



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

400 Seventh Street, S.W.  
Washington, D.C. 20590

SEP 7 1980

Mr. Richard J. Quigley  
5886-b Fernflat Rd.  
Aptos, CA 95003

Dear Mr. Quigley:

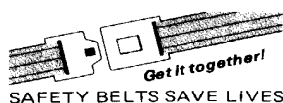
I am responding to your inquiry about Recommendation H-73-30 issued by the National Transportation Safety Board (NTSB) on August 9, 1973, and the response of the National Highway Traffic Safety Administration (NHTSA) to that recommendation.

In 1969, the New York State Department of Motor Vehicles issued a study on motorcycle injuries conducted by Raeder and Negri. The implications of that report led NTSB to issue Safety Recommendation H-73-30, which recommended that NHTSA "take immediate steps to confirm or disconfirm the implications of the New York State report that the wearing of helmets, as currently designed, increases the number of fatal neck injuries."

In response to the NTSB recommendation, NHTSA conducted an analysis of all available statistical data on motorcycle crash injuries. The agency published the results of this analysis in NHTSA Technical Report DOT HS-801-137, "Motorcycle Safety Helmet Study" March 1974, which was provided to the NTSB on September 18, 1974. After reviewing the report, the NTSB stated that "The study indicates that helmet usage does not adversely affect the neck to a significant extent during accidents. But it does not prove this true beyond all doubt. The NHTSA plans as soon as possible to initiate clinical research to resolve the question fully."

In 1975 NHTSA contracted with the University of Southern California (USC) to conduct a comprehensive study of motorcycle accidents and related injuries. The final version of this study, entitled "Motorcycle Accident Cause Factors and Identification of Countermeasures," was published as DOT HS-805-862, January 1981. The data showed that there were 88 cases of neck injury among the 900 on-scene accidents investigated by the USC teams. A case-by-case review of the nine critical or fatal neck injury cases indicated that the helmet neither caused nor prevented the injuries. The researchers concluded that for all other crashes in which there were less severe neck injuries, helmet use appeared to have a favorable effect on the extent of neck injury.

The NTSB closed Safety Recommendation H-73-030 on January 1, 1980, stating that NHTSA's actions on the recommendation were acceptable.



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Many other studies have been conducted on the effectiveness of motorcycle helmets and helmet use laws. A number of these studies also examined neck injuries as they relate to helmet use. In its 1992 Report to Congress, Highway Safety Motorcycle Helmet Laws Save Lives and Reduce Costs to Society, the United States General Accounting Office reviewed and summarized 46 studies concerning motorcycle helmets and helmet use laws. Many of these studies included research on neck injuries and motorcycle helmet use. A copy of that report is enclosed.

I hope this information is helpful. Please contact me at (202) 366-1739 if I can be of further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Ron E. Engle". The signature is written in a cursive style with a large initial "R" and "E".

Ron E. Engle  
Chief, Safety  
Countermeasures Division

enclosure