

Cycling is a healthy and life extending activity. Cyclists live longer than physically inactive people and experience less heart disease less osteoporosis and better mental health. It is a form of physical activity easily built into daily life. As Sir Liam Donaldson has said if a drug were invented tomorrow with the same benefits as physical activity the demand for it would be irresistible

Doubts are often expressed about cycle safety. Risks are more than outweighed for the individual by health benefits and for society at large by reduced risk to third parties. But anyway cycling is not unsafe. Cycling in England is no more dangerous than driving in France; for younger road users cycling is safer than driving; for middle aged road users making local journeys it is unclear whether there actually is a difference and if there is it is of no greater order than that of using a car rather than a train or driving on an A road rather than a motorway

To evaluate risk, it is necessary to have data for a) the numerator, casualties; and b) the denominator, the amount of cycling. The risk can be expressed either in fatalities per billion km's (F/Bn km) or, if average speeds are also available, in fatalities per million hours' use (F/MHU).

In the UK, good data on road casualties have been available for many decades. In contrast, travel habits were not recorded in detail until recently. The UK is unusual in having all-ages cycling data back to 1948, but this only allows very broad conclusions about risks of any age and sex on any kind of road. Such broad-brush data appear to show that cycling is roughly ten times riskier than driving per km travelled, and four times riskier per hour. But comparing an aggregate figure for cycling (dominated by young people making local journeys) with an aggregate figure for motoring (dominated by middle aged people driving on motorways) is misleading. A meaningful analysis needs to take account of sex, age group, and social class and needs to compare like journeys. The evolution of the National Travel Survey (NTS) over the last ten years has made it possible to break down the travel data at least by sex and age. Such a risk analysis was recently carried out by a Transport and Health Study Group team and published¹. It shows that the risks of travel vary more by age than by mode of transport. Pedestrians, cyclists and drivers bear risks of fatality within the same range. The risks of driving are high in youth and fall with age. In contrast, the risks of walking and cycling are lowest in youth and rise with age. The most at-risk groups were young male drivers, elderly pedestrians, and elderly cyclists. No systematic excess risk for cyclists emerged from the analysis. Young males are five times more at risk per hour when driving, than when cycling.

The Transport & Health Study Group is in the process of extending the modal risk analysis described above to include third party deaths. At present, there is a preliminary result only for teenaged males: drivers versus cyclists. When the third parties deaths are taken account of, the risk of any road user death per hour is *fifteen* times higher for young drivers, than young cyclists. The young drivers' overall risk rate per hour approached that of motorcyclists. Public policy must delay the young from driving. Increasing the appeal of cycling will help achieve this. Misleading the young that cycling is dangerous like riding a motorcycle is more likely to achieve the opposite.

This is not to say that cycle safety is not an issue. It has been the eternal cry of the irresponsible that their activity is no more dangerous than crossing the road and it usually isn't. We should aspire to something higher for cycling than merely matching the poor performance of the car. Nonetheless within our current transport system the decision not to cycle for reasons of safety is a tragic misperception which deprives people of health benefits whilst doing little to diminish their risk.

Partly because of this misperception cycle helmets have been promoted, and in some places, made compulsory. To date, only a few jurisdictions have introduced all-ages compulsion, but helmet laws for children are more common. Amongst European countries, Sweden, Croatia, Czech Republic,

¹ Mindell J, Leslie D, Wardlaw M.

Jersey and Austria have introduced child helmet law. However with the one single exception of Ontario (which was unusual because cycle helmet wearing was already high, the law was not enforced, and cycle-helmet wearing actually fell following legislation) legislation to enforce cycle helmet wearing has caused a fall in cycling rates. The health benefits of regular cycling are well documented, and incorporated in the Health Economic Assessment Tool² (HEAT). These benefits substantially exceed the life years lost due to fatal accidents (no research contradicts this conclusion). An econometric model³ allows different scenarios of risk versus health benefit to be tested. Since it has been observed that enforced helmet laws reduce cycling levels, overall more lives have been lost due to such laws than have been saved. No public health body supports legislation to enforce cycle helmet wearing, except the British Medical Association. The BMA supports it only as part of a comprehensive cycle safety programme and even then only when cycle helmet wearing is already the norm. The Faculty and THSG support the BMA in its call for a comprehensive cycle safety programme and support the BMA's opposition to cycle helmet legislation in current circumstances. Indeed we go further and we take issue with the BMA's belief that it might be feasible in future hypothetical circumstances. On current evidence we are quite simply opposed to legislation to compel the wearing of cycle helmets.

The question of whether cyclists should be encouraged voluntarily to wear a cycle helmet, with such wearing being universally promoted in images and by role models, is a more difficult one. Early research into cycle helmet effectiveness suggested large reductions in head injuries with helmet use. However, experience with high levels of helmet wearing after enforced legislation has shown no noticeable injury prevention. Reductions of head injuries reported at the time were later found to have been due to reductions in cycling and pre-existing downward trends. Possible explanations could be that cycle helmets contain hidden dangers for example of neck injuries or of increasing the risk of entrapment of the head by making it larger. Or it could be that cyclists feel safer with helmets and take more risks or that other road users do not see them as being as vulnerable and therefore do not give them as much space; there is one study which supports this last hypothesis.

Quite apart from the conflicting evidence about benefits, by presenting cycling as an activity normally helmeted we put it in the same category as riding a motorcycle or working on a construction site and thereby feed the public misperception of it as unsafe.

If there is a case for wearing a cycle helmet it is no greater than the case for wearing a helmet whilst driving or whilst walking and it is less of a case than for wearing a helmet whilst playing football.

² HEAT web page

³ De Jong P.