

Study underlines impact of air pollution on people with asthma in Scotland

December 18 2023



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New research by the University of Stirling has offered a greater understanding of how people with asthma in Scotland are affected by air pollution.

The study could offer an opportunity to improve the effectiveness of advice aimed at helping individuals to reduce their personal exposure to air pollution.

Asthma is the world's most widespread chronic respiratory condition and more than 368,000 people receive treatment for asthma in Scotland, 7% of the population.

Meanwhile, air pollution causes 7 million [premature deaths](#) every year, with an estimated 2,500–3,500 of those in Scotland.

Exposure to air pollution is a known asthma trigger and University of Stirling researchers interviewed 36 people in Scotland who spoke in detail about the impact on their lives.

One woman was advised by her GP that her health would only improve if she moved house while another said if air quality is poor, she does not go out.

Another participant from Glasgow said she consciously walks quickly through Charing Cross, which is next to the busy M8 motorway, while another woman said she closes every window in her house if traffic is heavy outside.

The new study comes after previous research by the University of Stirling's Faculty of Natural Sciences found that better air quality monitoring is needed to assess the acute impacts of air pollution on people with asthma.

Ph.D. researcher Amy McCarron who led both studies said, "While the physiological connections between air pollution and asthma have been extensively studied, this study sought to explore the nuanced perspectives, daily experiences and management strategies of

individuals.

"This research offers a greater understanding of the challenges faced by at-risk groups, such as individuals with asthma, in managing their condition relating to air pollution exposure."

Behavioral change

Previous research has found that current advice often proves ineffective in promoting [behavioral change](#) to minimize personal exposure, as it tends to be generic and overlooks individual circumstances and [past experiences](#).

McCarron said, "By better understanding how air pollution impacts those most vulnerable in their day to day lives and how they practically manage this, we can work towards creating more effective communications and advice aimed at encouraging behavior change, taking into account these experiences.

"In turn, this could encourage greater uptake of behavior change, ultimately reducing personal exposure to air pollution."

Researchers interviewed 36 non-smoking adults living in Scotland who been diagnosed with asthma by a health care professional. Interviews took place between September 2021 and September 2022.

The paper, "I have to stay inside ...": Experiences of [air pollution](#) for people with [asthma](#)," was [published](#) in the journal *Health and Place*.

More information: Amy McCarron et al, "I have to stay inside ...": Experiences of air pollution for people with asthma, *Health & Place* (2023). [DOI: 10.1016/j.healthplace.2023.103150](https://doi.org/10.1016/j.healthplace.2023.103150)

Provided by University of Stirling

Citation: Study underlines impact of air pollution on people with asthma in Scotland (2023, December 18) retrieved 28 April 2024 from <https://medicalxpress.com/news/2023-12-underlines-impact-air-pollution-people.html>

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