



# Policy statement

## Passive smoking

### Introduction

Over 11,000 people are estimated to die each year in the UK as a result of passive smoke.<sup>1</sup> The WHO estimate that 600,000 die each year worldwide due to passive smoke.<sup>2</sup>

### Policy statement

Passive smoking is a recognised cause of significant short and long-term harm to others, particularly to children, and especially in enclosed places. Smokefree legislation has resulted in substantial reductions in exposure to passive smoke in most workplaces and enclosed public places in the UK, but significant exposure still occurs to others in the home and other private places, such as cars.

The BHF believes that the single most effective way of reducing children's exposure to passive smoke is for parents to quit but, if this isn't achievable, smokefree homes and cars offer the best alternative to help protect children from the harmful effects of passive smoking.

In order to reduce exposure to passive smoke, the BHF is calling on UK Governments to:

- protect children from the effects of passive smoking in cars by legislating to prevent smoking in cars where children are present, and supporting this legislation with a high profile social marketing campaign
- ensure that the prohibition on smoking in workplaces remains comprehensive, including vehicles that are used for work.
- promote smokefree homes through national and local campaigns

<sup>1</sup> Jamrozik K. Estimate of deaths attributable to passive smoking among UK adults: database analysis. *BMJ* 2005 Apr 9;330(7495):812. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/15741188>

<sup>2</sup> WHO Report on the Global Tobacco Epidemic, 2009: Implementing smoke-free environments. World Health Organization; 2009. Available at: <http://www.who.int/tobacco/mpower/2009/en/index.html>

## Background

There is clear evidence that passive smoking increases the risk of developing CHD.<sup>3</sup> A number of studies have shown an elevated risk of heart disease in people regularly exposed to passive smoke. Non-smokers living with smokers have a 30 per cent increased risk of developing the disease.<sup>4</sup> A study of young adults generated suggestions that non-smokers at risk of CHD should avoid all indoor environments that allow smoking.<sup>5</sup>

Further a study published in the British Medical Journal suggests that previous studies of the effect of passive smoking on the risk of heart disease may have been underestimated. The researchers found that blood cotinine levels among non-smokers exposed to passive smoke were associated with a 50-60 per cent increase risk of heart disease.<sup>6</sup>

The successful implementation of smokefree legislation in Scotland in 2006 and the rest of the UK in 2007 has significantly reduced public exposure to passive smoke. In Scotland, voluntary restrictions on smoking in homes increased following the smokefree legislation, resulting in a fall in overall exposure to passive smoke among children (note that children here and thereafter will refer to any person under the age of 18 years old).<sup>7</sup> A study has also shown a 21 per cent reduction for acute coronary syndrome in those who have never smoked and a 19 per cent reduction for former smokers.<sup>8</sup> Within Wales, the number of hospital admissions for heart attacks has fallen by 3.7 per cent since the legislation was implemented.<sup>9</sup> Between 2007 and 2008 there was also a drop of 2.4 per cent in the number of emergency admissions for heart attack in England.<sup>10</sup>

Despite this progress some commercial vehicles, shisha bars, sports grounds and music festivals, where smoking can occur in covered areas, continue to breach the legislation.<sup>11</sup> Many non-smokers, including children, are also still exposed to passive smoke on a daily basis at home and in cars.

## Passive smoking and children

For the purposes of this policy statement, “children” refers to anyone under the age of eighteen.

