



Safety tips to prevent ladder injuries in your hotel

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Ladders are a common tool utilized by the maintenance and engineering staff in nearly every hotel. They enable personnel to reach high places for a variety of reasons such as hanging banners, changing light bulbs, checking sprinkler heads, dusting high areas, accessing roof areas, and so much more. Yet, each year there are more than 164,000 emergency room-treated injuries in the United States relating to ladders. Of course not all these injuries occur in or at hotels and resorts, but many do. And when they do, the results can be costly.

A 2004 study that tracked ladder injury patients that were presented at a Level 1 Trauma Center over a three-year period found that men (89%) were more likely to be injured from a ladder than women. Over 18% of ladder injury patients required hospitalization and the median length and cost of the hospital stay was one week and \$3950, respectively. The median duration of disability and unemployment for ladder-related injuries was six weeks. The longest duration of disability was associated with foot fractures. The majority of patients fell between 5 feet and 10 feet, and they fell at work. The upper extremity was the most commonly injured anatomical region. Clearly, when used inappropriately, ladders can injure employees, drive up Workers' Compensation premiums, and decrease employee productivity.

In fact, the American Academy of Orthopedic Surgeons recently published statistics that illustrate the dangers of ladder accidents:

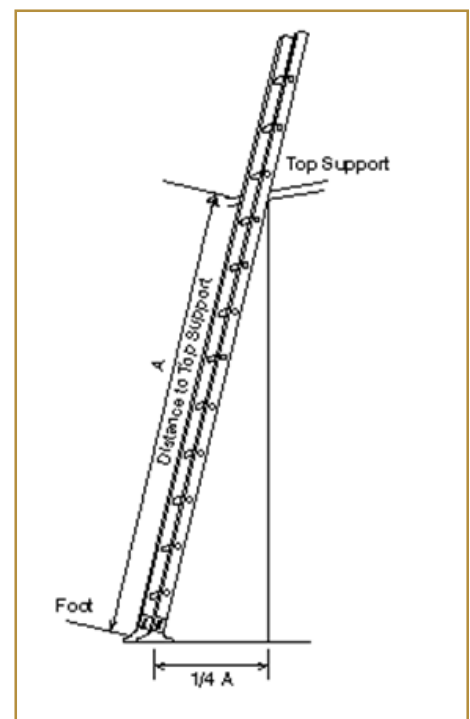
- In the United States more than 500,000 people a year are treated for ladder-related injuries, and that number does not include people who suffered injuries but did not go to a medical care provider for treatment.
- About 300 people in the United States die from ladder-related injuries annually.
- The estimated annual cost of ladder-related injuries in the United States is \$11 billion, including work loss, medical, legal, liability and pain-and-suffering expenses.

Since society has yet to find a more economical and safer option to access locations out of arm's reach, eliminating ladders in the workplace is not a feasible option for hotels. This said, the U.S. Consumer Product Safety Commission and OSHA offer the following safety precautions to help prevent ladder-related injuries.

Use the right ladder for the job

- Make sure the ladder is suited for the type of job you plan to do. Ensure the weight the ladder is supporting does not exceed its maximum load rating. (Load ratings are always posted on the side of the ladder.) This would include the weight of the user plus any materials. Ladders used in hotels should be Type 2 (medium duty commercial; which can support 225 lbs.), or Type 1/Type 1A/Type 1AA (heavy duty industrial; which can support 250 lbs./300 lbs./375 lbs. respectively).

Pictured below: Make sure the ladder is about one foot away from the vertical support for every 4 feet of ladder height between the foot and the top support. Also, if being used to climb onto an elevated platform, the extension ladder should extend at least three feet above the elevated platform, such as a roof.



