

Industry Insights

Ascending Safely: The Smarter Choice for Workplace Safety

**Transforming Workplace Safety by
Transitioning from Ladders to Stairs**



SEPARATING PEOPLE FROM HAZARDS



UNDERSTANDING OSHA'S LADDER SAFETY GUIDELINES

The Occupational Safety and Health Administration (OSHA) has established detailed guidelines and standards for using ladders in the workplace, covering the selection of the right ladder, pre-use inspections, appropriate placement, and safe climbing techniques. However, even with these measures in place, the risks linked to ladder use continue to be significant. According to OSHA data, ladder falls account for almost one-third of all fatalities caused by falls in the construction sector. This concerning statistic highlights the critical need for implementing safer options like stairs in industrial environments.



A CRITICAL LOOK AT THE HIGH COST OF FALLS

LADDER-RELATED INJURIES AND FATALITIES:

According to the U.S. Bureau of Labor Statistics, 22,300 workers receive treatment for ladder-related injuries in the United States annually, and 161 of these incidents result in fatal injuries.

OSHA VIOLATIONS:

Ladder safety violations consistently rank among OSHA's top 10 most cited safety violations, indicating widespread non-compliance with ladder safety standards in workplaces.

COST OF LADDER ACCIDENTS:

The Consumer Product Safety Commission (CPSC) reports that ladder-related injuries cost the U.S. economy more than \$24 billion annually, including medical, legal, liability, pain and suffering, and lost productivity costs.

OVER

22,000

PEOPLE RECEIVE TREATMENT FOR
LADDER-RELATED INJURIES

ALARMING STATISTICS

Every year, ladder mishaps cause over 22,000 people to require treatment, with 161 resulting in fatalities, highlighting a pressing need for safer work practices.

161

OF THESE INCIDENTS RESULT
IN FATAL INJURIES



THE CHALLENGE OF MAINTAINING THREE POINTS OF CONTACT ON LADDERS

Maintaining a three-point contact (two hands and one foot, or vice versa) is a key safety measure when using ladders to ensure stability and minimize fall risks. Yet, this becomes a complex task in industrial environments where carrying tools or materials up a ladder is common. This requirement forces workers into a precarious position, climbing at great heights with limited support, which can be both challenging and dangerous amidst the myriad of workplace hazards.

The necessity to hold items while ascending compromises this safety rule, as it leaves the worker with reduced points of contact, heightening the chance of imbalance and making the ascent more perilous. Stairs, on the other hand, offer a safer alternative, providing handrails for balance and support, allowing workers to carry items more safely, and aligning more closely with safety standards, thus diminishing the likelihood of accidents.



EFFICIENCY & SAFETY OF STAIRS

Research from the Liberty Mutual Research Institute for Safety indicates that using stairs reduces the likelihood of falls and injuries when transporting materials, as compared to ladders, due to the increased stability and the ability to maintain three-point contact more easily.

1

THREE-POINT CONTACT AND FALL PREVENTION:

The American Journal of Industrial Medicine highlights that adhering to the three-point contact rule can significantly reduce the likelihood of falls, which constitute a major portion of workplace accidents, especially in construction and industrial settings.

2

LADDER-RELATED FALL INJURIES:

The National Institute for Occupational Safety and Health (NIOSH) reports that falls from ladders account for approximately 20% of all fall injuries in the workplace, with a higher incidence rate in industrial and construction environments.

3

COMPARISON WITH STAIR USE:

According to the Occupational Health and Safety Administration (OSHA), using stairs instead of ladders in applicable situations can reduce the risk of fall-related injuries by up to 65%, as stairs provide a more stable and secure means of elevation, especially when carrying items.

