



# E-Cigarette Use Among Youth and Young Adults: A Report of the Surgeon General (2016)

## Fact Sheet

### Introduction

In December 2016, the United States Surgeon General's Office issued the first federal agency report on the use of electronic cigarettes (e-cigarettes) among youth and young adults in the United States. The report provides a comprehensive overview of the history, epidemiology, and health effects of e-cigarette use among youth and young adults, as well as information on the marketing and promotion of electronic cigarette products. The report also examines how existing and proposed public health policies can be used to address the increase in electronic cigarette product use among youth and young adults.

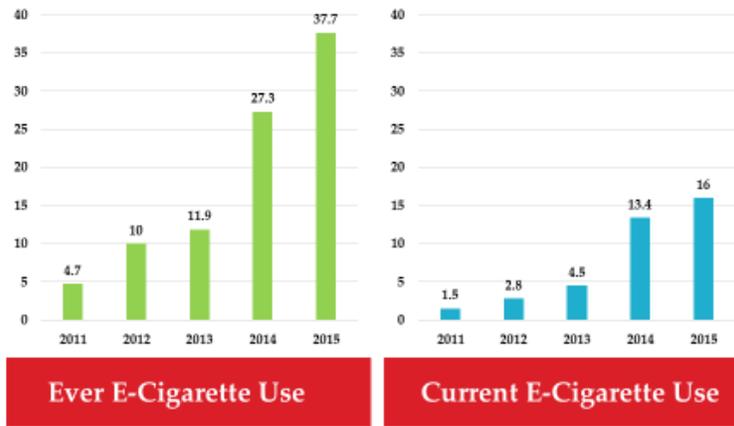
The issue brief below summarizes the report's key findings, including: (1) patterns of e-cigarette use among U.S. youth and young adults, (2) health effects, (3) marketing and promotion of e-cigarettes, and (4) e-cigarette policy and program recommendations.

### Patterns of E-Cigarette Use

Electronic cigarettes are now the most commonly used form of tobacco among youth in the United States. Youth e-cigarette use rates have surpassed the use rates for conventional tobacco products, including cigarettes, cigars, and chewing tobacco. The Surgeon General's 2012 report [\*Preventing Tobacco Use Among Youth and Young Adults\*](#) determined that the rate of youth and young adult conventional tobacco use was declining, however, evidence now indicates a dramatic increase in the use of e-cigarettes among youth and young adult populations during that same time period.

- In 2015, more than 1 in 4 U.S. adolescents (27.7%) reported having used e-cigarettes, including nearly 4 in 10 (37.7%) high school students.
- The rate of current e-cigarette use (i.e. using an e-cigarette in the past 30 days) among middle (5.3%) and high school (16%) students exceeded all other tobacco products.
- From 2011-2015, the rate of "ever use" among high school students increased nine-fold (4.7% to 37.7%) and "current use" increased ten-fold (1.5% to 16%).
- An estimated 2.3 million high school students and 620,000 middle school students currently use e-cigarettes.
- In 2014, 1 in 3 (35.8%) young adults (18-24) reported having used e-cigarettes, and 1 in 8 reported current e-cigarette use.

## Patterns of Use Among U.S. High School Students



### Health Effects

The sharp increase in e-cigarette use among youth and young adults underscores the need for comprehensive scientific research on the short and long-term health effects associated with e-cigarette use. The Report of the Surgeon General provides a review of existing scientific literature on adverse health effects associated with nicotine exposure, and potential adverse effects associated with e-cigarette use and secondhand exposure to e-cigarette aerosol. The major conclusions of the report include:

- Adolescent brains are “particularly sensitive to nicotine’s effects” and youth exposed to nicotine face an increased risk developing a substance abuse disorder, attention or learning problems, and depression.
- Nicotine can cross the placenta and has known effects on fetal and postnatal development.
- E-cigarette aerosol is not harmless water vapor. E-cigarettes contain several dangerous chemicals, including known carcinogens.
- Ingestion of e-cigarette aerosol containing nicotine can cause acute toxicity and may result in nausea, vomiting, and, in rare instances, death.
- The long-term health impacts of frequent exposure to e-cigarette aerosol (direct or secondhand) are still “not well understood.”
- Evidence of e-cigarette effectiveness as a cessation device among adults remains uncertain – although most peer-reviewed studies indicate a positive association between e-cigarette use and cessation. There is no evidence indicating that e-cigarettes are effective cessation tools for youth.

### Marketing and Promotion

The e-cigarette marketplace is diverse and rapidly changing. E-cigarettes entered the U.S. market in 2006-2007, and since that time retail sales have increased from several million to more than \$3 billion per year.

During this same period, annual marketing expenditures have increased from thousands to more than \$125 per year. E-cigarette marketing and promotion now includes magazine and print advertising, television advertising, event sponsorships, online advertising, and point-of-sale promotions. Most advertising and promotion restrictions for conventional tobacco products (i.e. radio/television bans) do not extend to e-cigarettes. As a result, youth and young adults are frequently exposed to marketing and promotion of e-cigarettes across all forms of media.

- E-cigarette manufacturers are currently not required to report marketing expenditures, making annual estimates uncertain.
- In 2014, nearly 1 in 2 (47%) of adolescents (12-17) and 8 in 10 young adults (18-21) were exposed to e-cigarette magazine ads, and 6 in 10 (62%) of adolescents saw at least one e-cigarette television ad. Overall, more than 18 million middle and high school students were exposed to at least one e-cigarette ad.
- Magazines with high youth readership have 4 times the number of e-cigarette ads as magazines with high adult readership.



## E-Cigarette Policy and Practice Implications

Despite identified gaps in scientific evidence and uncertain short and long-term harm, the report highlights the need to reduce youth e-cigarette use and access. Potential public policy approaches include: (1) clean indoor air policies, (2) licensing and sales restrictions, (3) taxation and minimum price policies, (4) marketing restrictions, and (5) youth educational initiatives. These policy approaches have effectively reduced youth use of conventional tobacco products and can be extended to include the diverse and rapidly evolving e-cigarette market.

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