Helmet Use and Associated Spinal Fractures in Motorcycle Crash Victims

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Facts

- According to the U.S. Department of Transportation’s National Highway Traffic Safety Administration (NHTSA), in 2007, 5,154 people died in motorcycle crashes, the highest level since NHTSA began collecting data in 1975. The 2007 figure represents a 6.6 percent from 4,837 the previous year.

- Motorcycle crash fatalities have increased every year for the past 10 years.

- According to the latest data available from the Federal Highway Administration, there were 7.1 million motorcycles on U.S. roads in 2007, compared with 137.8 million passenger cars. Motorcycles accounted for nearly 3 percent of all registered motor vehicles and 0.4 percent of vehicle miles traveled in 2007, according to the NHTSA.
Facts

- Some 123,000 motorcycles were involved in crashes in 2007, including property damage-only crashes, according to latest data from the NHTSA.

- Motorcyclists were 35 times more likely than passenger car occupants to die in a crash per vehicle mile traveled in 2006 and eight times more likely to be injured, according to NHTSA.

- The fatality rate per registered vehicle for motorcyclists in 2007 was 6 times the fatality rate for passenger car occupants, according to NHTSA.
Study Overview

- The objective of this study was to review the effect of helmet use on the frequency of cervical or thoracic fractures experienced in motorcycle crashes.

- A prospective cohort study was conducted at one hospital, St. Joseph’s Hospital Medical Center in central Phoenix, Arizona.
Cases were 422 motorcycle crash victims treated during the 3 years of the study (July 1, 2002 through June 30, 2005).

190 of them had a traumatic brain injury and 75 of them experienced some form of a spinal injury.
Study Overview

- The exposed group consisted of 169 motorcyclists who were wearing helmets.

- The non exposed group was 253 motorcyclists who were not wearing helmets at the time of their crash.
Study Overview

- The incidence of either cervical or thoracic spine fractures for helmeted patients was 12% and for unhelmeted patients was 15%.

- The difference between cervical or thoracic spine fractures of helmeted versus unhelmeted patients was not statistically significant.
Study Overview

- The estimated odds ratio for helmet use and traumatic brain injury, 0.590 [0.396, 0.877] was statistically significant.

- Helmet use therefore reduced the chance of any form of traumatic brain injury by almost 50%.
Study Overview

These results provide evidence that helmets reduce the incidence and severity of traumatic brain injury sustained by victims of motorcycle crashes but there was no significant relationship between location of spinal fracture and helmet use.
Wear a Helmet !!!
References

