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Teens and Adults Reporting E-Cigarette Use Have Increased Odds of Having Asthma and Asthma Attacks

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ATS 2021, New York, NY – While [vaping](#) is thought to be a safer alternative to smoking, teens and adults who use e-cigarettes have increased odds of developing [asthma](#) and having asthma attacks, according to research presented at the ATS 2021 International Conference.

Teresa To, PhD, senior scientist in the Child Health Evaluative Sciences program at The Hospital for Sick Children (SickKids), and colleagues sought to determine whether youth and young adults who are current e-cigarette users have increased odds of self-reported asthma and had an asthma attack within the last 12 months.

The researchers used data collected from the 2015-2016 and 2017-2018 cycles of the Canadian Community Health Survey (CCHS), a cross-sectional survey that collects self-reported information about health status, health determinants, and behaviors. They found that 3 percent of survey participants reported e-cigarette use within the previous 30 days, which corresponds to 1 in 32 individuals using e-cigarettes during that time period. Approximately half of e-cigarette users also reported smoking cigarettes daily. One in 8 (13 percent) e-cigarette users had asthma and those with asthma had nearly 24 percent increased odds of having an asthma attack within 12 months.

“To curtail the adverse health effects of vaping we should raise the awareness of the potential harmful health effects of vaping, and develop and implement evidence-based strategies to prevent and reduce e-cigarette use, especially in youth,” said Dr. To. “We should also provide means and support to help those who currently vape to quit.”

The study included 17,190 individuals aged 12 years and above who participated in the CCHS, in which 3.1 percent reported e-cigarette use in the past 30 days. After making statistical adjustments for other variables that might affect results (confounders), e-cigarette users had 19 percent higher odds of having

asthma. Current smokers had 20 percent higher odds of having asthma, while former smokers had 33 percent higher odds. Those who never smoked or used e-cigarettes did not have significant associations with asthma.

“Interestingly, our study found a significantly higher proportion of those who used e-cigarettes reported fair to poor mental health (15 percent) compared to those who did not vape (7 percent),” said Dr. To.

“In addition, those who used e-cigarettes had 60 percent higher odds of self-reported high levels of life stress compared to those who did not. While vaping may not cause stress, it appears that vape cravings may be triggered by stress and anxiety, making it harder for the e-cigarette user to quit. This may be particularly relevant during the pandemic when stress and anxiety are highly prevalent.”

“Our findings suggest that e-cigarette use is a modifiable risk factor for asthma to be considered in the primary care of youth and young adults,” she concluded.

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