

## FACT SHEET

### ELECTRONIC CIGARETTES (E-CIGARETTES)

#### Descriptions

- Electronic cigarettes, or e-cigarettes, are battery-powered devices that heat cartridges containing flavored, liquid nicotine and other additives that deliver nicotine to the user in the form of an aerosol or “vapor.”
- Electronic cigarettes are not lit, although many light up when they are drawn on. These devices are usually made to look like tobacco products, such as cigarettes and cigars.
- Nicotine cartridges come in many flavors, including both tobacco flavors, and fruit or candy flavors, such as strawberry, banana and chocolate.
- The ingredients in e-cigarettes and vapor are currently being studied for their effects on individual health.
- Trends of e-cigarette use are being studied for their effects on population health, particularly the impact on young people and tobacco users who want to quit.
- E-cigarettes have not been tested in U.S. clinical trials as a smoking cessation device.

#### Youth

- The N.C. General Assembly (2013) showed their concern over e-cigarettes’ attractiveness to youth by adding them to the law which bans the sale or distribution of tobacco products to minors (McKenzie, 2013).
- Flavored e-cigarette products may be particularly attractive to young people (CDC, 2013).
- In October, 2013 NBC New York reported the increasing use of e-cigarettes to ingest marijuana, noting that, because of the lack of smell, this vaporized use of marijuana was almost undetectable by others, including parents (Givens & Chang, 2013, Oct. 11).
- Experimentation and use of these products have risen sharply among young people according to a recently released CDC study: *E-cigarette experimentation and recent use doubled among U.S. middle and high school students during 2011–2012, resulting in an estimated 1.78 million students having ever used e-cigarettes as of 2012. Moreover, in 2012, an estimated 160,000 students who reported ever using e-cigarettes had never used conventional cigarettes* (CDC, 2013).
- Nicotine, which is in most e-cigarettes, is addicting, and has been shown to affect brain development of adolescents (Counotte, et al., 2011).

## Pregnant Women, Infants and Children, and Parents/Caretakers

- Epidemiologic evidence strongly supports links between conditions encountered during embryonic and fetal development, including smoking, with low birth weight and adult onset diseases, including atherosclerosis, coronary heart disease, type 2 diabetes, obesity, and cancer. New evidence is prompting studies to document the impact of nicotine in e-cigarettes on the fetus, including the impact on the genes and brain development that may increase the risk of behavioral problems and adult onset diseases. (Murphy, 2012)
- Nicotine is addictive. Nicotine crosses the placenta and can have negative effects (damage lungs, heart, and central nervous system) on the developing fetus. (Maritz, 2009).
- Nicotine is a known poison. Bottles of e-juice, used in e-cigarettes, are a poison risk for small children and pets (Yamin, Bitton, & Bates, 2010).
- Some e-cigarette vapors and refill fluids, known as e-juice, have tested to be toxic to fetal and embryonic mouse cells, which means expectant mothers' use of e-cigarettes may prove hazardous for the unborn (Talbot, 2013).
- Exhaled vapor from some e-cigarettes contains hazardous chemicals and particles that collect on surfaces, possibly posing risks to children and pets (Williams, 2013).

## Smokers Who Want to Quit

- It's illegal for e-cigarettes to be marketed as a smoking cessation aid. A U.S. District Court of Appeals judge said if they make medical claims, like the product helps people quit smoking, they'd need to go through a formal FDA process. (CDC 2013). A number of electronic cigarette companies have received warning letters from the FDA for making such claims (FDA, 2010).
- The ads for electronic cigarettes often tell smokers they can use e-cigarettes anywhere they are not allowed to smoke. This is not the case, as all U.S. airlines and other places have banned the use of electronic cigarettes (Davies, 2013).
- Studies testing electronic cigarettes as a tobacco cessation aid have had mixed results, at best. They may help some quit, or they may impede quitting, or even increase addiction to nicotine in others (Glantz, 2013).
- While scientists agree that e-cigarettes expose their users to far lower levels of the toxic chemicals -- such as poisons, carcinogens and metals -- found in cigarette smoke, many of the chemicals are still present, just in much lower levels (Williams, 2013).
- E-cigarette vapor is created with either propylene glycol, which is a known irritant and asthma trigger, or vegetable glycerin. While these products are generally considered safe for humans, they have not been studied for use while heated or over a long period of frequent exposure (Williams, 2013).

## Regulation

- As of December, 2013 electronic cigarettes and their advertising and promotion are not regulated. The U.S. Food and Drug Administration (FDA) has announced its intention to regulate electronic cigarettes as tobacco products, but no regulations have yet been issued (FDA, 2011, April).
- As of December, 2013 E-cigarettes manufacturers have not applied to FDA to have them approved as a smoking cessation aid.
- In September, 2013, top law enforcement officials from 41 states, including NC, urged the FDA to promptly issue rules governing the sale of e-cigarettes (Fisher, 2013).
- Electronic cigarette manufacturers do not always accurately label the amount of nicotine in their products. (Cheah et al., 2012 and Trtchounian & Talbot, 2011). Of 65 compounds found in e-cigarette aerosol, 26 are listed on the FDA established list of harmful and potentially harmful substances (Williams, 2013).

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