E-CIGARETTES AND PUBLIC HEALTH
THE NEXT GENERATION OF TOBACCO PRODUCTS

OVERVIEW
Including the 41,000 who die from exposure to secondhand smoke, smoking kills more than 480,000 Americans a year and remains one of the most preventable causes of death and disease in the U.S.1,2 The American Heart Association, in partnership with leading public health organizations, has worked tirelessly to prevent tobacco-related deaths by supporting tobacco cessation and prevention. Due to cohesive, nationwide efforts, an estimated 8 million premature deaths have been avoided since the 1960s and youth smoking rates have been cut in half since the early 2000s.3

These historical efforts are at risk, however, as tobacco companies try to capture a new generation of smokers with electronic cigarettes (e-cigarettes) and other new tobacco products. Introduced just over a decade ago, these products are perceived to be less harmful than cigarettes and are popular with youth.4

Figure 1: Use of E-Cigarettes in Middle and High School Youth

![Graph showing use of E-Cigarettes in Middle and High School Youth](source: Centers for Disease Control and Prevention)

E-CIGARETTES AT A GLANCE
E-cigarettes are battery-operated devices that deliver nicotine, flavors, and other chemicals to the user in an aerosol. An e-cigarette mimics smoking without combustion where the user inhales aerosol instead of smoke. A recent National Academy of Sciences report concluded that they produce less of certain toxins compared with regular cigarettes.5 Proponents use this to support their claims that e-cigarettes provide a less dangerous alternative for those who smoke regular cigarettes. However, there is evidence that they deliver nicotine and other substances that may be toxic, especially to the cardiovascular system.5,6

Opponents point out that e-cigarettes could continue to support and promote nicotine addiction especially for new smokers. In fact, nearly 20% of those who simply try an e-cigarette go on to become regular users.7 Additionally, there is some evidence that heart rate and diastolic blood pressure increase immediately after using e-cigarettes with nicotine.5 They may also serve as a gateway to combustible cigarettes.5 There is not yet conclusive scientific evidence that they lead to smoking cessation, but they may promote dual use.5

Exposure to e-cigarette liquid can also be harmful. From late 2010 through early 2014, there was an increase in the number of calls to poison control centers due e-cigarette exposure which can include exposure to the nicotine refill liquids.8 E-cigarette devices can also explode and cause burns and projectile injuries.5

USER PROFILE
- Research has painted a broad picture of the typical e-cigarette user:
  - Non-Hispanic whites, current smokers, young adults, and those with a higher education and higher income perceive e-cigarettes as less harmful than combustible tobacco products and are more likely to use them.9
  - 76% of current adolescent users of e-cigarettes also smoke conventional cigarettes.10
  - In 2015, about 3.5% of adults reported using e-cigarettes daily.11

IMPACT ON YOUTH
The rise in the manufacturing and marketing of e-cigarettes has had a huge influence on U.S. youth:
In May 2016, the Food and Drug Administration (FDA) finalized a rule extending its regulatory authority to cover all tobacco products, including vaporizers, vape pens, hookah pens, e-cigarettes, e-pipes, and all other Electronic Nicotine Delivery Systems (ENDS). This rule allows the FDA to regulate the manufacture, import, packaging, labeling, advertising, promotion, sale, and distribution of ENDS. This includes components and parts of ENDS, but excludes accessories. The American Heart Association supports the development and implementation of strong requirements under this rule.

AHA also advocates for:

- Increasing e-cigarette taxation to reduce youth access and purchasing, while retaining a differential with the price of combustible cigarettes by raising their taxes simultaneously.
- Banning the use of characterizing flavors other than tobacco.
- Including e-cigarettes in smoke-free laws and also prohibit the sale and marketing of tobacco to minors.
- Addressing the consequence of product, price, placement and promotion of e-cigarettes.
- Educating healthcare workers to adequately counsel their patients regarding comprehensive tobacco cessation strategies.
- Incorporating e-cigarette use into screening questions at clinical visits and worksite/community health screenings.
- Increasing or maintaining surveillance on the prevalence of e-cigarette use in adults, children, and adolescents.
- Continuing research and surveillance on the short, medium, and long-term physiological effects of e-cigarette nicotine, propylene glycol and glycerol, flavorings and other ingredients.

ASSOCIATION ADVOCATES

In May 2016, the Food and Drug Administration (FDA) finalized a rule extending its regulatory authority to cover all tobacco products, including vaporizers, vape pens, hookah pens, e-cigarettes, e-pipes, and all other Electronic Nicotine Delivery Systems (ENDS). This rule allows the FDA to regulate the manufacture, import, packaging, labeling, advertising, promotion, sale, and distribution of ENDS. This includes components and parts of ENDS, but excludes accessories. The American Heart Association supports the development and implementation of strong requirements under this rule.

AHA also advocates for:

- Increasing e-cigarette taxation to reduce youth access and purchasing, while retaining a differential with the price of combustible cigarettes by raising their taxes simultaneously.
- Banning the use of characterizing flavors other than tobacco.
- Including e-cigarettes in smoke-free laws and also prohibit the sale and marketing of tobacco to minors.
- Addressing the consequence of product, price, placement and promotion of e-cigarettes.
- Educating healthcare workers to adequately counsel their patients regarding comprehensive tobacco cessation strategies.
- Incorporating e-cigarette use into screening questions at clinical visits and worksite/community health screenings.
- Increasing or maintaining surveillance on the prevalence of e-cigarette use in adults, children, and adolescents.
- Continuing research and surveillance on the short, medium, and long-term physiological effects of e-cigarette nicotine, propylene glycol and glycerol, flavorings and other ingredients.