

# OVERVIEW OF NIOSH RESEARCH ON Slips, Trips and Falls

DR. JENNIFER L. BELL AND DR. JAMES W. COLLINS >> NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

Work-related slip, trip and fall incidents can frequently result in serious disabling injuries that impact an employee's ability to do his or her job, often resulting in lost workdays, reduced productivity and/or expensive workers' compensation claims.

## National Impact of Slips, Trips and Falls

Slips, trips and falls (STFs) accounted for 24.5 percent of the total lost-workday injuries reported by the U.S. Department of Labor's Bureau of Labor Statistics in 2010 (BLS, 2011a), ranking second only to "contact with objects" (e.g. being hit by a falling object, or caught in machinery).

- + Contact with objects: 25.8% of total lost workday injuries
- + Slips, trips and falls: 24.5% of total lost workday injuries
- + Overexertion/bodily reaction: 24.0% of total lost workday injuries

Slips and falls on the same level, including slips and trips that do not result in a fall, account for 74 percent of total lost-workday STFs, while falls from an elevation (which includes falls from heights and falls down stairs) account for 26 percent.

The prevention of same-level falls remains a challenge. The most recent five years of national data for all private industry from 2006 through 2010 shows that the incidence rate of lost workday slips, trips and falls on the same level have decreased only three percent, while the lost workday incidence rate for all other events combined has declined 18 percent.

While same-level falls are declining slightly in the U.S., there are certain industry subsectors where the rate of STFs has increased in recent years. Nursing care facilities (NAICS 6231) is an example of an industry where certain injury events, such as overexertion injuries, have declined substantially (21 percent), but the rate of STF injuries increased from 2006-2010 by 1.4 percent.

## Slips, Trips and Falls Are Preventable

The good news is that STF injuries are largely preventable, and there is a growing body of scientific evidence to show that workplaces that implement slip, trip and fall prevention measures can reduce the burden of employee injuries and workers' compensation claims.

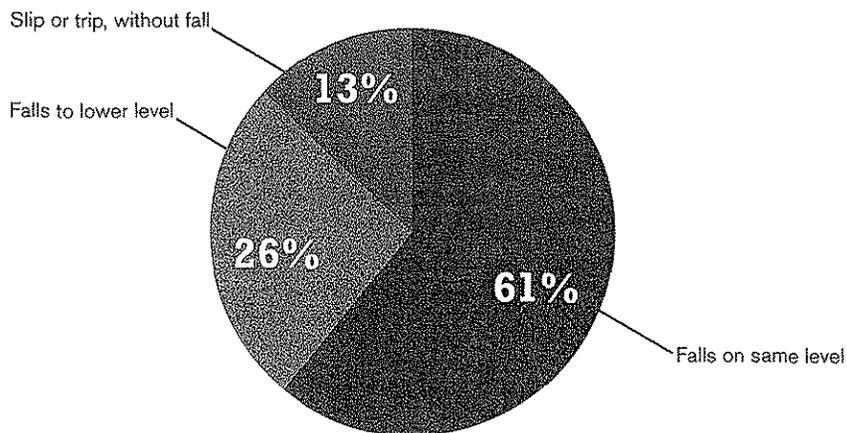
The National Institute for Occupational Safety and Health (NIOSH) and its partners conducted a 10-year longitudinal study in acute care hospitals (Bell *et al.*, 2008), which provides evidence that implementation of a broad-scale prevention program can significantly reduce STF workers' compensation injury claims. As a result of the findings from this study, NIOSH published a STF prevention guide

entitled "Slip, Trip and Fall Prevention for Healthcare Workers" ([www.cdc.gov/niosh/docs/2011-123](http://www.cdc.gov/niosh/docs/2011-123)) for use by healthcare facility administrators, safety and health professionals, facility managers, food service managers and workers who are responsible for safety (Bell *et al.*, 2010). Although this document was based on research conducted in acute care hospitals, most of the principles and recommendations for prevention will apply to long-term care settings, as well as other industry subsectors. The document identifies 10 common STF hazards in hospitals, provides a checklist to help identify different hazards in a healthcare facility and provides guidance on implementing a program to protect healthcare workers.

In addition to the aforementioned prevention guide, ANSI standards such as the standard for the provision of slip resistance on walking/working surfaces

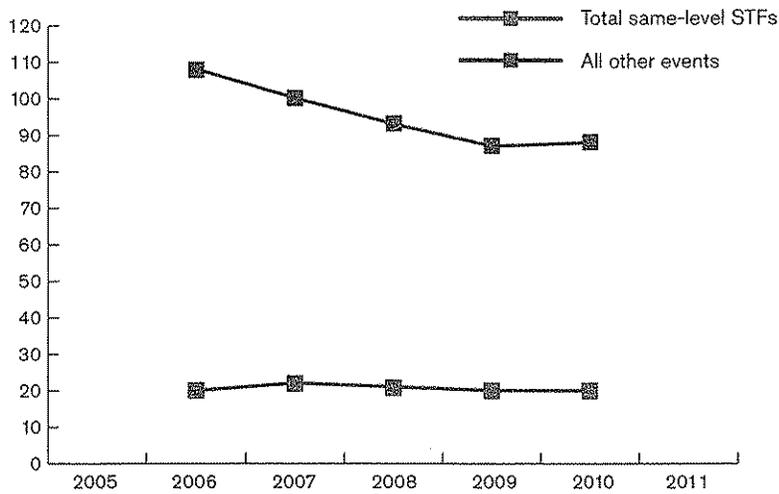
## Type of slip, trip and fall injury event for total lost-workday STFs

