

# Smoke free legislation linked to drop in second-hand smoke exposure among adults

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(Medical Xpress) -- Levels of second-hand smoke exposure among non-smoking adults fell by almost 30 per cent after smoke free legislation was introduced in England in 2007, researchers in the Department for Health (University of Bath) have found.

The most comprehensive study to date of second-hand [smoke exposure](#) among non-smoking adults in England, which was funded by the Department of Health, will be published online today in the journal [Environmental Health Perspectives](#).

Researchers analysed data from seven national surveys conducted between 1998 and 2008. These surveys measured cotinine, an indicator of [tobacco smoke exposure](#), in saliva samples from over 30,000 people aged 16 and over.

They showed that levels of exposure to second-hand smoke in non-smokers had been declining in the ten years leading up to smoke free [legislation](#). But even when this decline was taken into account, the introduction of smoke free public places led to significant, additional reductions in exposure. Average exposure fell by 27 per cent immediately following the legislation.

The results further revealed that while there was a marked reduction in the levels of second-hand smoke exposure among those who lived in a smoke free home, those who lived in a home where there was smoking inside showed no significant change in exposure following the implementation of smoke free public places.

Dr Michelle Sims, the first author of the paper, said: “Smoke exposure fell after the introduction of England’s smoke free legislation above and beyond the underlying long-term decline, demonstrating the positive effect of the legislation.

“Nevertheless, some population subgroups appear not to have benefited significantly from the legislation, suggesting that these groups should receive more support to reduce their exposure.

“There is now a large body of evidence documenting the adverse effects of second-hand smoke exposure. In adults it is now known to be linked with coronary heart disease, lung and various other cancers, stroke, chronic respiratory symptoms and adverse pregnancy outcomes.”

Other research has shown that smoke free legislation is also associated

with reductions in hospital admissions for heart attacks and asthma in the UK and other countries.

Professor Anna Gilmore, who directed the study, said: “The importance of this study is that it examines the impacts of smoke free policies on adults’ exposure using a specific biological-marker of smoke exposure (rather than self-reported exposure) while simultaneously controlling for underlying declines in exposure.

“To our knowledge it is the first study to do this. The fact it shows marked declines in adult exposure provides further evidence of the important public health benefits of smoke-free policies.”

Provided by University of Bath

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