A Message From the Director

Drowsy driving is a principal cause of motor vehicle crashes, contributing to more than 6,000 deaths and 100,000 injuries annually in the United States. Despite these statistics, drivers are often convinced of their ability to resist sleep when driving fatigued. That is, until they actually fall asleep, involuntarily.

The latest issue of From Research to Reality profiles a joint study with Brigham and Women’s Hospital that examined the impact of night-shift work on drowsy driving. Our scientists observed a phenomenon known as microsleep, in which fatigued drivers fall asleep for a fraction of a second up to several seconds. Study participants who drove after working a night shift experienced a high number of near-crash events and an increased risk of microsleep.

As we continue to analyze the data to better understand the physiological changes that precede a near-crash event, our findings can be used to educate drivers about the real risks associated with drowsy driving. The ultimate goal of this research is to help all drivers manage drowsy driving risks more effectively.

We invite you to read more about this research and our latest news developments. As always, we welcome your feedback.
The Most Serious Workplace Injuries Cost U.S. Companies $62 Billion

According to the 2016 Liberty Mutual Workplace Safety Index, workplace injuries and accidents that cause employees to miss six or more days of work cost U.S. employers nearly $62 billion in 2013, the most recent year for which statistically valid injury data is available from the U.S. Bureau of Labor Statistics (BLS) and the National Academy of Social Insurance. The latest Liberty Mutual Workplace Safety Index reveals that the 10 leading causes of the most disabling work-related injuries account for more than $51 billion, or 82.5 percent of the total cost of $62 billion.

“By highlighting the direct costs of the most serious workplace accidents, the annual Liberty Mutual Workplace Safety Index informs the national agenda on workplace safety,” notes Dr. Ian Noy, director, Liberty Mutual Research Institute for Safety. “It also provides a key tool for individual companies to benchmark safety performance and focus improvement efforts and resources on the most pressing areas.”

“Workplace accidents impact employees’ physical, emotional and financial well-being,” says Debbie Michel, general manager, Liberty Mutual’s National Insurance Casualty operation. “They also financially burden employers, who pay all the medical costs related to a workplace injury, together with some portion of an injured employee’s pay. Besides these direct costs, workplace injuries also produce indirect costs for employers, such as hiring of temporary employees, lost productivity, quality disruptions and damage to a company’s employee engagement and external reputation.”

The Liberty Mutual Workplace Safety Index is compiled based on information from Liberty Mutual, the BLS and the National Academy of Social Insurance. Liberty Mutual scientists rank the top 10 causes of the most serious, nonfatal workplace injuries by their direct costs each year to help companies improve safety, which better protects both employees and the bottom line. The researchers examine BLS injury data to determine which events caused employees to miss six or more days of work, and then rank those events by total workers compensation costs. This year’s ranking of the top leading causes of the most serious workplace injuries is remarkably consistent with prior years.

### Top 10 Causes and Direct Costs of the Most Disabling U.S. Workplace Injuries

<table>
<thead>
<tr>
<th>Cause Description</th>
<th>Direct Cost</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overexertion involving outside source</td>
<td>$15.08 billion</td>
<td>24.4%</td>
</tr>
<tr>
<td>Falls on same level</td>
<td>$10.17 billion</td>
<td>16.4%</td>
</tr>
<tr>
<td>Falls to lower level</td>
<td>$5.40 billion</td>
<td>8.7%</td>
</tr>
<tr>
<td>Struck by object or equipment</td>
<td>$3.31 billion</td>
<td>5.3%</td>
</tr>
<tr>
<td>Other exertions or bodily reactions</td>
<td>$4.15 billion</td>
<td>6.7%</td>
</tr>
<tr>
<td>Roadway incidents involving motorized land vehicle</td>
<td>$2.96 billion</td>
<td>4.8%</td>
</tr>
<tr>
<td>Slip or trip without fall</td>
<td>$2.35 billion</td>
<td>3.8%</td>
</tr>
<tr>
<td>Caught in/ compressed by equipment or objects</td>
<td>$1.97 billion</td>
<td>3.2%</td>
</tr>
<tr>
<td>Struck against object or equipment</td>
<td>$1.85 billion</td>
<td>3.0%</td>
</tr>
<tr>
<td>Repetitive motions involving micro-tasks</td>
<td>$1.82 billion</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

Total cost of the most disabling workplace injuries: $61.88 billion

Cost of top 10 most disabling workplace injuries: $51.06 billion

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1 The 2016 Liberty Mutual Workplace Safety Index is based on 2013 injury data.
2 Based on release date changes, this year’s index is titled 2016 Liberty Mutual Workplace Safety Index and does not represent a break in the series.
KTU Welcomes New Staff Member

The Research Institute’s Knowledge Translation Unit (KTU) is pleased to welcome Elaina Hamilton to its staff. As program manager, Marketing Communications, Ms. Hamilton will plan, develop and manage internal communication programs that will promote broader leverage of the Institute’s research findings to support business marketing and operational objectives.

Ms. Hamilton brings 14 years of marketing and communications experience to the KTU. Most recently, she served as associate program manager for Liberty Mutual Insurance personal lines. There she developed marketing and communications strategies on behalf of the field sales organization and managed corporate partnership strategies with various well-known entities, including Walt Disney/Epcot, “Antiques Roadshow”/PBS and Boston College Athletics. Prior to that, Ms. Hamilton worked as a product manager at Dorel Juvenile Group in Foxboro, Massachusetts, and as an account executive at Match Drive in Boston. She is a graduate of Boston University School of Management, where she earned her B.S. in business administration with a concentration in marketing.

Established in 2014, the Research Institute’s KTU facilitates the exchange of knowledge between Research Institute scientists and Liberty Mutual Insurance constituents. It was formed to help enhance the Institute’s research programs and promote broader application of its scientific findings. The KTU collaborates with Liberty Mutual Insurance strategic business units and business partners to identify high-impact research opportunities in driving, workplace, built environment and disability. The KTU also translates scientific findings into practical, digestible communications that can be easily understood and applied by business professionals.

Pransky Earns NECOEM Recognition

Glenn S. Pransky, M.D., M.Occ.H., director of the Research Institute’s Center for Disability Research, recently received the 2015 Harriet Hardy Award. Presented annually by the New England College of Occupational and Environmental Medicine (NECOEM), the award recognizes an individual who has made outstanding contributions to the occupational health field. Awardees are nationally recognized for their excellence and leadership in clinical practice, research, public health advocacy or teaching in occupational health.

A pioneer in the occupational medicine field, Dr. Harriet Louise Hardy was a distinguished physician who left a legacy in her career of practice, teaching and research. She was the first woman professor at Harvard Medical School, and primarily studied toxicology and environmental-related illness.

“I’m honored to receive this award,” says Dr. Pransky. “It’s primarily for the significant contributions of the Research Institute over the past 60 years. I’ve been most fortunate to work with productive scientists at the Institute who are leaders in injury and work disability prevention.”
News and Notes

The Research Institute recently announced the winners of the annual internal Best Paper Award. Research Institute directors evaluated all 2015 accepted scientific papers for originality, quality and impact. This year’s winners are:


Recent Publications


Recent Conferences


• Safety climate as a leading indicator of workplace safety: A project developing safety climate scales for lone workers – Yulan-H Huang, Ph.D. and J Lee, Ph.D.