-tool by Cal/OSHA: <https://www.dir.ca.gov/dosh/etools/08-001/index.htm>