

Full moon linked to increased risk of fatal motorcycle crashes

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The full moon is associated with an increased risk of fatal motorcycle crashes in the United States, the United Kingdom, Canada and Australia, finds a study in the Christmas issue of *The BMJ*.

The researchers say their findings might encourage motorcyclists to ride with extra care during a full [moon](#) and, more generally, to appreciate the power of seemingly minor distractions at all times.

Motorcycle crashes are a common cause of [death](#) worldwide. In the United States, they account for nearly 5,000 deaths every year - one in seven total road traffic deaths and \$6-12bn in costs to society.

Momentary distraction is a common contributor to road traffic deaths. A full moon occurs about 12 times a year, appearing big and bright in the night sky - and is therefore a potential distraction for roads users.

So Donald Redelmeier at the University of Toronto and Eldar Shafir at Princeton University, set out to test whether a full moon might contribute to motorcycle related deaths.

They analysed data from the official United States registry of [motor vehicle crashes](#) from 1975 to 2014, and calculated the number of fatal crashes on full moon nights compared with control nights (exactly one week before and one week after the full moon).

A total of 13,029 people were in a fatal motorcycle [crash](#) during the 1,482 separate nights (494 full moon nights, 988 control nights). The typical motorcyclist was a middle aged man (average age 32 years) riding a street bike in a rural location who experienced a head-on frontal impact and was not wearing a helmet.

Overall, 4,494 fatal crashes occurred on the 494 nights with a full moon, equal to 9.10 per night, and 8,535 on the 988 control nights without a full moon, equal to 8.64 per night. This gave an absolute total increase of 226 additional fatal crashes over the study period, meaning for every two full moon nights, there was one additional fatal crash.

Similar results were found after analyses of data from the UK, Canada and Australia.

This increased risk was accentuated under a supermoon. Of the 494 full moon nights, 65 were a supermoon night (where the moon appears larger and brighter than a regular full moon). A total of 703 [fatal crashes](#) occurred on a supermoon night, equal to 10.82 per night - about two additional deaths on a [night](#) with a supermoon.

This is an observational study, so no firm conclusions can be drawn about cause and effect, as the researchers outline in the study limitations. For example, other distractions and traffic hazards were not taken into account, neither were factors including the prevailing weather or moon visibility. And whilst they used large datasets, like any routinely collected data, there may be errors when the data was entered.

Nevertheless, they conclude that the findings highlight the importance of constant attention when riding, and that extra care is needed when riding during a full moon.

"Additional strategies while riding might include wearing a helmet, activating headlights, scanning the road surface for defects, respecting the weather, being wary of left turning vehicles, obeying traffic laws and forgoing stunts", they add.

More information: The full moon and motorcycle related mortality: population based double control study, The *BMJ*
www.bmj.com/content/359/bmj.j5367

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