

Study uncovers the hidden dangers of secondhand vape exposure to children

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In homes across America, an invisible threat may be lurking—one that could affect the health of our youngest and most vulnerable. Recent findings presented this month at the National Association of Pediatric

Nurse Practitioners conference in Denver shed light on the often-overlooked danger of secondhand e-cigarette vapor, particularly its impact on children.

For years, electronic cigarettes have been marketed as a safer alternative to traditional smoking. However, as these devices gain popularity among adults, there is growing concern over the unintended consequences for [children](#) exposed to the exhaled vapors.

A new study by researchers at Emory University's Nell Hodgson Woodruff School of Nursing and Rollins School of Public Health shows that children living in households where e-cigarettes are used are unintentionally inhaling substances that could harm their developing bodies.

The study implemented a unique approach to [data collection](#) that combined the traditional use of blood tests with less invasive saliva and exhaled breath tests to determine the exposure of children to hazardous substances. The results were telling: Children aged 4-12 years who were exposed to secondhand e-cigarette vapor showed significantly higher levels of metabolites linked to chemicals found in e-cigarette liquids compared to their unexposed peers.

These metabolites interfere with the body's normal operations by disrupting dopamine levels and causing inflammation and [oxidative stress](#). Oxidative stress leads to cellular damage throughout the body and is linked to numerous diseases, including diabetes, heart disease, and cancer.

"Many people who smoke have switched to using e-cigarettes, thinking it's safer for them and others nearby," says Dr. Jeannie Rodriguez, associate professor at Emory's School of Nursing and lead author of the study. "However, there are chemicals in the liquids used in a vape that

are hazardous for you and those that you care about who are exposed to the vapors you exhale."

The outcomes of the analyses were shared with parents to highlight the risks linked to exposing children to the byproducts of [e-cigarette](#) vapor.

Surprisingly, many parents were unaware of the risks. In focus group discussions with Emory researchers, more than half (11 of 19) of parents revealed they considered vaping around their children a minor concern, if a concern at all. This alarming disconnect underscores the need for education on the subject.

Health experts like Rodriguez stress the importance of equipping parents with the knowledge to make informed decisions. By understanding the tangible evidence of harm, parents might be more inclined to put down their [vaping devices](#) for good.

However, quitting is not straightforward. The study also unveiled that despite understanding some risks, the addictive grip of nicotine and the belief that vaping is less harmful than traditional smoking complicate parents' decision to stop. This highlights the nuanced challenges in combating the vaping epidemic and the critical role health care professionals play in guiding families toward healthier choices.

"If you do vape and are ready to quit, talk to your [health care provider](#) and your family and friends," says Rodriguez. "You may need the support of those around you to be successful. Think of past attempts to quit not as failures but as training opportunities for you to quit eventually successfully. Don't give up."

As vaping continues to cast a shadow over [public health](#), especially among the youth, the findings from this study are clear: While the vapor from electronic cigarettes may be invisible after it disperses through the

air, the effects on children are not.

Co-authors of the study include Jeannie Rodriguez, PdD, RN, and Irene Yang, PdD, RN, of Emory's Nell Hodgson Woodruff School of Nursing and Donghai Liang, Ph.D., of Emory's Rollins School of Public Health.

Provided by Emory University

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