Cycling Scotland’s Position on Cycle Helmets

We continue to support those who choose to wear cycle helmets but remain strongly opposed to any move toward helmet compulsion. We believe that any such measures may negatively impact on the uptake of cycling as part of a healthy, active and sustainable lifestyle.

Cycling Scotland is neither anti- nor pro-helmet and believes that ultimately each individual should be free to decide whether to wear a helmet or not whilst cycling.

Cycle Helmets Briefing Paper

For a number of years there has been debate over whether cycle helmets should be made compulsory in the UK. As the debate has intensified, observed helmet use has increased and some other countries have passed helmet legislation. Recently this issue has been addressed by the Northern Ireland Assembly which has sought to legislate in this area. This briefing reviews the issue.

Cycling as transport:
Cycling is a low-risk activity akin to walking or driving; not a high-risk activity like motorcycling. 4% of all UK road fatalities are cyclists. Long-term data collected by the government show that, on average, cyclists face lower risks per mile travelled than pedestrians, and similar long-term risks to drivers. Additionally, cycling is not a leading cause of head injury in any age group. Only, an estimated 0.7% of hospital admissions for head injury are due to cyclists in road traffic accidents. Amongst children, 7% of serious head injuries are due to cycling accidents of any type.¹,²,³,⁴,⁵,⁶

Reasons to Encourage Cycling:
Public Health
The decline in routine physical activity has had a significant negative effect on public health. Researchers now recognise the potential to reverse the decline in physical activity such as through the journey to school or work.

The House of Commons Health Committee has also stated that significantly raising levels of cycling might achieve more in the fight against obesity than any other individual measure.⁷ Cycling is a very healthy activity. It has repeatedly been shown that the health benefits greatly exceed the risks.⁸

Road Safety
Edinburgh, York and London have boosted cycle use substantially without an increase in reported casualties. It has been demonstrated that more cycling leads to safer cycling, in fact, countries with the lowest levels of cycle use have the poorest cyclist safety records.
Cyclists also pose negligible risk to pedestrians. Conversely, the proportion of UK road deaths in cars or on motorcycles increased from 62% in 1994-98 to 69% in 2003, and these modes impose a great risk to pedestrians.

**Traffic congestion**
The Congestion Charge has doubtless aided the approx. 40% increase in cycle use in London since 2002.

**Effect of (non-enforced) helmet legislation:**
From October 1995, helmets became compulsory for child cyclists in the province of Ontario, Canada. The law was not enforced. No Toronto child has been ticketed for cycling without a helmet. After an initial increase, helmet use fell back to pre-law levels. Non-enforced legislation is of doubtful efficacy, except perhaps to teach children that laws need not be obeyed.

**Effect of (enforced) helmet legislation:**
Cycle helmets became compulsory in New Zealand from 1st January 1994. The law was enforced with vigour, driving adult helmet use up from 40% to 90+% where it has remained. However, there was no reduction in the severity of serious head injuries. Cycle use fell by 22% between 1993 and 1997. However, the helmet law was introduced alongside campaigns against drink driving and speeding, and this also contributed to fewer accidents. For instance, pedestrian deaths also fell by 42% in the first year of the cycle helmet law. Road casualty data provide no evidence of death or serious head injury prevented by the helmet law. Cycle use fell by about one third as the law was enforced.

These population-level outcomes are not consistent with documented hospital-based case-control studies, which predicted that helmet use reduced the risk of serious head injury in a crash by 50-80%. This literature has been widely cited by organisations seeking to establish a case for the compulsory wearing of cycle helmets. One would expect that mass helmet use should give an obvious reduction in the proportion of cycling injuries that are to the head, yet such a reduction is not observed in reality. In epidemiology, it is now recognised that case-control studies are prone to erroneous results when applied to self-selected behaviour. This is due to confounding by social factors – “selective recruitment”. It is hard to evaluate what protection a cycle helmet may provide at the individual level, but the effect of mass helmet use does not clearly emerge at the population level. This counter-intuitive result is not widely appreciated.

**Enforced helmet legislation drives cycle use down.** In Australia, cycle use was generally growing before the helmet laws of the early 1990s. Since then it has declined steadily in most states. In New South Wales, child cycle use had fallen by 44% by the second year of the helmet law. In Sydney, cycle use was still 48% down on pre-law levels five years after legislation. The state of Western Australia has made considerable efforts to promote cycling, yet per-capita cycle use has barely recovered to pre-law levels ten years after legislation, in contrast to big increases in the decade preceding the law.
In Nova Scotia, Canada, cycle use dropped by 40+% after legislation. In British Columbia, Canada, cycle use fell by an estimated 28% following legislation.