20%

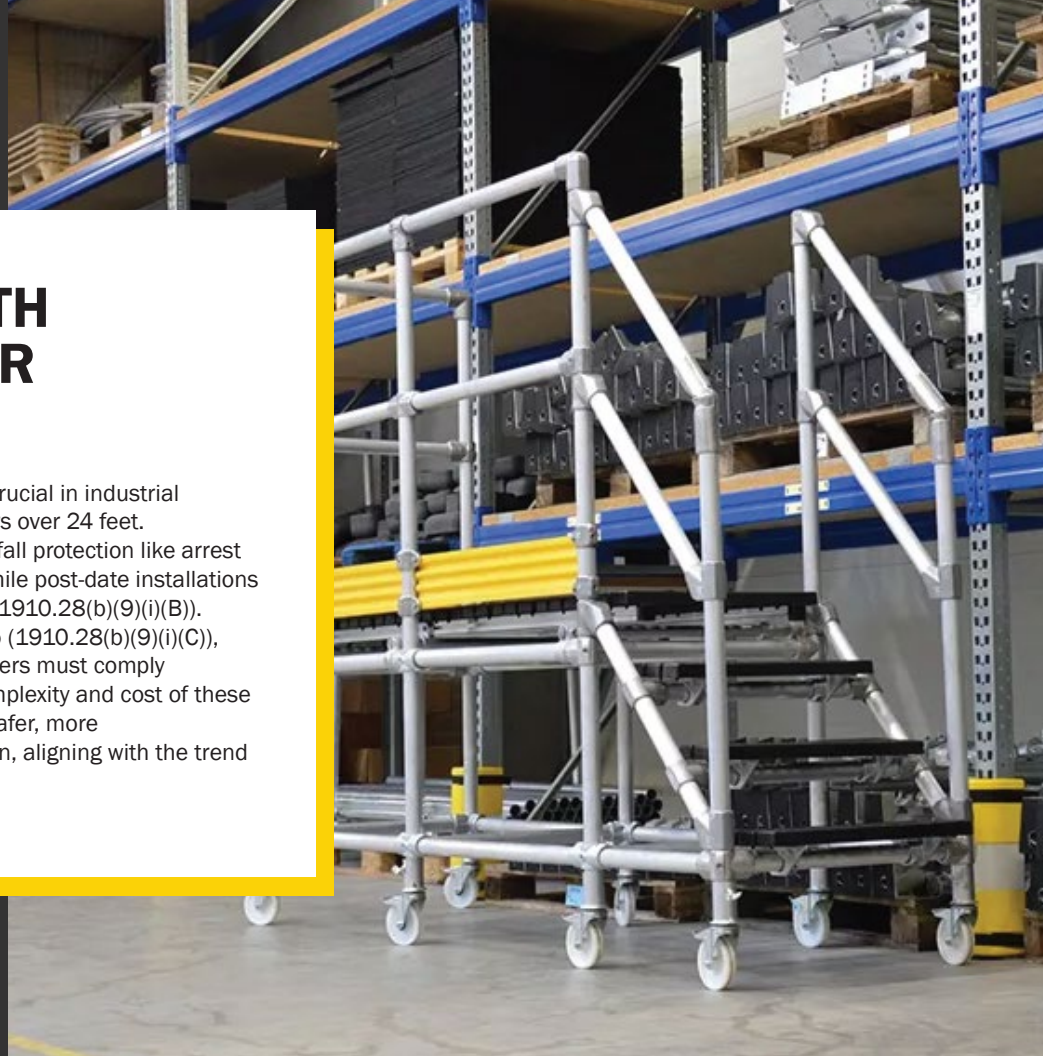
Falls from ladders account for approximately **20% of all fall injuries** in the workplace

65%

Opting for stairs over ladders can cut **fall injury risks by up to 65%**

KEEPING UP WITH OSHA RULES FOR FIXED LADDERS

Adhering to OSHA's safety regulations is crucial in industrial environments, particularly for fixed ladders over 24 feet. Pre-November 19, 2018, ladders require fall protection like arrest systems or cages (1910.28(b)(9)(i)(A)), while post-date installations need fall arrest or ladder safety systems (1910.28(b)(9)(i)(B)). Upgrades must include these systems too (1910.28(b)(9)(i)(C)), and by November 18, 2036, all fixed ladders must comply (1910.28(b)(9)(i)(D)). Considering the complexity and cost of these requirements, opting for stairs can be a safer, more straightforward, and cost-effective solution, aligning with the trend towards stricter safety standards.



ENHANCING WORKPLACE SAFETY: THE ADVANTAGES OF STAIR ACCESS

25%

Research in the Journal of Safety Research shows that carrying items on a ladder **boosts fall risk by over 25%** by hindering three-point contact and balance.

