

## Children as young as seven affected by parents smoking

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A new study out today (24 July) shows that children as young as seven had elevated levels of cotinine (a by-product of nicotine) in their blood if their mother smoked, particularly children whose mothers smoked ten cigarettes a day or more.

The study looked at cotinine levels among children in the Children of the 90s study at the University of Bristol. It included over 3,000 children when they were aged seven and 2,000 children when they were aged 15.

The researchers found that the cotinine levels of children at both ages were strongly related to whether or not the mother smoked, and how heavily, indicating clear evidence of environmental [tobacco smoke exposure](#) (also known as [passive smoking](#)).

Most importantly, the cotinine levels of non-smoking 15-year-olds were five times higher if their mother smoked ten or more [cigarettes](#) a day, compared with the children of non-smoking mothers. For seven-year-olds they were four times higher.

These levels of passive smoking exposure at age seven and 15 are comparable to the levels of exposure seen at age 15 in [teenagers](#) who smoke infrequently (less than weekly).

It is already well known that passive smoking increases the risk of [heart disease](#), [lung cancer](#) and respiratory disease. According to the researchers, this study provides important new evidence of the need to

reduce smoking in private homes and cars.

Speaking about the findings, the lead author, Alex Stiby, said: "We have found that the children of mothers who smoke have elevated cotinine levels, indicating clear evidence of passive smoking exposure. This provides a strong public-health message about the risks to children if there are adults smoking in the home. Our research shows that the risks apply to older children just as much as to younger ones."

Professor Marcus Munafò, the senior academic on the paper from the University of Bristol's School of Experimental Psychology, said: "At the age of seven it is highly unlikely that children have started smoking, so the presence of cotinine in their blood at this age provides clear and conclusive evidence of the risks to young children from adults smoking at home."

Professor David Lomas, Chair of the Medical Research Council's Population and Systems Medicine Board, who part-funded the study, said: "We already know that passive smoking can harm children and has a cumulative, damaging impact on their lung development. What large, well-conducted studies like this offer us is clear, measurable evidence that parents smoking around their children presents a tangible risk to their health that shouldn't be underestimated. Population-based cohorts such as ALSPAC are an essential resource for health research and the trends that they identify give researchers crucial clues and help develop effective interventions against smoking-related diseases."

**More information:** [doi 10.1093/ntr/ntt094](https://doi.org/10.1093/ntr/ntt094).

Provided by University of Bristol

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