

## Briefing for the Public Petitions Committee

**Petition Number:** [PE1679](#)

**Main Petitioner:** Jenny Lockhart

**Subject:** Cycle helmets in Scotland

Calls on the Parliament to urge the Scottish Government to introduce legislation or a national information campaign to ensure people wear helmets when cycling in Scotland.

### Background

**Bicycle helmets:** Bicycle helmets aim to reduce the risk of injury due to impacts to the head by performing three distinct functions:

- reducing the deceleration of the skull and hence brain by managing the impact. This is achieved by crushing the helmet liner material, normally expanded polystyrene
- spreading the area over which the forces of the impact reach the skull, preventing forces being concentrated on a very small area
- preventing direct contact between the skull and the impacting object

The design of bicycle helmets is driven by the practical needs of cyclists, including the need to see upwards and sideways, hear traffic and be able to tilt their head back. In addition, the need for the head to be reasonably cool means helmets must be lightweight and incorporate ventilation slots. These requirements restrict the level of protection a bicycle helmet can provide, meaning they are most effective at reducing some types of head injury from low-speed falls, without any other vehicle involved.

**Debate:** The effectiveness of cycle helmets and the impact of helmet promotion or compulsion have been hotly debated by cyclists, academics and safety campaigners for years. [Research](#) conducted for the UK Department for Transport summarises the key arguments on both sides as follows:

- The pro-helmet group base their argument overwhelmingly on one major point: that there is scientific evidence that, in the event of a fall, helmets substantially reduce head injury.
- The anti-helmet compulsion group base their argument on a wider range of issues including: compulsory helmet wearing leads to a

decline in cycling with the resultant reduction in physical activity outweighing any health gains from helmet use, risk compensation by helmet wearing cyclists negates any health gains from helmet wearing, scientific studies into the effectiveness of helmets are defective, cyclist safety is best served by improving the overall road environment rather than legislating for compulsory helmet wearing.

No UK or Scottish cycling NGO or campaign group is in favour of compulsory helmet wearing. Cycling UK provide a comprehensive explanation for this position in its briefing [Cycle Helmets: An overview of the evidence](#). However, some health organisations, such as [Headway](#) – The Brain Injury Charity, do support mandatory helmet wearing for children.

**Cyclist safety in context:** The health benefits of utility cycling are clear, research conducted by Celis-Morales et al<sup>1</sup> found that “Commuting by cycling was associated with a lower risk of all cause mortality and adverse Cardio-Vascular Disease and cancer outcomes”. The British Medical Association states in its [Healthy Transport = Healthy Lives](#) report that “In spite of the harms cyclists face in terms of safety and exposure to air pollution, a number of studies have found that the health benefits of cycling, such as improved quality of life, weight control, and protecting against major chronic diseases, greatly outweigh these risks, by up to a factor of 20 to 1.”

[Figures from the UK Department for Transport](#) show that, while cyclists are more likely to be killed or injured per billion km travelled than car and van drivers/passengers, annual average deaths are less than that for pedestrians and motorcyclists. Cyclists are more likely to suffer serious injuries than pedestrians, but considerably fewer than motorcyclists.

**UK passenger casualty rates by mode per billion km travelled: Annual Average 2006 to 2015**

	Cyclist	Pedestrian	Motorcycle	Car	Van
Killed	24	26	83	1.6	0.4
Killed or Seriously Injured	616	324	1119	16	5

**Effectiveness of mandatory helmet wearing:** Research into whether mandatory cycle helmet laws deliver a net societal health benefit<sup>2</sup> concluded that:

“Using estimates suggested in the literature on the effectiveness of helmets, the health benefits of cycling, head injury rates, and reductions in cycling leads to the following conclusions. In jurisdictions where cycling is safe, a helmet law is likely to have a large unintended negative health impact. In jurisdictions where cycling is relatively

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<sup>1</sup> Association between active commuting and incident cardiovascular disease, cancer, and mortality: prospective cohort study, BMJ 2017; 357 doi: <https://doi.org/10.1136/bmj.j1456> (Published 19 April 2017)

<sup>2</sup> De Jong, Piet, The Health Impact of Mandatory Bicycle Helmet Laws (February 24, 2010). Risk Analysis, 2012.

unsafe, helmets will do little to make it safer and a helmet law, under relatively extreme assumptions, may make a small positive contribution to net societal health.”

## **Scottish Government Action**

The Scottish Government has not taken any action on this issue.

## **Scottish Parliament Action**

The Scottish Parliament has not taken any action on this issue.

### **Alan Rehfish**

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19 December 2017

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