



## NATIONAL SAFETY COUNCIL

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### Position/Policy Statement

#### Electronic Nicotine Delivery Systems (ENDS)

##### POSITION / POLICY

The National Safety Council supports policies aimed at reducing Electronic Nicotine Delivery Systems (ENDS) use, with a particular emphasis on policies that restrict e-cigarette use by teenagers.

##### JUSTIFICATION

Teenage use of traditional, combustible cigarettes has declined steadily in recent years. However, this decline has been accompanied by a startling and dramatic increase in the number of teenagers who use Electronic Nicotine Delivery Systems (ENDS) such as e-cigarettes. In 2018, 3.6 million middle and high school students had used e-cigarettes within the previous 30 days.<sup>1</sup> E-cigarettes have quickly become the most commonly used tobacco products among middle and high school students, while regular cigarettes have remained the choice of adult smokers.<sup>2,3</sup> Moreover, a majority of adults who use e-cigarettes continue to use traditional cigarettes.<sup>4</sup> While research into the health effects of e-cigarettes is limited, there is evidence that the aerosol from e-cigarettes can contain harmful chemicals that can contribute to lung disease and other serious health conditions.<sup>5</sup> Moreover, while e-cigarette aerosol generally contains fewer toxic chemicals than traditional cigarettes, they are not harmless. They can contain harmful and potentially harmful substances including nicotine, heavy metals such as lead, volatile organic compounds, and cancer-causing agents.<sup>6</sup> Nicotine exposure during adolescence can harm the developing brain and can increase risk for future addiction to other drugs.<sup>7</sup>

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<sup>1</sup> [https://www.cdc.gov/mmwr/volumes/67/wr/mm6745a5.htm?s\\_cid=mm6745a5\\_w](https://www.cdc.gov/mmwr/volumes/67/wr/mm6745a5.htm?s_cid=mm6745a5_w)

<sup>2</sup> [https://www.cdc.gov/mmwr/volumes/67/wr/mm6722a3.htm?s\\_cid=mm6722a3\\_w](https://www.cdc.gov/mmwr/volumes/67/wr/mm6722a3.htm?s_cid=mm6722a3_w)

<sup>3</sup> [https://www.cdc.gov/mmwr/volumes/67/wr/mm6744a2.htm?s\\_cid=mm6744a2\\_w](https://www.cdc.gov/mmwr/volumes/67/wr/mm6744a2.htm?s_cid=mm6744a2_w)

<sup>4</sup> <https://www.cdc.gov/mmwr/volumes/65/wr/mm6542a7.htm>

<sup>5</sup> <https://www.health.harvard.edu/blog/electronic-cigarettes-good-news-bad-news-2016072510010>

<sup>6</sup> <https://www.drugabuse.gov/related-topics/trends-statistics/infographics/teens-e-cigarettes>

<sup>7</sup> <https://e-cigarettes.surgeongeneral.gov/documents/surgeon-generals-advisory-on-e-cigarette-use-among-youth-2018.pdf>

## BACKGROUND

E-cigarettes is a blanket term used to refer to a variety of products that allow users to inhale aerosol, including Electronic Nicotine Delivery Systems (ENDS).<sup>8</sup> While designed to vaporize e-liquids, many ENDS can be used to vaporize other substances, including THC, the active ingredient in marijuana.<sup>9</sup> The most common ENDS are typically composed of a rechargeable battery, an atomizer, replaceable cartridges of e-liquids, and a mouthpiece used to inhale aerosol.<sup>10</sup> ENDS can come in a variety of forms, including disposable e-cigarettes, e-pipes, e-cigars, and devices with medium- and large-sized e-liquid tanks.<sup>11</sup> Youth are gravitating towards USB- and other easily disguised e-cigarettes.<sup>12</sup>



Photo of Juul e-cigarette, one of the most popular in the U.S.