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<sup>3</sup> *The health consequences of involuntary exposure to tobacco smoke: a report of the Surgeon General*. Atlanta, USA: US Department of Health and Human Services; 2009. Available at: <http://www.surgeongeneral.gov/library/secondhandsmoke/>

<sup>4</sup> Law MR, Morris JK, Wald NJ. Environmental tobacco smoke exposure and ischaemic heart disease: an evaluation of the evidence. *BMJ* 1997 Oct 18;315(7114):973-80. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/9365294>

<sup>5</sup> Pechacek TF, Babb S. Commentary: How acute and reversible are the cardiovascular risks of secondhand smoke? *BMJ*. 2004 Apr 24;328(7446):980-3. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/15105323>

<sup>6</sup> Whincup PH, Gilg JA, Emberson JR, Jarvis MJ, Feyereabend C, Bryant A, Walker M, Cook DG. Passive smoking and risk of coronary heart disease and stroke: prospective study with cotinine measurement. *BMJ*. 2004 Jul 24;329(7459):200-5. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/15229131>

<sup>7</sup> Akhtar PC, Currie DB, Currie CE, Haw SJ. Changes in child exposure to environmental tobacco smoke (CHETS) study after implementation of smoke-free legislation in Scotland: national cross sectional survey. *BMJ*. 2007 Sep 15;335(7619):545. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/17827487>

<sup>8</sup> Pell JP, Haw S, Cobbe S, Newby DE, Pell AC, Fischbacher C, McConnachie A, Pringle S, Murdoch D, Dunn F, Oldroyd K, Macintyre P, O'Rourke B, Borland W. Smokefree legislation and hospitalizations for acute coronary syndrome. *N Engl J Med*. 2008 Jul 31;359(5):482-91. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/18669427>

<sup>9</sup> Welsh Assembly Government (2009): 'Chief Medical Officer for Wales, Annual Report 2008' Press Release : <http://wales.gov.uk/newsroom/healthandsocialcare/2009/091209prevention/;jsessionid=YTQrNbyhww2RXQ0nkr1HpZhGcb1K35hxCKnQnzTQL8Q62hmVbYQy!2087199134?lang=en&ts=1&status=ope>

<sup>10</sup> Sims M, Maxwell R, Bauld L, Gilmore A. Short term impact of smoke-free legislation in England: retrospective analysis of hospital admissions for myocardial infarction. *BMJ*. 2010 Jun 8;340:c2161. doi: 10.1136/bmj.c2161. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/20530563>

<sup>11</sup> Royal College of Physicians. *Passive smoking and children*. A report by the Tobacco Advisory Group. London: RCP; 2010.

Passive smoking increases the risk of a number of health problems in children, including lower respiratory infections, wheezing, asthma, middle ear disease, and bacterial meningitis, and more than doubles the risk of sudden infant death.<sup>12</sup>

Although for some time evidence has been limited on the link between passive smoking and heart and circulatory disease amongst young people<sup>13</sup>, this is changing. There is a growing body of research that suggests that passive smoking is associated with medical risk factors for cardiovascular disease amongst children; for example, a systematic review carried out in 2011 found passive smoke was associated with altered cholesterol profiles particularly low levels of protective HDL among children.<sup>14</sup> Another review from 2007 noted that passive smoking was associated with endothelial (inner lining of the blood vessels) dysfunction in 11 year olds.<sup>15</sup> Endothelial dysfunction is widely believed to be a precursor to the onset of atherosclerosis associated with increased risk for coronary artery disease. This evidence suggested it was present in children even with a moderate level of exposure, leading its authors to conclude their evidence reiterated *'the importance of smoke free-environments for children and adolescents'*.

A related study found that childhood exposure to passive smoking was associated with increased stiffness of the aorta, which can enhance the risk of a cardiovascular event in later life<sup>16</sup>, while evidence from the US found that children who were exposed to long term passive smoking had lower HDL-C, or 'good', cholesterol.<sup>16</sup>

Additionally, some evidence suggests that the detrimental impact of passive smoke on cardiorespiratory function could limit children's inclination to be physically active, leading to an enhanced risk of obesity.<sup>17</sup> A German study found that very young children who were exposed to passive smoking at home were more likely to be obese or overweight than children who were unexposed.<sup>18</sup>

The limited available evidence suggests, therefore, that exposure to passive smoke is associated with heightened biomedical risk for heart disease as well as an increased risk of obesity.

