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Factsheets
Smoking in Cars

# Smoking in Cars

The dangers of exposure to second hand smoke (SHS, also known as environmental tobacco smoke) are well established[1] and researchers have found that SHS concentrations in vehicles are often greater than in any other micro-environment[2]. In Wales it has been against the law to smoke in vehicles used for work by more than one person (even if those persons do so at different times or only intermittently) since April 2007.[3] The Welsh Government are due to launch a proposal on the prohibition of smoking in private vehicles carrying under-18s.

## Health risks

Levels of SHS in cars can be extremely high because of the small area in which the smoke is circulated[4]. One study found significantly increased levels of blood carboxyhaemoglobin (carbon monoxide in the blood) in individuals exposed to the smoke of as few as three cigarettes in an enclosed vehicle.[5]

The California Environmental Protection Agency warns that:

- SHS in cars can be ten times more concentrated than the level considered "unhealthy" by the U.S. environmental protection agency.

- Cigarette smoke particle exposure in a closed car is comparable to the exposure a fire-fighter might receive over four to eight hours fighting a California wildfire.

- One smoker emits five times more fine particles into a car than are emitted per-mile by the car's exhaust pipe.

- The concentration of SHS in cars can exceed that in homes and bars by ten to one hundred times[6].

## Prevalence of smoking in vehicles

In the United Kingdom as a whole, it has been reported that around 30% of adult smokers permit smoking in their vehicle when non-smokers are present.[7] Figures for Wales suggest that whilst the smoking ban has had a positive impact in reducing exposure to second-hand smoke in enclosed public places and workplaces. In 2014, 9% of children said that smoking was allowed in their family vehicle.[8]

## Eliminating the risk?

The World Health Organisation (WHO) concludes that there is no safe level of exposure to SHS.[9] Opening a car window does not reduce the levels of SHS to a safe level and smoke, much of it invisible to the human eye, lingers for hours. A US study examined 100 different air change rate measurements in four vehicles: results showed that with windows open and the fan on high, SHS concentrations in a vehicle were greater than in any other small enclosed place.[10]

## Impact on adult and child health

The United States Environmental Protection Agency (EPA) classifies environmental tobacco smoke as a known human carcinogen. In addition to short-term effects such as eye irritation and coughing, in the longer-term those exposed to second-hand smoke run a greater risk of developing a range of smoking-related diseases[11].

Given that children have significantly higher metabolic and respiratory rates than adults, exposure to SHS in vehicles is potentially a very serious problem. SHS exposure in children has been linked to increased risks of respiratory infections, ear infections, and asthma, amongst other health problems.[12] Exposure to SHS in babies and children is a significant cause of morbidity and mortality such as sudden infant death syndrome (cot death).[13]

Babies and children younger than age 6 who are exposed to SHS regularly are more likely to get respiratory tract infections, such as pneumonia and bronchitis.[14] An Australian study found that children exposed to SHS in their parents' car had double the risk of persistent wheeze compared to children who had not been exposed[15].

## Impact on road traffic accidents

Studies on smoking and car safety were reviewed by the Monash University Accident Research Centre in Australia in 2003. The review found that smokers have an increased risk of being involved in motor crashes, and "actual distraction caused by the act of smoking is a likely factor".[16] The review concludes that "it is clear that smoking while driving is a hazard".[17] Further studies have also identified a significant increase in redirection of attention away from the road when lighting a cigarette, along with a greater number of events per hour such as lane wandering and crossing whilst smoking.[18]

## Legal position

The Welsh Government are due to launch a proposal on the prohibition of smoking in private vehicles carrying under-18s. The Highway Code 2007 advises against smoking and driving because it can cause a distraction.[19] In addition, the Smoke-free Premises etc. (Wales) Regulations 2007 stipulate that a vehicle must be smoke-free if it is used "for the transport of members of the public (whether or not for reward or hire); or for work purposes by more than one person (even if the persons who use it for such purposes do so at different times, or only intermittently." Furthermore, smoke-free vehicles must display a "No Smoking" sign in a prominent place.

A number of jurisdictions have introduced legislation prohibiting smoking in cars including parts of Australia, Canada and the US. For example, in South Australia and Tasmania, smoking by the driver or passengers is prohibited in cars carrying children under the age of 16 years, whether the car is moving or stationary. In Australia, this legislation is enforced by both Police Officers and Tobacco Control Officers, issuing a penalty up to a maximum of $200.[20] In Scotland, a backbench MSP has consulted on introducing a bill to ban smoking in cars carrying children under 16 and both the Republic of Ireland and Northern Ireland are planning to propose similar legislation.

## Public support for a ban on smoking in cars

In February 2012, the Welsh Government launched a campaign called Fresh Start Wales to encourage adults to keep their cars smoke free to protect children, with a pledge to consider legislation if exposure levels do not drop.[21]

There have been high levels of public support in Wales for a ban in cars that are carrying children and young people under the age of 18. In a survey of over 1,000 Welsh adults in 2013, 79% strongly agreed or agreed that smoking should be banned in cars that are carrying children younger than 18 years of age. [22]

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