

# Trucks found to be a significant cause of severe accidents

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Trucks are responsible for 4,500 deaths per year in the United States. Truck crashes also cause huge losses in productivity, property and personal injury. New research just published in the International Journal of Injury Control and Safety Promotion details how trucks account for 8% of US highway traffic, yet are involved in 11% of fatal road crashes.

Previous research has revealed little other than that severity of crash bears a direct relation to abuse of drink and drugs, or inattention whilst driving. This study examined a Tennessee sample of truck crashes over a 5 year period in relation to different environmental factors, and used a model to determine crash severity outcomes.

1,134 crashes were examined – 101 single-vehicle, and 1,033 multi-vehicle crashes. Crash severity was categorized as couched property damage only, non-incapacitating injury, incapacitating injury, and fatal. Factors affecting crash were categorised into groups of differing characteristics – traffic, driver, vehicle, environmental, and geometric. The authors considered 15 traffic factors ranging from condition of the driver, speed, vehicle characteristics, location etc.

The main finding of the study was that overall, the percentage volume of trucks on the road was key in affecting severity of crash, even to the extent that lower traffic volume with higher truck percentage increases risk of fatal accident. An increase of 1% truck volume results in a disproportionately higher increase in severe crash probability.

Speed was exposed as the other significant factor in determining severity of crashes, with severity escalating as speeds increase. Speeds above 45mph were shown to double the risk of a fatal crash.

Driver characteristics showed that male drivers had a higher incidence of [fatal crashes](#), due to increasing likelihoods of men to speed, act aggressively, or drive whilst impaired due to fatigue or substance abuse. Impaired drivers are almost 7 times more likely to be involved in a fatal crash, and have a far greater risk of a severe crash whilst weakened by inferior reactions and poor judgement.

Considering vehicle type, longer combination [trucks](#) were most at risk of a severe crash due to restricted right hand side view of the driver. Type and use of safety belt bore a direct relationship to severity of crash. Vehicles moving forward with acceleration were found to be more at risk of severe crash than one doing a manoeuvre, which was at certain greater risk of a property only crash.

Only one significant environmental factor emerged during the study: weather. Increasingly inclement weather intensified risks of severe crash, with extreme conditions such as snow doubling the threat.

This study strives to provide scientific data affecting the severity of truck involved crashes. By doing so, the authors have given a potential basis for number and severity of [crashes](#) to be reduced.

**More information:** 'Identifying the factors contributing to the severity of truck-involved crashes', by Chunjiao Dong, Stephen H. Richards, Baoshan Huang & Ximiao Jiang, International Journal of Injury Control and Safety Promotion, published by Taylor & Francis.

[www.tandfonline.com/doi/full/1...17457300.2013.844713](http://www.tandfonline.com/doi/full/1...17457300.2013.844713)

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