



## COMMENTARY

# Bicycle helmets - a review of their effectiveness: a critical review of the literature

Road Safety Research Report No 30

*Towner, Dowswell, Burkes, Dickinson & Hayes. Department for Transport, London, November 2002.*

[Original report](#) **External Link**

## Independent commentaries

In addition to the BHRF commentary below, the following two reviews have been made of this paper:

- [Bicycle helmet effectiveness – a broader perspective](#)  
A review by John Franklin and presented to the UK Department for Transport
- [Comments on Road Safety Research Report 30](#)  
A review by Dorothy Robinson

## BHRF Commentary

This report is cited by the UK Department for Transport as providing 'considerable scientific evidence' of the effectiveness of cycle helmets, and the justification for controversial helmet promotion policies.

Independent analysts, however, have criticised it strongly, as much for what it omits as what it contains. The review is highly selective in the evidence considered, makes no reference at all to so much that is crucially relevant, and does not show in any way how its conclusions follow from the evidence that is presented.

Key criticisms include:

- The Review examined only one type of evidence on helmet effectiveness, that provided by non-randomised case-control studies.
- There is no reference at all to traffic casualty trends, hospital admission data or any other large population evidence where helmet use is significant, even though most of this evidence shows no benefit from helmet use.
- There is no reference at all to evidence that helmet use has often been associated with increased risk of injury or injury severity.
- There is no reference at all to rotational injuries, the principal cause of serious head injuries. There is no mention of medical evidence that helmets may increase the likelihood of the most serious injuries.
- Consideration of 'risk compensation', which can result in people taking more risks when helmeted and for which there is clear evidence, is specifically excluded from the Review.
- There is no reference to cost-benefit analyses of helmet promotion.
- There is no reference to other evidence unresponsive of helmet use, except to a minimal extent in a section on 'opinion pieces', which attempts to belittle helmet sceptic views without any consideration of the merits of evidence put forward.
- Two data sets account for almost one-half of the total number of cyclists on whom the Review as a whole is based. Both are from the same team of researchers whose work has been widely criticised as extreme and untenable. Other case studies chosen for review have also been the subject of much criticism.
- The Review itself identifies many serious criticisms of the studies examined, but no reasons are given as to why these were not reflected in the Review's conclusions.
- Papers examined by the Review are sometimes reported selectively. For example, an Australian report is cited out of context as evidence for head injury reductions through helmet legislation, whereas the principal



outcome that legislation was not cost-effective is not mentioned.

- Helmet promotion campaigns are examined without any consideration of their impact on injury trends or cycle use, even though some of the papers examined suggest negative results.
- Data on helmet legislation in Australia is seriously misrepresented.
- The Review exaggerates cycling as being inherently hazardous, with no comparison to other everyday activities.
- The impact of helmet promotion on wider public health goals is not assessed. There is no evaluation of the net benefit of less cycling with helmets against more cycling without helmets.

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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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