

Passive smoking results from breathing in a combination of other people's exhaled tobacco smoke – the smoke drawn in by the smoker and then breathed out – and the smoke released from the cigarette's burning tip.

Together, these are referred to as second-hand smoke.

Passive Smoking and Health



Second-hand smoke contains more than 4,000 chemicals, many of which are known to be cancer-causing agents such as arsenic and benzene. Particles in second-hand smoke tend to be smaller than those in smoke drawn directly from cigarettes, meaning they can penetrate deeper into the lungs¹.

Second-hand smoke is classified as a substantial public health hazard² and is a controllable and preventable form of indoor air pollution; it is classified as a known, class A, human carcinogen (IARC³; World Health Organization¹⁰). Although overall exposure in the population has declined due to smoke-free legislation in the UK and reduced smoking prevalence, cars and homes continue to be places of high exposure.

Passive smoking and health

Passive smoking is known to have serious consequences for health. Census records and mortality records were studied for two population cohorts of adults. The first study found that 'adults who had never smoked and who lived with smokers had about 15% higher mortality than never smokers living in a smoke-free household', and the second study's findings were consistent with this⁴. Passive smoking has a causal effect on the development of lung cancer and heart disease^{2,3}. Other health risks for non-smokers exposed to second-hand smoke over long periods (and even moderately⁵) include:

- a 24% increase in the risk of developing lung cancer^{2,3,6} – which means several hundred extra deaths per year in the UK^{2,3,6}
- a 25% greater chance of developing ischaemic heart disease, a major cause of heart attacks²
- a 25-35% increase in the risk of developing acute coronary heart disease^{3,5}

- chronic respiratory symptoms and increased risk of respiratory conditions such as asthma, allergies, bronchitis and even chronic obstructive pulmonary disease (COPD)⁷.

In addition to the long-term effects, second-hand smoke can trigger heart attacks in people with heart conditions after only short periods of exposure. Although the absolute level of risk is not yet known, it is advised that people at risk of coronary heart disease and those with known coronary artery disease should avoid smoky indoor environments, where possible⁸.

What can be done?

Following Scientific Committee on Tobacco and Health (SCOTH) and International Agency for Cancer Research (IARC) recommendations that smoking should be restricted in public service buildings and public transport, and whenever possible should not be permitted in workplaces^{2,3} and given the ineffectiveness of ventilation systems for eliminating the health risks of second-hand smoke⁹, smoke-free legislation was enacted throughout the UK and Ireland. Already health improvements have emerged since this legislation, such as a reduction in exposure to second-hand smoke and a reduction in heart attack admissions to hospital.

References

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