

# Vaping may harm fertility in young women

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E-cigarette usage may impair fertility and pregnancy outcomes, according to a mouse study published in the *Journal of the Endocrine Society*.

Many young and pregnant women are using e-cigarettes as a safer

alternative to smoking, but little is known about the effects on fertility and [pregnancy outcomes](#). E-cigarettes are driving increases in tobacco product use among youth. According to the [Centers for Disease Control and Prevention](#), the number of middle and [high school students](#) using e-cigarettes rose from 2.1 million in 2017 to 3.6 million in 2018—a difference of about 1.5 million youth.

"We found that [e-cigarette](#) usage prior to conception significantly delayed implantation of a fertilized embryo to the uterus, thus delaying and reducing fertility (in mice)," said the study's corresponding author, Kathleen Caron, Ph.D., of University of North Carolina at Chapel Hill, N.C. "We also discovered that e-cigarette usage throughout pregnancy changed the long-term health and metabolism of female offspring—imparting lifelong, second-generation effects on the growing fetus."

In this study, researchers used a [mouse model](#) to examine whether e-cigarette exposure impairs fertility and offspring health. After exposure to e-cigarette vapor, female mice showed decreased embryo implantation and a significant delay in the onset of pregnancy with the first litter. Female offspring exposed to e-cigarettes in utero also failed to gain as much weight as control mice by the 8.5 month mark.

"These findings are important because they change our views on the perceived safety of e-cigarettes as alternatives to traditional cigarettes before and during pregnancy," Caron said.

**More information:** The study, "E-Cigarette Exposure Delays Implantation and Causes Reduced Weight Gain Within in Utero Exposed Female Offspring," was published online in the open-access journal.

Provided by The Endocrine Society

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