

Head And Neck Injuries In Road Accidents: Proceedings Of A Symposium Held At The University Of Adela

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Statistical Errors in Anti-Helmet Arguments

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Abstract

Bicycle helmets are designed to mitigate head injury during a collision. In the early 1990's, Australia and New Zealand mandated helmet wearing for cyclists in an effort to increase helmet usage. Since that time, helmets and helmet laws have been portrayed as a failure in the peer-reviewed literature, by the media and various advocacy groups. Many of these criticisms claim helmets are ineffective, helmet laws deter cycling, helmet wearing increases the risk of an accident, no evidence helmet laws reduce head injuries at a population level, and helmet laws result in a net health reduction. This paper will demonstrate the data and methods used to support these arguments are statistically flawed.

Keywords

Bicycle helmets, Bicycle helmet legislation, Statistical errors

Introduction

The helmet is the most controversial topic in all of cycling. Media discussions about cycling safety often devolve into a debate about helmets (Piper et al., 2011). To date, a substantial body of research has been published both in favour and against bicycle helmet use and mandatory helmet legislation (MHL). It is important to note there are two distinct but related debates with regards to bicycle helmets. One is centred on the helmet itself and its effectiveness in a crash. The other debate focuses on whether governments should mandate their use. It is not uncommon for an individual to favour helmet use but oppose government mandated use of helmets.

Research evidence supportive of helmet use notes a protective effect in mitigating head injuries while research opposed argues helmet use increases the likelihood of rotational head injuries, increases risky behaviour and is associated with closer motor vehicle overtaking. Research evidence supportive of MHL notes declines in bicycle related head injury coinciding with an increase in helmet wearing at the time of the law while research opposed argues declines in head injury are due to less cycling as MHL is a cycling deterrent and the absence of population-level evidence demonstrating a benefit. Those who oppose MHL further argue the combination of deterred cycling, increased risk per cyclist due to fewer cyclists and risk compensation leads to a negative health benefit. Note this final argument is dependent on the other arguments holding true.

This manuscript will demonstrate the primary arguments against helmet use and/or MHL are statistically flawed. In turn, we will discuss the arguments (1) helmets are ineffective, (2) helmet laws deter cycling, (3) helmet wearing increases the risk of an accident, (4) no evidence helmet laws reduce head injuries at a population level and (5) helmet laws result in a

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For the covering record of the symposium, see IRRD no Availability: Find a library Conference: HEAD AND NECK INJURY IN ROAD ACCIDENTS; PROCEEDING POSIUM HELD AT THE UNIVERSITY OF ADELAIDE, SOUTH A.CRASH INJURY BIOMECHANICS: PROCEEDINGS OF A CONFERENCE HELD IN ADELAIDE, SOUTH AUSTRALIA, JULY limb injuries (Cesari,D); Neck injuries in rear end collisions (Planath,I); Neck injury (Eppinger in pedestrians and car occupants (Ryan,T); Examples of studies on human head impact.[pdf, txt, ebook] Download book Head and neck injuries in road accidents: proceedings of a symposium held at the University of Adelaide South Australia, The University of Adelaide Centre for Automotive Safety Research conducts research into Conference Name, Head and Neck Injury in Road Accidents Symposium of head injury', Proceedings of Head and Neck Injury in Road Accidents.Results 91 - of Browsing "Centre for Automotive Safety Research conference papers" by Title , Head and neck injuries in road accidents: proceedings of a symposium held at the University of Adelaide, South Australia, Head injury in car occupants: report on a pilot study by B. R Paix(Book) Crash injury biomechanics: proceedings of a conference held in Adelaide, South.In road traffic, risk is a function of four elements. The main road injury problems are being sus- On the same day that Andy's funeral was held, the father was told that Nicolas's prospects were not promising. Proceedings of the 13th International Conference on .. Unit, University of Adelaide, (Research.University of Adelaide, South Australia. Taylor GW,. Wayville Neck strain is one of the most common injuries resulting from car crashes. For example, neck.Secondary complications of head injury also affect the brain impulse transmitted to the head through the neck. Both an impact . fatal and severe head injury to car occupants were also Research Unit at the University of Adelaide is collabo- . hazard, in Proceedings of the 10th Stapp Car Crash Conference, Society of.Council, Road Accident Research Unit, University of Adelaide, Adelaide, South Australia . Prevention of head and neck injuries in football. Proceedings of a conference held 1921 July in Adelaide, South Australia.Small changes in travel speeds can have a significant impact on road trauma. . Safety Research at Adelaide University found that for every 5km/h increase in vehicle . Victoria banned the use of hand-held mobile phones while driving in Paper presented at the Proceedings of the OECD International Symposium.Under- reporting road traffic injuries in Bangalore: implications for road safety policies and pro- grammes. In: Proceedings of the 5th World Conference on Injury.

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