Marketed as a healthier alternative to traditional combustible cigarettes, there is some anecdotal evidence that adult smokers can use ENDS to wean themselves off tobacco products.<sup>13</sup> However as previously noted, a majority of adults who use e-cigarettes continue to use traditional cigarettes.<sup>14</sup> General consensus is that e-cigarettes are likely less harmful to health than combustible cigarettes, but this does not eliminate their health risk.<sup>15</sup>

E-cigarettes currently are not a FDA-approved aid for quitting smoking, as there is insufficient evidence of their effectiveness.<sup>16</sup>

### **Known Health Risks**

Like combustible cigarettes and other tobacco products, ENDS contain nicotine, a highly addictive drug. Nicotine addiction increases the likelihood a young user may try other nicotine delivery vehicles, including combustible cigarettes, and has been attributed to alterations in brain chemistry that increase vulnerability to other addictions.<sup>17</sup> Also, the e-liquids used in ENDS have been associated with accidental poisonings; between 2013 and 2016, accidental ingestions of e-liquids by children increased by 1500%.<sup>18</sup> While the chemical contents of ENDS are not fully disclosed to the public, the chemical diacetyl is commonly found in e-cigarettes and has been associated with lung disease. There also is some evidence that other chemicals present in e-cigarettes and other ENDS can decompose and form formaldehyde and other toxic compounds.<sup>19</sup> These can include heavy metals such as lead, volatile organic compounds, and cancer-causing agents.<sup>20</sup>

<sup>8</sup> [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/about-e-cigarettes.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html)

<sup>9</sup> <https://www.centeronaddiction.org/e-cigarettes/recreational-vaping/beyond-nicotine-vaping-marijuana>

<sup>10</sup> <https://e-cigarettes.surgeongeneral.gov/getthefacts.html>

<sup>11</sup> [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/pdfs/Electronic-Cigarettes-Infographic-508.pdf](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/pdfs/Electronic-Cigarettes-Infographic-508.pdf)

<sup>12</sup> <https://e-cigarettes.surgeongeneral.gov/documents/surgeon-generals-advisory-on-e-cigarette-use-among-youth-2018.pdf>; [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/factsheet/index.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/factsheet/index.html)

<sup>13</sup> <https://www.cnbc.com/2018/11/01/juul-e-cigarettes-are-being-used-to-help-some-adults-quit-smoking.html>

<sup>14</sup> <https://www.cdc.gov/mmwr/volumes/65/wr/mm6542a7.htm>

<sup>15</sup> <https://www.health.harvard.edu/blog/electronic-cigarettes-good-news-bad-news-2016072510010>

<sup>16</sup> [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/pdfs/Electronic-Cigarettes-Infographic-508.pdf](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/pdfs/Electronic-Cigarettes-Infographic-508.pdf)

<sup>17</sup> <https://e-cigarettes.surgeongeneral.gov/knowtherisks.html>

<sup>18</sup> <https://www.health.harvard.edu/blog/electronic-cigarettes-good-news-bad-news-2016072510010>

<sup>19</sup> <https://www.health.harvard.edu/blog/electronic-cigarettes-good-news-bad-news-2016072510010>

<sup>20</sup> <https://www.drugabuse.gov/related-topics/trends-statistics/infographics/teens-e-cigarettes>

## E-Cigarette Flavors

E-cigarette cartridges are sold in a variety of flavors, including menthol, alcohol, fruit, and sweets. These flavored e-cigarette cartridges increase the appeal of e-cigarettes to children and youth. As many as 85% of e-cigarette users between the ages of 12 and 17 years use flavored e-liquids.<sup>21</sup> While these flavorings are generally regarded as safe when consumed, their safety when inhaled is not well known.

## Marketing

In 2016, nearly 80% of youth were exposed to e-cigarette marketing, a key contributor to the increased teenage use of ENDS.<sup>22</sup> NSC supports restricting advertising of ENDS to prevent adolescent exposure to marketing.

## Policies

The National Safety Council supports a comprehensive and multi-faceted approach to addressing the public health concerns posed by Electronic Nicotine Delivery Systems (ENDS). Specifically NSC advocates for policies that address three main objectives: restricting youth access to ENDS products, eliminating disparities between ENDS and tobacco regulations, and increasing public awareness of health risks.