(BLS, 2011)



Source: U.S. Department of Labor's Bureau of Labor Statistics

## Lost workday incidence rate for nonfatal occupational injuries by event, 2006-2010 (BLS 2011b)



Source: U.S. Department of Labor's Bureau of Labor Statistics

(ANSI 2006), textbooks such as “Slip, Trip and Fall Prevention: A Practical Handbook” (Di Pilla 2010) and STF-specific chapters in “Modern Hospital Safety” (Collins and Bell 2010) can guide occupational safety and health professionals in the reduction of STF hazards. NIOSH continues to improve upon the body of research supporting effective STF prevention techniques (both same-level and from an elevation). For example, a NIOSH study is currently underway to evaluate the injury prevention effectiveness and cost-effectiveness of employee slip-resistant shoe programs in the food services industry.

### Applying Scientific Research to Workplace Practice

Research has shown that most same-level STFs are initiated by slipping on wet, greasy or icy surfaces. Slippery surfaces can be addressed in multiple ways, including improvements in housekeeping practices and grounds maintenance. Additional common hazards and specific prevention strategies, including a hazard audit checklist for the workplace, can be found in the NIOSH STF prevention guide (Bell *et al.*, 2010).

When looking at workplace injury records, often the most common injuries seen are

sprains and strains. Although many of these are caused by lifting, pushing and pulling tasks, the most common injury after an STF event is also a sprain or strain. Slip, trip and fall events cause a significant portion of a workplace's overall sprain/strain burden.

Based on NIOSH research examining workers' compensation claims from a study population of both acute care hospitals and nursing care facilities, roughly 20 percent of the slip, trip and fall incidents had an incident narrative that was lacking sufficient detail for prevention. For example, the incident narrative would describe the injury “right knee contusion” rather than describe causative factors such as “slipped on icy patch in parking lot.” Ensuring that causative factors are transcribed into incident narratives is another way to target prevention efforts.

NIOSH and partners continue to conduct research to reduce the incidence of STFs. More information on NIOSH research activities in this area is available at [www.cdc.gov/niosh/topics/falls/](http://www.cdc.gov/niosh/topics/falls/). It is the hope of NIOSH that more workplaces will recognize the significant portion of the worker injury burden caused by STFs and take steps toward implementing prevention strategies to reduce STF injuries.

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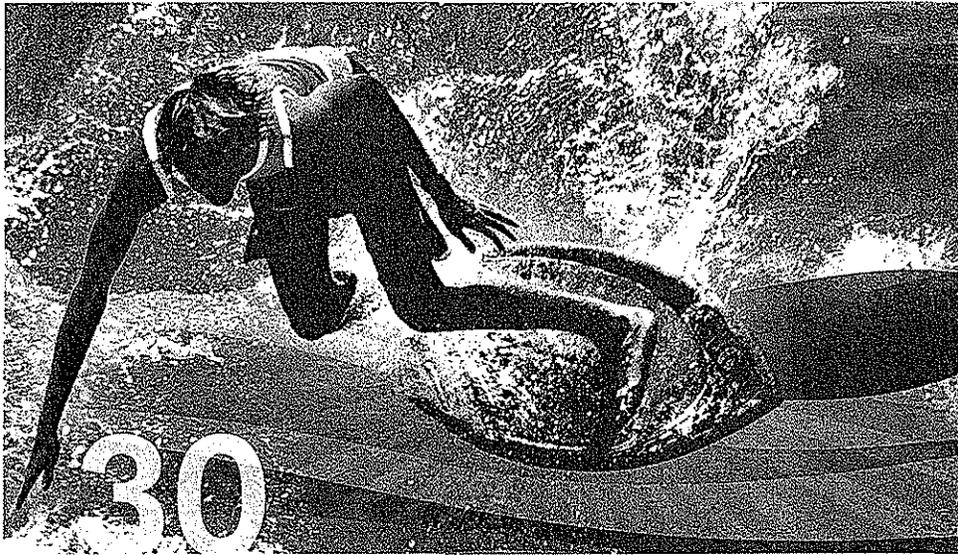
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**INTEGRATING SAFETY**  
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Overview of NIOSH Research  
on Slips, Trips  
and Falls





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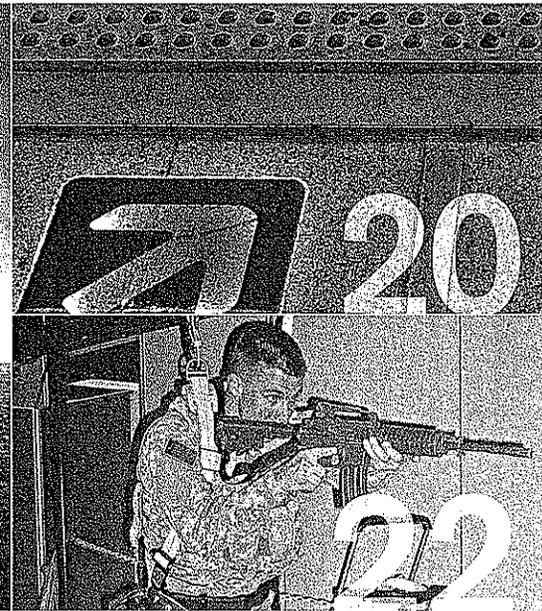
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