The Consumer Product Safety Commission (CPSC) reports that ladder-related injuries cost the U.S. economy more than

\$24 BILLION

annually

Productivity and Accessibility: Stairs can improve productivity and accessibility in industrial settings, offering a faster and safer means for workers to move between levels, especially when carrying tools or materials.

Cost-Effectiveness of Stairs: The initial investment in installing stairs instead of ladders may be higher, but the long-term benefits include reduced maintenance costs, lower risk of fall-related injuries, and potential savings from avoiding OSHA penalties for non-compliance.



COMPARING STAIRS AND LADDERS IN SPECIFIC SCENARIOS



HIGH TRAFFIC AREAS

Stairs support continuous flow, unlike ladders, which can become congested. OSHA statistics reveal that ladder congestion can lead to hazardous situations.

National Safety Council reports that congested work environments contribute to over 10% of workplace injuries.



CARRYING LOADS

Carrying loads up and down ladders significantly increases the risk of falls. In 2020, 161 people suffered fatal injuries from ladder accidents (OHS Online). Stairs offer a safer way to transport materials.

Stairs, with handrails and eliminating the need for load balancing, are significantly safer for transporting materials than ladders.



EMERGENCY SITUATIONS

In emergencies, rapid and safe evacuation is essential. Stairs provide a quicker and safer route, crucial given that ladder-related delays can have dire consequences.

Ladders can create serious bottlenecks that impede evacuation, substantially slowing down the process and increasing risks during emergency situations.



STEPPING UP: THE SAFETY AND EFFICIENCY BENEFITS OF SWITCHING TO STAIRS

Moving from ladders to stairs significantly bolsters both immediate and long-term workplace safety, reducing fatigue among workers which, in turn, promotes increased efficiency and concentration. This shift is also economically beneficial, as it leads to fewer accidents, which correlates to less downtime from injuries and overall cost savings for companies.

The trend of replacing ladders with stairs is gaining momentum across industries, driven by the goal to improve worker safety and operational efficiency. This move aligns with current safety regulations and reflects a commitment to long-term worker welfare and productivity enhancements.

STAIRS OVER LADDERS: BOOSTING SAFETY & SPEED

Research underscores the efficiency of stairs over ladders, revealing that stairs allow for a speedier ascent and descent by up to 30%, streamlining operations that involve frequent transitions between various levels. This increase in speed not only aids in task completion but also minimizes the time workers spend in potentially hazardous situations associated with height.

Ergonomic solutions, such as integrating stairs into the workplace, have been shown to significantly reduce the incidence of accidents, with a potential decrease of up to 65% according to studies conducted by the Ergonomics Center of North Carolina. This reduction in workplace accidents contributes to a safer work environment and can lead to a decrease in associated costs from lost workdays and workers' compensation.

EFFICIENCY OF STAIRS:

Research indicates that stairs can be ascended and descended **faster than ladders by up to 30%**, improving efficiency in tasks involving multiple level changes.

30%

65%

ACCIDENT REDUCTION:

Implementing ergonomic solutions like stairs can **reduce the number of workplace accidents by 65%**, according to studies by the Ergonomics Center of North Carolina.



ELEVATING STANDARDS: THE STRATEGIC SHIFT FROM LADDERS TO STAIRS FOR ENHANCED WORKPLACE SAFETY

The move from ladders to stairs in industrial settings is not just a safety upgrade but part of a growing trend towards enhanced workplace safety and efficiency. Recognizing the ergonomic challenges and safety hazards associated with ladders, a leading national manufacturer has taken a significant step by transitioning to stairs for rooftop access, setting a new industry benchmark. This shift promises to offer long-term health benefits, increase productivity, and reduce the frequency of workplace accidents. Kee Safety's expertise and customized safety solutions support this transition, fostering a safer and more productive work environment.



Kee Safety: Your Fall Protection Experts

Kee Safety is the leading expert and global manufacturer of safety components and fall protection systems. We are fully committed to **Separating People from Hazards**. Established in 1934, Kee Safety has a proud history of engineering, manufacturing, and supplying the most trusted fall protection solutions, safety railing systems, and safe access equipment for working at height.



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