Most youth use e-cigarettes for novelty, flavors—not to quit smoking

ANN ARBOR—In 2015, more than half of all students in 8th, 10th and 12th grades who used vaporizers such as e-cigarettes report that a primary reason for use was curiosity to see what they were like.

About 40 percent said that they used them because they tasted good. Far fewer—about 10 percent—said that they used them in an attempt to quit smoking regular cigarettes.

"These results suggest that vaporizers are primarily a new way to use recreational substances more so than a means to end tobacco addiction, at least among adolescents," said Richard Miech, a senior investigator of the study.

The findings come from the 2015 nationwide Monitoring the Future study, which is the first major study to ask U.S. adolescents why they use electronic vaporizers. The study annually tracks trends in substance use among 8th-, 10th- and 12th-graders. It surveys more than 40,000 students in about 400 secondary schools each year throughout the contiguous United States.

Vaporizers are battery-powered devices with a heating element. They produce an aerosol, also known as a vapor or mist, that users inhale. The aerosol may contain nicotine, although the specific contents of the vapor are proprietary and are not regulated. The liquid that is vaporized comes in hundreds of flavors. Some of these flavors, such as bubble gum and milk chocolate cream, are likely attractive to younger teens.

The specific vaporizer known as the e-cigarette has made rapid in-roads among U.S. adolescents in recent years. In 2015, a substantially higher percentage of adolescents used e-cigarettes in the past 30 days than had smoked regular cigarettes. Specifically, in 8th grade the respective percentages are 9.5 percent vs. 3.6 percent, in 10th grade
they are 14.0 percent vs. 6.3 percent, and in 12th grade they are 16.2 percent vs. 11.4 percent.

"Part of the reason for the popularity of vaporizers such as e-cigarettes is the perception that they do not harm health," Miech said.

Only 19 percent of 8th-graders believe there is a great risk of people harming themselves with regular use of e-cigarettes. This compares to 63 percent of 8th-graders who think there is a great risk of people harming themselves by smoking one or more packs of tobacco cigarettes a day.

Because e-cigarettes are relatively new, a comprehensive assessment of their health impact—especially their long-term consequences—has yet to be developed, Miech said.

"E-cigarettes seem to be used in different ways at different ages," he said. "Our finding that so few adolescents use e-cigarettes to stop smoking contrasts with studies of adults, who are more likely to use e-cigarettes to try to stop smoking cigarettes."

Miech said that removing flavoring from e-cigarettes could be one way to reduce use among youth, while still making e-cigarettes available to adults who want to use them to quit smoking. He points out that in 2009 the Food and Drug Administration prohibited the addition of flavors (except menthol) to cigarettes, which likely helped reduce youth cigarette use.

Tables and figures
Monitoring the Future
Related story on teens and cigarette use
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Surveys of nationally representative samples of American high school seniors were begun in 1975, making the class of 2015 the 41st such class surveyed. Surveys of 8th- and 10th-graders were added to the design in 1991, making the 2015 nationally representative samples the 25th such classes surveyed. The 2015 samples total 44,892 students located in 382 secondary schools. The samples are drawn separately at each
grade level to be representative of students in that grade in public and private secondary schools across the coterminous United States.

The findings summarized here will be published in January in a forthcoming volume: Johnston, L. D., O'Malley, P. M., Miech, R.A., Bachman, J. G., & Schulenberg, J. E. (2016). Monitoring the Future national results on adolescent drug use: Overview of key findings, 2015. Ann Arbor, Mich.: Institute for Social Research, the University of Michigan. The content presented here is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute on Drug Abuse, or the National Institutes of Health.