

# Inattentional blindness: Why drivers may fail to see motorcycles in plain sight

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The disproportionately high number of motorcycle-related traffic accidents may be linked to the way the human brain processes—or fails to process—information, according to new research published in *Human*

Factors, "Allocating Attention to Detect Motorcycles: The Role of Inattentional Blindness." The study examines how the phenomenon of *inattentional blindness*, or a person's failure to notice an unexpected object located in plain sight, might explain the prevalence of looked-but-failed-to-see (LBFTS) crashes, the most common type of collision involving motorcycles.

According to human factors/ergonomics researchers Kristen Pammer, Stephanie Sabadas, and Stephanie Lentern, LBFTS crashes are particularly troublesome because, despite clear conditions and the lack of other hazards or distractions, [drivers](#) will look in the direction of the oncoming [motorcycle](#) - and in some cases appear to look directly at the motorcycle - but still pull out into its path.

Pammer, a professor of psychology and associate dean of science at Australian National University, notes, "When we are driving, there is a huge amount of sensory [information](#) that our [brain](#) must deal with. We can't attend to everything, because this would consume enormous cognitive resources and take too much time. So our brain has to decide what information is most important. The frequency of LBFTS crashes suggests to us a connection with how the brain filters out information."

The researchers recruited 56 adults and asked them to examine a series of photographs depicting routine driving situations taken from the driver's perspective. The respondents were to determine whether the image represented a safe or unsafe driving environment. In the final photograph, the researchers manipulated the image to include an unexpected object, either a motorcycle or a taxi, and asked participants if they noticed either object.

Although 48% of all participants reported that they didn't notice any additional object, they were significantly less likely to detect the motorcycle (65%) than to notice the taxi (31%).

Further evidence that inattentive blindness could be present was revealed in the results of a survey administered before the experiment, the purpose of which was to gauge participants' overall perception of each vehicle in the photos. Although they believed a motorcycle was just as likely to be on the road as a taxi, they thought they would be far less likely to notice the motorcycle.

Pammer and coauthors believe their study highlights the need to encourage drivers to be more motorcycle-aware. Training programs could be required for all novice drivers.

"Motorcycles appear to be very low on the priority list for the brain when it is filtering information," Pammer adds. "By putting motorcyclists higher on the brain 'radar' of the driver, hopefully drivers will be more likely to see them. In the meantime, we need to be more vigilant, more active, and more conscious when driving."

**More information:** Kristen Pammer et al, Allocating Attention to Detect Motorcycles: The Role of Inattentive Blindness, *Human Factors: The Journal of the Human Factors and Ergonomics Society* (2017). [DOI: 10.1177/0018720817733901](https://doi.org/10.1177/0018720817733901)

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