

# Construction industry has highest number of traumatic brain injuries in US workplace

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Although traumatic brain injury (TBI) is one of the leading causes of death in the United States, work-related TBI has not been well documented. In a study published in the July issue of the *American Journal of Preventive Medicine*, researchers describe the epidemiology of fatal TBI in the US workplace between 2003 and 2008. This study provides the first national profile of fatal TBIs occurring in the US workplace. The construction industry had the highest number of TBIs and the agriculture, forestry, and fishing industry had the highest rates.

"While TBI is an important topic for public health researchers, there has been a lack of attention paid to the investigation of brain injuries occurring in the workplace," commented lead investigator Hope M. Tiesman, PhD. "Describing the magnitude of the problem, identifying at-risk sociodemographic and occupational subgroups, and documenting trends are vital first steps when developing prevention strategies... Future research should enumerate and describe nonfatal occupational TBIs in the US. An improved understanding of these factors should lead to more focused and tailored prevention strategies. With limited resources available for occupational safety and health programs, the identification and targeting of high-risk populations, including older workers, should be a priority for industry."

Using data from the Census of Fatal Occupational Injury (CFOI), coupled with the Current Population Survey, investigators from the National Institute for Occupational Safety and Health, Division of Safety Research, Analysis and Field Evaluations Branch, Morgantown, WV,

determined that the fatality rate is 0.8 per 100,000 workers per year. The leading causes of fatal TBI were motor vehicle (31%), falls (29%), assaults and violent acts (20%) and contact with objects or equipment (18%). Men suffered fatality rates 15 times higher than women, and workers 65 and over had the highest TBI fatality rates of all workers (2.5 per 100,000 per year).

Certain occupations remained more hazardous than others, with construction, transportation, and agriculture/forestry/fishing industries recording nearly half of all TBI fatalities. The logging sub-industry had the highest occupational TBI fatality rate of all at 29.7 per 100,000 per year. However, occupational TBI death rates significantly declined 23% over the six-year period.

The authors also found that the leading cause of fatalities has recently shifted from motor vehicle to falls. This change mirrored changes seen in overall TBI [fatality rates](#). This effect may also be related to the "graying" of the American workforce, with employment of workers 65 and over increased by 101% from 1977 and 2007. These older workers are more susceptible to falls.

**More information:** The article is "The Epidemiology of Fatal Occupational Traumatic Brain Injury in the U.S." by Hope M. Tiesman, MSPH, PhD; Srinivas Konda, MPH; and Jennifer L. Bell, PhD. ([doi: 10.1016/j.amepre.2011.03.007](https://doi.org/10.1016/j.amepre.2011.03.007)). It appears in the *American Journal of Preventive Medicine*, Volume 41, Issue 1 (July 2011)

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