### *Restricting Youth Access*

Use of ENDS products has become particularly prevalent among teenagers and young adults, populations which are particularly vulnerable to nicotine dependence and other adverse health impacts. Consequently, the National Safety Council supports policies aimed at restricting youth access to ENDS products, including:

- **Increased Minimum Age for ENDS Sales.** The National Safety Council supports increasing the minimum age for ENDS sales to 21, to limit the number of adolescent users and to keep ENDS products out of the hands of younger users who are more vulnerable to forming addiction or dependence. This policy mirrors NSC support for an increased minimum age for sale of tobacco products to 21.
- **Enhanced Age Verification.** The National Safety Council strongly opposes the use of ENDS by minors. Vendors and manufacturers must be subject to stringent oversight, and prevented from marketing or selling e-cigarettes and related products to minors. This includes enhanced age verification measures by both online and brick and mortar retailers.
- **Redesigned Packaging and Advertising to Limit Youth Appeal.** Studies have demonstrated that ENDS advertising has saturated underage markets, contributing to underage use of ENDS products. The National Safety Council encourages ENDS manufacturers to redesign product packaging and advertising to limit youth appeal and exposure, and encourages government regulatory agencies to exercise regulatory and

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<sup>21</sup> [https://www.cdc.gov/tobacco/data\\_statistics/sgr/e-cigarettes/pdfs/2016\\_sgr\\_entire\\_report\\_508.pdf](https://www.cdc.gov/tobacco/data_statistics/sgr/e-cigarettes/pdfs/2016_sgr_entire_report_508.pdf)

<sup>22</sup> <https://www.cdc.gov/mmwr/volumes/67/wr/mm6710a3.htm>.

oversight powers to ensure compliance. NSC also supports the use of child-resistant packaging for ENDS cartridges and other products.

- **Restrictions on the Use of Flavored ENDS Cartridges.** As with packaging and advertising, the proliferation of flavored ENDS cartridges has also been associated with widespread use by underage adolescents. One study found that one-third of middle and high school students using ENDS products identified flavoring as a major selling point.<sup>23</sup> NSC supports additional limitations on the sale of ENDS flavored cartridges such as fruit and candy flavors, which are particularly appealing to underage users.

#### *Eliminating Disparities between ENDS and Tobacco Regulations*

- **Expand Smoke-Free Policies to Include ENDS Products.** The proliferation of smoke-free policies in public buildings and parks, restaurants, shops, workplaces, and other venues has been instrumental in reducing consumption and mitigating the risks posed by exposure to second-hand smoke. The National Safety Council encourages policymakers to expand smoke-free policies to include a prohibition of the use of ENDS products in indoor and outdoor spaces.
- **Extend Cigarette Taxes to ENDS Products.** Federal, state, and local taxes on cigarettes and other tobacco products have been demonstrated to be effective at reducing consumption and preventing the initiation of use. Moreover, they can be a valuable source of revenue that can be used to fund important public health and cessation programs. The National Safety Council supports extending these taxes to cover ENDS products in addition to tobacco products.

#### *Increasing Public Awareness of Health Risks*

- **Guarantee Increased Funding for Research.** In contrast to combustible cigarettes and tobacco products, for which decades of research exists, ENDS are relatively new products with very little existing research into the potential health effects of repeated use. The National Safety Council supports increased research into the health effects of these products, so that potential risks are better understood, and so that future policy can be better informed by science.
- **Mandate Increased Transparency from ENDS manufacturers.** Manufacturers are not currently required to report the ingredients used in their products, leading to significant misinformation. For example, nearly 70% of teens surveyed believed flavoring was the only ingredient in their e-cigarettes; only 13% knew that e-cigarettes contained nicotine.<sup>24</sup> Manufacturers should be required to be more transparent about the ingredients and chemicals used in their products, including clear labeling on product packaging.

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<sup>23</sup> <https://www.nytimes.com/2018/11/13/health/juul-ecigarettes-vaping-teenagers.html>

<sup>24</sup> <https://www.drugabuse.gov/related-topics/trends-statistics/infographics/teens-e-cigarettes>

## **Conclusion**

Electronic Nicotine Delivery Systems (ENDS) have exploded in popularity in recent years, such that increased sales have outpaced medical research and knowledge of the near- and long-term health effects of prolonged use. The National Safety Council supports policies aimed at reducing e-cigarette use, including enhancing age verification requirements, increasing funding for research into the health effects of ENDS use, and increasing transparency about ENDS contents.

*This position statement reflects the opinions of the National Safety Council but not necessarily those of each member organization.*

Adopted by the National Safety Council, 2019