In addition to the specific impact of passive smoke on children's health, including their cardiovascular risk, children who are exposed to smoking in their homes are also more likely to start to smoke than those who are brought up in smokefree environments. At least 23,000 young people in England and Wales each year start smoking by the age of 15 as a result from exposure to smoking in the home.<sup>19</sup>

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<sup>12</sup> Ibid

<sup>13</sup> Kallio K, Jokinen E, Raitakari OT, Hämäläinen M, Siltala M, Volanen I, Kaitosaari T, Viikari J, Rönnemaa T, Simell O. Tobacco smoke exposure is associated with attenuated endothelial function in 11-year-old healthy children. *Circulation*. 2007 Jun 26;115(25):3205-12. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/17548727>

<sup>14</sup> Metsios GS, Flouris AD, Angioi M, Koutedakis Y. Passive Smoking and the Development of Cardiovascular Disease in Children: A Systematic Review. *Cardiol Res Pract*. 2010 Aug 29;2011. pii: 587650. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/20886056>

<sup>15</sup> Kallio K, Jokinen E, Raitakari OT, Hämäläinen M, Siltala M, Volanen I, Kaitosaari T, Viikari J, Rönnemaa T, Simell O. Tobacco smoke exposure is associated with attenuated endothelial function in 11-year-old healthy children. *Circulation*. 2007 Jun 26;115(25):3205-12. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/17548727>

<sup>16</sup> Moskowitz WB, Schwartz PF, Schieken RM. Childhood passive smoking, race, and coronary artery disease risk: the MCV twin study. *Arch Pediatr Adolesc Med*. 1999 May;153(5):446-53. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/10323623>

<sup>17</sup> Metsios GS, Flouris AD, Angioi M, Koutedakis Y. Passive Smoking and the Development of Cardiovascular Disease in Children: A Systematic Review. *Cardiol Res Pract*. 2010 Aug 29;2011. pii: 587650. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/20886056>

<sup>18</sup> Apfelbacher CJ, Loerbroks A, Cairns J, Behrendt H, Ring J, Krämer U. Predictors of overweight and obesity in five to seven-year-old children in Germany: results from cross-sectional studies. *BMC Public Health*. 2008 May 21;8:171. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/18495021>

<sup>19</sup> Royal College of Physicians. *Passive smoking and children*. A report by the Tobacco Advisory Group. London: RCP; 2010.

## **Passive smoking and cars**

Private vehicles are exempt from the smoke free legislation that is in place in the different UK nations, and so remain one of the few remaining enclosed places where children can legally be exposed to passive smoke. They are a serious concern on public health grounds because of the high levels of passive smoke in them when someone smokes: studies suggest levels of smoke tend to be higher than in bars or restaurants were before smoking bans<sup>20</sup>, while research carried out for the Chartered Institute of Environmental Health found dangerous levels of second hand smoke remained even after a cigarette had been extinguished.<sup>21</sup> Research carried out by the British Lung Foundation found that more than 51 per cent of 8 to 15 year olds reported they had been exposed to cigarette smoke when confined in a car.<sup>22</sup>

There is a health inequalities argument for a ban on smoking in cars with children: a YouGov survey carried out for the Royal College of Physicians found that 70 per cent of UK respondents did not allow smoking in their vehicles, and that only 8 per cent of people allowed smoking at all times. Younger adults (37 per cent) and those from lower socio-economic groups (31 per cent) were more likely to be exposed than other groups.<sup>23</sup> It is likely, therefore, that children from lower socio-economic groups are at greater risk of exposure than those from more affluent groups.

Legislation on this issue is most appropriate in order to address health inequalities rather than via social marketing campaigns, as traditional health promotion messages are least likely to get through to the poorest groups.<sup>24</sup> While social marketing should be used as part of the strategy, it should not replace statutory intervention, and should ensure that inequalities are not exacerbated.

