

Obesity, exposure to pollutants affect asthma control

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(Phys.org) -- Older adults who are obese or exposed to traffic pollutants are more likely to have poorly controlled asthma, according to University of Cincinnati (UC) researchers.

Data from a study led by allergist Tolly Epstein, MD, assistant professor in the division of immunology, allergy and rheumatology in UC's Department of Internal Medicine and UC Health allergist, appears in the June issue of *Annals of Allergy, Asthma & Immunology*, the scientific journal of the American College of Allergy, Asthma and Immunology (ACAAI).

"Obese patients aged 65 years and older are five times more likely than those of normal weight to not have their asthma well controlled," says Epstein, an ACAAI member. "Poor [asthma control](#) can lead to a decreased quality of life and an increased risk for emergency department visits, hospitalizations and death."

The number of baby boomer and older asthmatics in the United States will climb from the current 3.1 million to 6.2 million in the next 25 years. This age population accounts for up to two-thirds of asthma related deaths.

"The health effect of outdoor air pollutants on asthma in baby boomers as well as young children is substantial and underappreciated," said UC Health allergist David Bernstein, MD, study co-author, professor in the immunology, [allergy](#) and [rheumatology](#) division and ACAAI fellow.

"Asthma is a serious disease that, if not treated properly, can be life threatening. Asthma patients under the care of an allergist are shown to have better outcomes with controlled symptoms."

The UC study analyzed 104 patients and showed that baby boomers with asthma may be more susceptible to [traffic pollution](#) exposure was one of the strongest predictors of poor asthma control in the study. The reason for increased susceptibility to air pollution among older asthmatics is not clear, although it may be due to potentially impaired responses to highly reactive molecules produced in their bodies as they breathe in polluted air.

The link between obesity and poor asthma control has been shown in younger asthmatics as well. It's speculated that this effect may be due to a heightened inflammatory state caused by obesity, or mechanical impairments on normal breathing that can occur among overweight individuals. In Epstein's study, subjects who were obese also seemed to be more susceptible to the adverse effects of air pollution.

Asthmatics can reduce their contact with environmental pollutants with these tips from ACAAI:

- Avoid traveling and being outdoors during peak commuting times.
- Keep windows closed, especially if your home faces a highly trafficked road.
- If you have an attached garage, don't start the car and let it run—fumes can make their way into the home even when the garage door is open.
- Avoid smoke, dirt, gases and other pollutants that can trigger [asthma flare-ups](#).

Study co-authors include Patrick Ryan, PhD, of UC and Cincinnati Children's Hospital Medical Center; Grace LeMasters, PhD, of UC; Cheryl Bernstein of the Bernstein Clinical Research Center in

Cincinnati; Linda Levin, PhD, of UC; Jonathan Bernstein, MD, of UC and the Bernstein Clinical Research Center; and Manuel Villareal, MD, of UC.

Provided by University of Cincinnati

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