- Inspect and maintain ladders regularly. Stepladders and extension ladders should be inspected for broken or frozen joints or latches. Aluminum ladders should be inspected for cracks and broken welds. Aluminum ladders should also be inspected for rough spots and burrs before first use. Wood ladders should be inspected for cracked wood, splinters, and rot. Look for broken or loose hardware. Protect wood ladders with linseed oil or clear sealant. Never paint a wooden ladder - the paint may hide imperfections such as rot or cracks. Fiberglass ladders are protected with a clear sealant. If the fiberglass is damaged through the sealant, sand lightly before applying another coat of lacquer. Never use damaged or defective ladders.
- Use a ladder that is the proper length for the job. Proper length is a minimum of 3 feet extending over the roofline or working surface. The three top rungs of a straight, single or extension ladder should not be stood on.
- All metal ladders should have slip-resistant feet.
- The ground under the ladder should be level and firm. Large flat wooden boards braced under the ladder can level a ladder on uneven ground or soft ground. A good practice is to have a helper hold the bottom of the ladder.
- Metal ladders will conduct electricity. Use a wooden or fiberglass ladder in the vicinity of power lines or electrical equipment. Do not let a ladder made from any material contact live electric wires.

Use the ladder correctly

- Straight, single or extension ladders should be set up at about a 75-degree angle against a vertical surface. Use the 1:4 ratio to ensure a stable working platform. This means that for every four feet in elevation, the feet of the ladder must be set back one foot from the vertical surface. A fully-extended 20 foot extension ladder will reach a maximum height of 17 feet if perfectly vertical (this is because of the three foot overlap between ladder sections); hence, the ladder should be set back 4.25 feet from the base of the wall if fully extended to 17 feet in length. But this also means the 20-foot extension ladder will only extend up to 14-15 feet high when properly positioned against the wall.
- Do not place a ladder in front of a door that is not locked, blocked or guarded.
- Never leave a raised ladder unattended. These are considered an “attractive nuisance” and a huge liability. Kids love them – but they will also likely become injured by fooling around on them.
- When using a step ladder, always ensure that the leg brace for both sides is locked in place. When using an extension ladder, ensure that both ring locks are secure before ascending.
- If possible, secure extension ladders by lashing or fastening the top and/or bottom of the ladder to prevent movement. For added stability, consider mounting a “U-shaped” ladder stabilizer at the top of the ladder.
- There should only be one person on the ladder at a time.
- Always face the ladder when climbing or descending.
- Do not step on the top step, bucket shelf or attempt to climb or stand on the rear section of a stepladder.
- Never climb on the top three rungs of an extension ladder.
- If climbing onto another surface (such as onto a roof), make sure the ladder extends at least three feet past the platform you are climbing onto.
- When climbing or descending, always maintain three points of contact with the ladder.
- Do not carry loads up or down an extension ladder. Doing so will prevent you from maintaining three points of contact with the ladder, plus you may injure someone on the ground if you drop your load. Climb the ladder then pull up or lower your load using a rope and bucket.
- Except for climbing and ascending, keep both feet on the ladder. Never put one foot on a rung and the other foot on a different surface.
- Don’t overreach while standing on a ladder. Keep your body centered between the rails of the ladder at all times. Do not lean too far to the side while working. A general rule of thumb is to keep the “belt buckle” of the worker within the side rails of the extension ladder at all times.
- Do not use a ladder for any purpose other than that for which it was intended. Ladders should not be used as horizontal planks or scaffold platforms.
- Follow use instruction labels on ladders.



Hot tip

If a ladder is damaged and cannot be properly repaired, do NOT use the ladder. Before disposing, destroy the ladder by cutting it throughout with a saw to prevent others from attempting to use it. Remember, if you dispose of a damaged ladder and someone else retrieves and attempts to use it, your hotel could be held liable if they are injured! (Chances are that you had your hotel's name painted on the side of the ladder.)

- Never leave ladders unattended in public areas of a hotel. Always collapse them and lock them up, or remove them to proper storage areas. ✧

(Jesse Denton is an independent loss prevention consultant based in Atlanta, GA. He possesses over 40 years of experience, the last 24 years with major hotel and insurance companies in the hospitality industry. Jesse was honored in February 2009 by HospitalityLawyer.com with the Thom Davis Award for hospitality loss prevention. He is available for consultation and may be reached via E-mail at: jldentonjr@bellsouth.net or by phone at 770-257-8363.)