



## COMMENTARY

### 4 UK reports find little evidence of helmet effectiveness

Four papers published in the second half of 2005 emphasise the questionable nature of the evidence of the efficacy of cycle helmets in preventing or reducing injury to cyclists. Two of the papers were written by Paul Hewson, an environmental statistician; the other two were produced independently for a childrens' charity and a government department.

#### [Cycling and children and young people: a review](#) **External Link**

*Gill T. National Children's Bureau, 2005. ISBN 1-904787-62-2*

The aim of this paper was to summarise and critically review public policy evidence and arguments on cycling, children and young people's health, well-being and safety. The report concluded that there is widespread agreement on the benefits of cycling for children and young people. There are clear drivers for action from the health, environmental, transport, sustainability and child policy arenas.

In this context, the debate about cycle helmets was considered so important that it was reviewed in an annex (pp 31-48) nearly as long as the report itself. The last page states:

*"Those ... who cycle should be under no illusion that helmets offer reliable protection in crash situations where our lives may be in danger. Neither should we believe that widespread adoption of helmet wearing would see many fewer cyclists killed or permanently disabled. The evidence so far suggests otherwise."*

The above conclusions were based on a review of the evidence, including the estimate (section A5) that the best possible scenario (assuming universal and correct use of helmets, that risk compensation does not occur and that no children die as a result of strangulation) is that at most 3 out of the current 18 child cyclist deaths per year might be prevented.

The author concludes that the strong claims of injury reduction made by helmet proponents have not been borne out for fatalities in real-life settings. Two key arguments against helmet promotion – strong criticism of the key case-control studies and the first empirical evidence of risk compensation – have both recently appeared in peer-reviewed journals. Tragedies happen and child cyclists are left dead or badly injured and we find it hard to accept that a helmet may have made no difference. But our response demands reflection and perspective as well as sympathy and conviction.

#### [Cycle helmets and road casualties in the UK](#) **External Link**

*Hewson PJ. Traffic Injury Prevention, 2005;6(2):127-134*

#### [Investigating population level trends in head injuries amongst child cyclists in the UK](#)

**External Link**

*Hewson PJ. Accident Analysis & Prevention. 2005;37(5):807-815.*

Both papers cover similar ground, the second concentrating on children. They are based on statistical analysis of police data for cyclist casualties from 1995 to 2002 and data on hospital admissions for child cyclists from 1989-2003



The hospital data covered a longer period than the 1995-2001 dataset examined by Cook and Sheikh, 2003. Identical trends in percent head injury rates were found for boy and girl cyclists, despite an increase in the percentage of girls wearing helmets and a fall in percentage helmet wearing by boys. The author considered this strongly suggestive that the different trends for pedestrians and cyclists could not be simply due to helmet wearing.

The police data consisted of road injuries, usually involving collisions with motor vehicles. Although some recreational and leisure injuries are thus excluded, these data includes the great majority of deaths and debilitating brain injuries.

The analyses found little evidence of the overall benefits predicted by published case-control studies. In particular, no association could be found between differing patterns of helmet wearing rates and casualty rates for adults and children. This could be because helmets have little potential to reduce transport-related cycling injuries, or because benefits are restricted to particular sub-groups of cyclists with special risk profiles.

On the other hand, head injury rates are falling among child cyclists and pedestrians independently of helmet use. This raises questions as to the priority given to helmet advocacy over and above other activities, such as the unknown activity that is causing the decrease in head injury rates for both pedestrians and cyclists. More focus is needed to determine what interventions work best and when.

### [Extent and severity of cycle accident casualties](#) **External Link**

*Scottish Executive Social Research, 2005.*

Data from five hospitals in the Lothians of Scotland was studied to find out more about the nature of injuries to cyclists. Data about head injuries and cycle helmets was only a small part of the research.

39% of cyclists wore a helmet at the time of their crash. Use was much higher off-road than on-road and highest among those using the mountain bike leisure trails in the area. In a direct comparison, with no investigation into possible other differences between the two groups, helmeted cyclists were less likely to suffer any injury to the head (7% v 14% for non-wearers). However, wearing a helmet made no significant difference to outcome in the case of the more serious head injuries measured by need of follow-up or hospital admission.

## References

### **Cook and Sheikh, 2003**

Cook A, Sheikh A, 2003. [Trends in serious head injuries among English cyclists and pedestrians.](#) Injury Prevention 2003;9:266-267. [Link includes commentary](#)

<http://www.cyclehelmets.org/1099.html>

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The Bicycle Helmet Research Foundation (BHRF), an incorporated body with an international membership, exists to undertake, encourage and spread the scientific study of the use of bicycle helmets. Also to consider the effect of the promotion and use of helmets on the perception of cycling in terms of risk and the achievement of wider public health and societal goals.

BHRF strives to provide a resource of best-available factual information to assist the understanding of a complex subject, and one where some of the reasoning may conflict with received opinion. In particular BHRF seeks to provide access to a wider range of information than is commonly made available by those that take a strong helmet promotion stance. It is hoped that this will assist informed judgements about the pros and cons of cycle helmets.

For more information, please visit [www.cyclehelmets.org](http://www.cyclehelmets.org).

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