

Liberty Mutual Workplace Safety Index

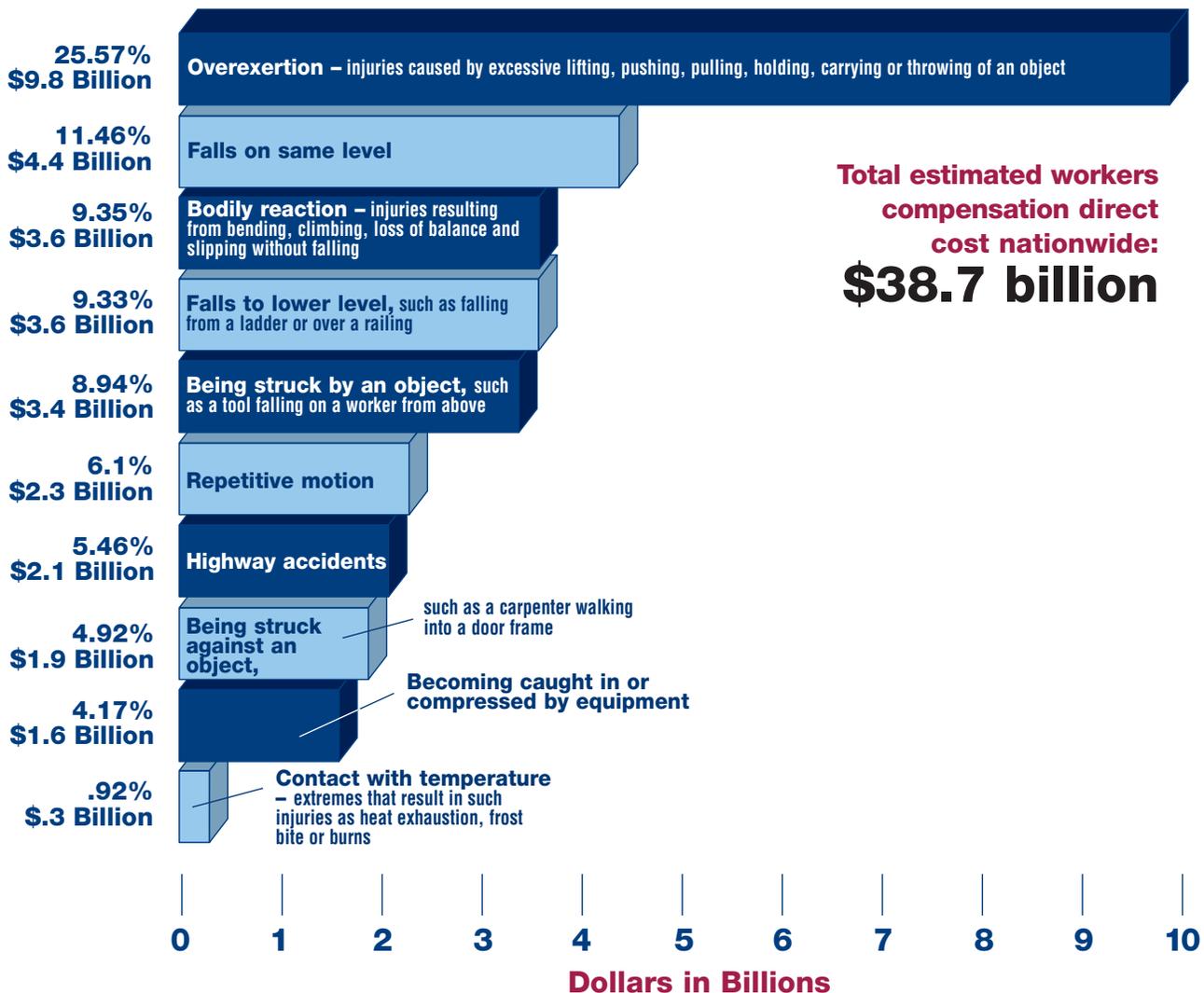
Identifies Leading Causes and Direct Cost of Workplace Accidents

The *Liberty Mutual Workplace Safety Index* provides the first ranking of the leading causes of workplace injuries and illness based on the direct costs associated with each accident cause.

The Index, which is based on data from Liberty Mutual — the country's leading provider of workers compensation insurance — the Bureau of Labor Statistics and the National Academy of Social Insurance, also provides guidelines to help employers reduce the costs generated by the top causes of workplace accidents.

Accident Drivers

The 10 leading causes of workplace injuries and illness accounted for 86 percent of the \$38.7 billion in wage replacement and medical payments made by employers in 1998, the last year for which data is available. These leading causes include:



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Guidelines for Improving Workplace Safety

As the leading provider of workers compensation insurance, Liberty Mutual has partnered with thousands of employers to help improve workplace safety, benefiting a company's employees and financial performance.

