



## Memorial Day 2016 Holiday Period Traffic Fatality Estimate

The 2016 Memorial Day holiday period begins at 6:00 p.m., Friday, May 27, and ends at 11:59 p.m., Monday, May 30. Our estimate of traffic fatalities for this 3.25-day holiday period is **439** deaths with a 90% confidence interval (C.I.) of **367** to **521** deaths. Nonfatal medically consulted injuries, i.e. injuries serious enough that a medical professional was consulted, are estimated at 50,500 with a range of 42,200 to 59,900. The Memorial Day holiday period is always 3.25 days in length. The estimated fatality total for 2016 is 15% higher than the average actual number of fatalities (380) that occurred during the previous six Memorial Day holiday periods for which data are available and would be the highest fatality total since 2009. An evaluation of recent Memorial Day holiday period estimates is presented in Table 1.

**Table 1. Evaluation of Recent Memorial Day Holiday Period Estimates**

Year	Estimate	90% Confidence Interval	Actual
2009	366	324-415	462*
2010	353	319-391	389
2011	406	351-468	389
2012	420	361-489	367
2013	407	358-461	334*
2014	382	327-445	337

\*=outside of 90% confidence interval.

Studies have shown that seat belts, when used, are 45% effective in preventing fatalities among front-seat passenger car occupants. Although the reduction in the risk of fatal injury from wearing seat belts is higher for light-truck occupants at 50%, the lower figure for passenger car occupants is used in the calculations here as the more conservative measure. The most recent data from the Fatality Analysis Reporting System (FARS) indicate that seat belt use by fatally injured passenger car and light truck occupants was 47.4%. Based on this information it is estimated that **170** person's lives may be saved this Memorial Day holiday period because they will wear their safety belts and an additional **104** lives could be saved if all wore safety belts.

The average number of traffic fatalities during the six most recent Memorial Day holiday periods was 10.4% higher than similar non-holiday periods (380 vs. 344 deaths). The difference is not statistically significant.

The terms used in the above discussion were chosen carefully to reflect the level of accuracy of the quantities involved. *Estimate* is used because the fatality figures are calculated approximately, as opposed to the precision of calculation inferred by the use of the word *predict*. *May* is used to indicate the figures express a contingency, whereas *will* is used to express something that may be expected or is supposed to occur.

Details of the estimating methodology and a discussion of holiday deaths compared to non-holiday periods are included in the attached paper.

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