

## Electronic Cigarettes (E-cigarettes)

- ▶ Electronic cigarettes, or e-cigarettes, are nicotine delivery devices that are relatively new to the U.S. market. E-cigarettes are battery operated, but are designed to look and feel like a cigarette. The nicotine in them is derived from tobacco plants. The potential user is lead to believe that e-cigarettes are a healthier alternative to smoking cigarettes and can be used to help stop smoking.



- ▶ The U.S. Food and Drug Administration (FDA) has not approved the e-cigarette as a cessation aid and it has not been shown to be safe. Preliminary FDA tests of e-cigarettes indicate they contain carcinogens and toxic chemicals such as diethylene glycol, an ingredient used in antifreeze.<sup>1</sup>
- ▶ Nicotine solutions for e-cigarettes are offered in differing strengths and vary by company. Solutions are very concentrated and contain from 500 to more than 1,000 mg of nicotine in one 30 ml or 1 oz. bottle. This creates the potential for overdosing or poisoning as the lethal dose of nicotine for adults is 30 to 60 mg if swallowed, and for children is just 10 mg.<sup>2</sup>
- ▶ E-cigarettes model smoking behavior to youth. Many of the nicotine solutions come in fruit and candy flavors that appeal to young people, including vanilla, chocolate, strawberry, grape, bubble gum, cherry, mint and peach cobbler, among others. This increases the appeal of e-cigarettes to youth, paving the way for them to become a “gateway” to tobacco use.<sup>3</sup>
- ▶ E-cigarettes do not just emit harmless water vapor. Secondhand e-cigarette aerosol contains nicotine, ultrafine particles and low levels of toxins known to cause cancer. The particle concentration is higher than in conventional cigarettes.<sup>4</sup>
- ▶ The best advice for the health of tobacco users is to quit using tobacco. Eliminating tobacco use improves your health and saves you money. For help with quitting, contact NDQuits by calling 1.800.QUIT.NOW (1.800.784.8669) or visiting [www.ndhealth.gov/ndquits](http://www.ndhealth.gov/ndquits).
- ▶ For more information about E-cigarettes, visit the American Legacy Foundation website at [www.legacyforhealth.org/3228.aspx](http://www.legacyforhealth.org/3228.aspx).

### Sources:

Graphic of E-cigarette provided by American Legacy Foundation.

<sup>1</sup> FDA Warns of Health Risks posed by E-cigarettes. U.S. Food and Drug Administration. (2009, July) from <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/2009/ucm173222.htm>.

<sup>2</sup> Indiana Tobacco Prevention and Cessation (2009, May 27). E Cigarettes. Retrieved from <http://.in.gov/itpc/files/ECigarettes.pdf>.

<sup>3</sup> West Virginia Division of Tobacco Prevention and Control. News 2 Use (Summer 2009) E-cigarettes Remain Controversial And Lack The Proof Of Any Health Benefits.

<sup>4</sup> Fuoco, F.C.; Buonanno, G.; Stabile, L.; “Influential parameters on particle concentration and size distribution in the mainstream of e-cigarettes,” Environmental Pollution 184: 523-529, January 2014.

For more information, contact:  
Tobacco Prevention & Control Program  
North Dakota Department of Health  
600 E. Boulevard Ave., Dept. 301  
Bismarck, N.D. 58505-0200  
701.328.3398 or 800.280.5512 / [www.ndhealth.gov/tobacco](http://www.ndhealth.gov/tobacco)

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