One of the key arguments for a ban on smoking in public places was to ensure that bar and hospitality workers were protected from the adverse effects of passive smoke on workers' health. It seems a significant anomaly that children, who are even more vulnerable than workers, are denied this kind of protection, especially in a situation where passive smoke is potentially even denser. The car is an already highly regulated environment, on public health grounds (with legislation on the use of seat belts, child seats etc) so additional legislation to protect children's health would be appropriate.

### **Public support**

A full ban on smoking in cars with children has been introduced in several US, Canadian and Australian states.<sup>25</sup> The evidence consistently suggests that making a similar move in the UK would have high levels of public support, even among smokers; a survey carried out for RCP suggested a remarkable 76 per cent of respondents (including 54 per cent of daily smokers) supported a ban on smoking in cars carrying children under the age of 18, while a Faculty of Public Health report put support for the measure at 74 per cent.<sup>26</sup> Additionally, evidence from New Zealand suggests that public support for this legislation tends to increase over time.<sup>27</sup>

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<sup>20</sup> Royal College of Physicians. *Passive smoking and children*. A report by the Tobacco Advisory Group. London: RCP; 2010.

<sup>21</sup> Clarke E, The impact of smoking cigarettes on particulate levels in private vehicles, *CIEH* 2011. Available at: [http://www.cieh.org/media/ctieh\\_press.html](http://www.cieh.org/media/ctieh_press.html)

<sup>22</sup> Kids unite to stop smoking in cars. British Lung Foundation. Wednesday March 2 2011:

<http://www.lunguk.org/campaigns/media-centre/latestpressreleases/kids-unite-to-stop-smoking-in-cars>

<sup>23</sup> Royal College of Physicians. *Passive smoking and children*. A report by the Tobacco Advisory Group. London: RCP; 2010.

<sup>24</sup> Thomson G, Wilson N. Public attitudes to laws for smoke-free private vehicles: a brief review. *Tob Control* 2009 Aug;18(4):256–61. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/19052041>

<sup>25</sup> Royal College of Physicians. *Passive smoking and children*. A report by the Tobacco Advisory Group. London: RCP; 2010.

<sup>26</sup> *Healthy Nudges – When the Public Wants Change and Politicians Don't Know It: A policy action report from the Faculty of Public Health*. London: Faculty of Public Health; 2010.

<sup>27</sup> Thomson G, Wilson N. Public attitudes to laws for smoke-free private vehicles: a brief review. *Tob Control* 2009 Aug;18(4):256–61. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/19052041>

A number of other health organisations are now calling for a ban on smoking in vehicles with children present, including The British Lung Foundation (who have started a petition on the issue and prepared a Children's Charter), the Royal College of Physicians, ASH UK, ASH Wales, and Action Cancer.

Politicians in Scotland, Wales and Northern Ireland are increasingly supportive of legislation in this area. The Scottish Labour party included a commitment to a consultation on a ban in its 2011 election. In Wales, the Chief Medical Officer for Wales called for a ban in 2010.<sup>28</sup> Also, Plaid Cymru's 2011 manifesto stated their intention to legislate against smoking in cars when children are present. In Northern Ireland, Action Cancer released a survey that suggested 9 out of 10 adults there would support a ban.<sup>29</sup> The largest Northern Irish political party, the DUP, included support for a ban in their manifesto, as did the SDLP.

**For further information please email [policy@bhf.org.uk](mailto:policy@bhf.org.uk)**

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<sup>28</sup> Chief Medical Officer is right to call for ban on smoking in cars carrying children. *Epolitix*. Thursday October 7 2010: <http://www.epolitix.com/members/member-press/member-press-details/newsarticle/chief-medical-officer-is-right-to-call-for-ban-on-smoking-in-cars-carrying-children///sites/british-lung-foundation/>

<sup>29</sup> NI 'backs ban on smoking in cars'. Belfast Telegraph. Tuesday November 30 2010: <http://www.belfasttelegraph.co.uk/news/local-national/northern-ireland/ni-backs-ban-on-smoking-in-cars-15017271.html>