

Illegal urban off-road vehicles as risky as motorcycles in cities

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People who illegally ride off-road vehicles, such as dirt bikes and all-terrain vehicles, on city streets suffer similar crash injuries as motorcyclists, but are less likely to die even though many riders don't wear helmets, according to a Rutgers researcher.

With more off-road vehicles being ridden in urban areas, understanding the types of injuries involved in crashes will help emergency medical providers and trauma surgeons provide better care.

The study, published in *The Journal of Surgical Research*, is the first to compare the types of injuries sustained by people involved in crashes riding off-road vehicles versus motorcycles in urban areas.

Researchers looked at 1,556 people who were injured riding off-road vehicles or motorcycles on paved [inner city](#), suburban or major roadways and were admitted to a [trauma center](#) in Camden, N.J., from 2005 to 2016.

The study found that crash victims in both modes of transportation had similar rates of traumatic brain injuries and levels of consciousness following these injuries. It also found that motorcyclists without helmets were at a higher risk of traumatic brain [injury](#) when compared to urban off-road [vehicle](#) riders without helmets. In addition, motorcyclists had more chest injuries, while off-road vehicles riders had more facial injuries, which researchers attribute to their not wearing helmets.

The average age of off-road riders in the study was 26, almost 15 years younger than motorcyclists whose average age was 39. While 90 percent of those riding motorcycles wore helmets, they still required more emergency surgeries and had a higher death rate than the off-road riders, of which only 39 percent wore helmets.

"This could be attributed to the older age of motorcycle riders and the likelihood that

motorcycles were more frequently used at higher speeds at the time of the crash," said lead author Christopher Butts, a trauma surgeon at Rutgers Robert Wood Johnson Medical School, who worked in collaboration with [trauma surgeons](#) at Cooper University Health Care.

New Jersey requires helmets for motorcyclists but not for riders of dirt bikes or all-terrain vehicles. "The people who are riding off-road vehicles in urban areas are used to not wearing helmets and are already breaking the law by riding these vehicles on the street," Butts said.

"Although our data suggest a lower mortality rate in urban off-road vehicle riders, the lack of helmet use in this young group is still concerning," he said. "We hope this study will highlight the seriousness of off-road vehicle in [urban areas](#) and guide strategies to decrease this dangerous practice."

More information: Christopher A. Butts et al, Comparison of Urban Off-Road Vehicle and Motorcycle Injuries at a Level 1 Trauma Center, *Journal of Surgical Research* (2019). [DOI: 10.1016/j.jss.2019.07.069](#)

Provided by Rutgers University

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