Possible Undesired Results of Helmets:

Risk compensation by cyclists: It is accepted that safety equipment can change behaviour under certain circumstances. This may “use up” some of the benefit or even increase the risk. Risk compensation has been formally observed amongst risk-averse child cyclists. Measured adult helmet use is highest on busy roads and at peak times. A leading authority has warned: “Don’t over-predict benefits. Unduly optimistic predictions will hamper injury prevention efforts in the long run.”

Risk compensation by drivers? There is suspicion that some drivers may be less careful towards cyclists apparently protected by helmets. A cycle helmet is intended to protect in a simple fall at low speed, not in a collision with a motor vehicle. There is no known case of a UK court accepting that a cycle helmet would have reduced the severity of head injury suffered in a serious crash with a motor vehicle. Fortunately such incidents are rare for cyclists.

Slower thinking: In other activities, it has been observed that helmets may slow reaction times by heating the brain. If this is true of cycle helmets, it could lead to increased risk.

Discouragement of cycling: Enforced helmet laws drive cycle use down, thereby increasing the risk for those who still cycle and negatively impacting public health. There is also evidence that child cycling levels have fallen after local helmet campaigns. It is difficult to deny that clumsy helmet promotion will label cycling incorrectly as a dangerous activity. Some kinds of cycling do incur higher risks of head injury, such as stunt riding, mountain biking, and competition. Informed helmet use in specific activities is unlikely to deter cycle use overall. The perceived attitude that cycling is “inevitably dangerous” is a major obstacle to raising mass cycle use as daily transport. On-road cycling is a low-risk mode of travel that gets safer when it gets more popular.
Recommendations

1. *Cycle helmets should not be made compulsory now or at any time.* It would be arbitrary to impose legislation on cyclists, who do not face clearly higher risks than pedestrians or drivers. Enforced helmet laws drive cycle use down, thereby increasing the risk per cyclist and harming public health. Enforced helmet laws have not effected material prevention of serious head injury at the population level.

2. *A large increase in cycle use should have political and social priority.* Increasing cycle use is one of the most effective measures to reduce the risk of death per cyclist, due to the “safety in numbers” effect. It is also “probably the most effective measure” to tackle obesity and lack of physical exercise in general.

3. *Helmet guidelines should be realistic.* “Don’t over-predict benefits. Unduly optimistic predictions will hamper injury prevention efforts in the long run”.

Bibliography of Cycling Scotland helmet briefing paper

4. Data from the Registrar General for Scotland as requested by Sarah Boyak MSP from the Scottish Executive 9/3/2004. The average number of head injury deaths during 1999-2002 was 1.5 per year.
5. Of typically 3,000 serious cycling casualties in road accidents per year, an estimated 40% suffer serious head injuries (1,200 cases). The total number of all causes head injury admissions annually is estimated at 190,000 (see for instance Thornhill et al, *British Medical Journal* 2000;320:1631-5).
6. Hospital Episodes Statistics for England record that during 2001/2, a total of 30,816 children were admitted to hospital with serious head injuries, of which 2,183 were during to cycling.
11. Communication concerning unpublished research by Dr A. MacPherson et al, School of Kinesiology and Health Science, York University, Toronto, Ontario.
14. Land Transport Authority of New Zealand data.
17. Transport Accident Commission of Victoria data for average numbers of deaths and serious head injuries (DSHI) and all serious injuries (ASI) per year pre-law and post-law.

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<tr>
<th>Average number per year</th>
<th>Cyclists</th>
<th>Pedestrians</th>
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<tr>
<td></td>
<td>DSHI</td>
<td>ASI</td>
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<tr>
<td>Pre-law 1988/90</td>
<td>72.5</td>
<td>283</td>
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<tr>
<td>Post-law 1990/92</td>
<td>41.0</td>
<td>165</td>
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<td>Post-law years as %age</td>
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<td>Of pre-law years</td>
<td>56.6%</td>
<td>58.3%</td>
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23. For a commentary on follow-up studies in New Zealand and the state of Western Australia after helmet laws were passed, see Helmet Legislation Commentary at: www.scottish.parliament.uk/msp/crossPartyGroups/groups/cycle-docs/helmet-legis-commentary.pdf
25. The population of the state of Western Australia has increased by 33% since the passing of the helmet law, whereas cycling levels as measured at a major strategic point in the city of Perth have only exceeded pre-law levels in the last few years. Other cycle count data, though scrappy, confirm this general picture.
27. The figure of 28% is estimated from Traffic Collision Statistics British Columbia. Between 1995 and 1997, police-attended cyclist collisions with motor vehicles declined by 35%, but for pedestrians by only 7%. Given the short time period, a direct link between pedestrian and cyclist casualties can be assumed. The 7% indicates safer roads through a crackdown on speeding, leaving a 28% shortfall in cyclist casualties due to less cycling.