Improving workplace safety requires the involvement of senior management in developing and communicating annual safety plans. These plans review the company's production and distribution procedures, identify the current level of workplace safety, compare current performance to industry benchmarks, and identify the steps necessary to make the job-site safer.

Guidelines for addressing the top five causes of workplace accidents identified by the *Liberty Mutual Workplace Safety Index* include:

Accident cause	Guidelines for Addressing
Overexertion – injuries caused by excessive lifting, pushing, pulling, holding, carrying or throwing of an object	<ul style="list-style-type: none"> • Evaluate production, storage and display workflows to remove excessive reaching, bending, pushing, pulling, lifting, loading, and unloading • Use mechanical lifting aids such as hoists or adjustable lift tables to reduce the need to bend, reach and twist. Use carts, tables or other mechanical devices to move and position heavy objects • Design jobs to allow sufficient rest
Fall on same level	<ul style="list-style-type: none"> • Keep floors free of holes, water, grease, oil, and other potential fall hazards • Provide footwear with the tread pattern and soling necessary to prevent slips • Provide adequate lighting for all interior and exterior walking surfaces • Highlight transitions in floor height • Remove snow and ice in parking lots and on sidewalks • Use appropriate non-slip floor surfaces, cleaners and waxes
Bodily reaction	<ul style="list-style-type: none"> • See Overexertion, Fall on same level and Fall to lower level
Falls to lower level, such as falling from a ladder or over a railing	<ul style="list-style-type: none"> • Use appropriate ladders capable of comfortably reaching work or storage heights • Use mechanized material handling devices to access higher levels • Regularly inspect and repair all ladders and lifting equipment • Provide railing protection for areas with abrupt floor level changes (i.e. loading dock) • Avoid storage of heavy or awkward items above the reach of most workers • Provide handrails and slip-resistant treads for all stairs. Avoid storage of any kind on stair treads and walkways • Install nets when other types of fall protection cannot be used
Being struck by an object, such as a tool falling on a worker from above	<ul style="list-style-type: none"> • Require that aisles are clear, well marked and have adequate clearance • Train and supervise lift truck operators • Enforce speed controls and install mirrors at blind spots to enhance visibility • Stabilize overhead storage. Avoid high storage that may cause overloading • Use traffic control mirrors in “intersections” or areas of the building and exterior grounds where pedestrians and vehicles interact • Avoid storing or displaying products or equipment in areas where people travel • Restrict access to areas underneath work areas • Use equipment and power tools only with the manufacturers’ guards in place. Maintain all equipment and tools by following the manufacturers’ guidelines • When approaching mobile equipment, workers should always make eye contact with the driver

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Workplace Safety Case Studies

Liberty Mutual Helps Prevent Overexertion Accidents at a Manufacturer

Investments in training and technology can yield high returns in worker safety.

- Problem:** Employees in the company's packing department were experiencing continued injuries to the back, neck and shoulder caused by lifting heavy cartons at loading docks.
- Solution:** Liberty Mutual conducted an ergonomics training session with the company's engineering staff to come up with cost-effective ways to reduce manual tasks at loading docks. The engineering department installed several vacuum hoists and job safety training was integrated into employee training program.
- Results:** Strain and overexertion injuries were reduced by over two-thirds, from 61 injuries prior to installation to 19. Costs associated with these injuries declined from \$280,884 prior to installation to \$126,274 following installation.

Liberty Mutual Helps Prevent Falls at a Concrete Company

Safety systems and correct supervision can help prevent accidents in the workplace.

- Problem:** A study of five years of claims data from a concrete company found that 63 drivers had experienced falls from their vehicles, resulting in a direct cost of \$541,680 in insurance payments and an indirect cost estimated at \$2.2 million.
- Solution:** Liberty Mutual helped the company develop a system for preventing falls that was incorporated into driver training sessions. They also observed drivers getting in and out of concrete mixers and developed a supervisory observation form that is now used by driver trainers, the plant safety staff and in the field.
- Results:** The estimated cost of controls was \$150,000 for two years. The cost saving in the first full year after the controls were in place was \$248,728.

Liberty Mutual Helps Prevent Workers Being Struck by Falling Boxes at a Distribution Center

Commitment from top-management can help improve workplace safety.

- Problem:** The distribution center for a large discount department store experienced high levels of accidents, mainly from loading and unloading trailers, falls and tripping, and workers being struck by falling boxes.
- Solution:** Liberty Mutual reviewed the accidents and completed a survey of the facility and submitted recommendations to address some of the main issues, including plant traffic patterns. Liberty also created a procedure for accident investigations and facility self-inspections. The department store also participated in a Liberty Mutual seminar on accident investigation.
- Results:** In one year, the dollar loss went from \$102,237 per 200,000 work-hours to only \$1,486. Additionally, the facility went an entire month during peak season without any incidents.

