

Do Cyclists Need Mandatory Helmets?

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0. Summary

The issue of bicycle helmets is still controversial. Should all cyclists be compelled to wear a helmet, or should they be allowed to take their own responsible decision? In some countries, Spain among them, there is strong pressure to make bicycle helmets mandatory. Here, a cocktail of opinions, beliefs and numbers is administered to the unaware public who swallows it and mostly agrees that “them” (the cyclists) should all wear a helmet. Legislators and decision-makers are car-dependent and, unless they are pressed strong enough, prefer giving some showy treatment to a single symptom (helmets to hide away the head injuries of cyclists in road crashes) than working hard in fighting the basic illness: generalised lack of road safety through malign motor traffic.

1. Case description

In our over-consuming countries, cars have achieved the status of “holy cows”, with plenty of space to roam and rest. Non-motorised road users have to get out of their way or go around them, but there is no way of getting around the detrimental side effects of car culture on public health: road accidents, noise and air pollution. It has been found that pollution is even more harmful than accidents in many cities [1]. So any encouragement of non-motorised modes of transport has a direct beneficial effect upon the citizens’ health and quality of life.

In Spain, for example, there are about 6,000 fatalities only from road accidents (malign motor traffic) every year. Out of them, some 1,000 are pedestrians and 100 cyclists. The authorities have proposed themselves to remedy this situation. Recently a law has been passed to adapt the traffic regulations to cycling.

2. Remedy proposed

The issue of road safety for cyclists has been tackled in various ways in different countries and institutions. One recurrent item is helmet wearing. The purpose of this paper is to discuss this measure with special attention to health aspects.

2.1 Composition

Bicycle helmets are mostly composed of polystyrene foam with a discontinuous hard or soft shell. If fixed properly, they cover the upper part of the cranium.

2.2 Action

Bicycle helmets are devices for secondary protection of cyclists involved in accidents. They are designed and certified to “mitigate the effects of falling off your bicycle and striking your head... If a cyclist is accelerated by a car, then the helmet will not work and will not prevent a severe or even fatal injury” [2], because “it is impossible to build a helmet that will offer significant impact prevention” [3].

2.3 Indications

Inside motor vehicles, bicycle-style helmets are as effective as airbags. They reduce head injury by 25% [4] and thus avoid expenditure on public health.

Wearing a helmet while walking to school is as beneficial as not wearing a helmet [5].

Cycling without a helmet is healthier than not cycling at all. If 10% of the population were to stop cycling – as is likely to happen if a mandatory helmet law were introduced – then overall health would suffer [6].

2.4 Dose

Bicycle helmets have to be replaced every 3-5 years, more frequently for children and youngsters. In any case, they must be replaced after an accident or when the helmet has fallen

from the shelf, because “the helmet may, after receiving an impact, be damaged to the point that it is no longer adequate to protect the head against further impacts, ... this damage may not be visible to the user” [7]. Therefore, strict supervision by competent personnel is required when cycle helmets are brought to school, to a playground or to a sport facility, unless these provide safe individual lockers.

If the above doses of personal expenditure are not respected, cycle helmets may fail to give protection to the user’s head and helmet makers may decline any responsibility thereof.

2.5 Counter-indications

Road unsafety for cyclists, caused by speedy and careless motorists, cannot be reduced by making cycle helmets mandatory, on the grounds that they are not an element of primary prevention. Not a single accident is avoided through helmet wearing. On the contrary: helmeted cyclists are perceived by motorists as sufficiently protected and not in need of special attention and care when overtaken. Also, bicycle helmets have been reported to produce a subjective feeling of increased safety in some users, which makes them ride more carelessly (risk compensation phenomena) [8].

Hot weather and/or uphill cycling increase the need of surplus heat removal from the crown of the head, which is hindered by a helmet. Heat stroke cannot be excluded.

Helmet campaigns give an image of unsafety and danger to cycling, thus deterring many persons from a simple and pleasant form of healthy exercise. Danger comes from irresponsible car use, not from cycling. The British Medical Association refuses support to making bicycle helmets mandatory [9].

2.6 Precautions

Spectacular reports of up to 85% of head injury prevention through cycle helmet use should be treated with caution: they may be biased on sample size, observed user group (e.g. middle-class white helmeted vs. lower class black unhelmeted), observation area (e.g. park vs. road), definition of “head injury” (e.g. only upper skull or including face and neck), external circumstances (e.g. road safety campaigns against motorists’ speeding and drink-driving, general decrease of accident rate etc.) or other [8, 10, 11]. A nation-wide field experiment carried out in Australia, where bicycle helmets were made mandatory in 1991, indicates that it is not the number of head injuries to cyclists but the number of cyclists themselves that has dropped up to 40% [12].

2.7 Incompatibilities and side effects

Many traumatologists and emergency doctors perceive bicycle helmets as useful head injury prevention. This is not new, and on the same grounds they are also supposed to defend body armour for pedestrians and full-scale helmets for car occupants.

This view contrasts with that of cardiologists and family doctors who see the negative effects of a sedentary life style on their patients and the population as a whole and who prefer a comfortable and safe environment for cycling and walking to unpopular individual devices imposed upon cyclists [13].

Life years gained by cycling outweigh life years lost in accidents [14] by a factor of 20 to 1 even in the current hostile traffic environment [11].

Mandatory bicycle helmets may produce aversion to cycling, especially among children and their parents. A person who does not cycle during childhood is unlikely to take it up as an adult and is less likely to be considerate of cyclists on road [15].

Mandatory helmets may also produce civil disobedience of the helmet law and, by extension, of laws in general. In order to make a helmet law effective, the police has to divert part of their attention from danger-generating motorists to harmless cyclists.

2.8 Intoxication and treatment

Mandatory helmet wearing for cyclists, as approved recently by the Spanish Parliament together with other restrictive measures, produces strong opposition among the national and international cycling community and raises social debate. One of the main promoters of mandatory helmets was even forced to admit publicly that bicycle helmets will not solve the problem of cyclist accidentability – only to continue that they are lifesavers anyway [16].

Such intoxication occurs when unreflected beliefs are held by car-dependent politicians and opinion-makers who prefer to ignore the causes of bicycle accidents and offer some secondary symptomatic solutions which charge all responsibility unto the victims of malign motor traffic.

Only recently, the population of Quebec has been successful for the third time in six years in averting a helmet law, which is recurrently brought forward by the “helmeters” in the Administration. And even the Spanish Minister of the Interior admitted in a meeting that he does not believe in the effectiveness of mandatory cycle helmets, suggesting that the new law may be changed again in a not-too-far future and that public information and heavy lobbying with politicians of all parties are essential in this process.

2.9 Presentation

Bicycle helmets as a solution to accident-related injury are mostly marketed in road safety campaigns developed by motorist-dominated administrations and institutions.

Special helmet campaigns for children are embedded in sweet guardian angel features for parents to cover the untasty fact that a child’s head and limbs are also exposed to injury when running, playing, climbing trees or stairs, when being driven in the family car, and even when walking on a zebra crossing with the green traffic light on for them.

2.10 Warning

In no case should isolated symptomatic treatment (such as head capsules for cyclists) be applied to road unsafety syndromes, because this distorts the characteristic aspects of malign motor traffic and makes its diagnosis and treatment more difficult. Irresponsible production, control and use of a lethal agent (commonly known as motor vehicle) are a serious threat to public health.

3. References

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Baby helmets of straw and lace to protect the head against common domestic bruises have always been widely unpopular among babies. Grown to grandmas, yesterday’s kids may still surprise modern parents with this useful gift.