

## FREQUENTLY ASKED QUESTIONS ABOUT E-CIGARETTES

### What is an e-cigarette/vapor product?

- A battery-powered device that heats a liquid solution or gel to produce a vapor for inhalation.
- Some look similar to cigarettes and even have a tip that lights up when the user inhales, often called cig-a-likes. Other vapor products look less like cigarettes but serve the same purpose. Some are refillable and rechargeable, while others are disposable.



- Nicotine absorption levels differ significantly between first generation devices, such as those that resemble cigarettes, and new generation devices. New generation devices have larger heating elements, called atomizers, with a higher wattage output which enables a greater level of nicotine to be delivered to the blood stream. The new generation devices are often called tank systems.<sup>i</sup>
- The liquid solution comes in various flavors and nicotine levels.
- Use of an e-cigarette is often referred to as “vaping” rather than “smoking.”

### Is their popularity increasing?

- A majority of Oklahoma’s middle and high school students believe that e-cigarettes are either somewhat or very harmful to one’s health.<sup>ii</sup>
- E-cigarette use among middle and high school students tripled between 2013 and 2015 in Oklahoma.<sup>ii</sup>
- Among Oklahoman adults who are current or former smokers, 27.5% have used both e-cigarettes and conventional cigarettes simultaneously.<sup>iii</sup>

### Are they safe? Are they regulated?

- E-cigarettes do not contain traditional tobacco, but they do contain nicotine, which is a tobacco-derived product. As a result, a federal court has determined they can be regulated as a tobacco product. The Food and Drug Administration finalized a rule to extend its regulation of tobacco products – [Deeming Tobacco Products To Be Subject to the Federal Food, Drug, and Cosmetic Act](#) – giving it authority to cover all tobacco products including e-cigarettes and vapor products. The final rule went into effect August 8, 2016.
- E-cigarette aerosol is not just water vapor. Exhaled aerosol contains propylene glycol, glycerol, flavorings, and nicotine, along with acetone, formaldehyde, acetaldehyde, propanal diacetyl, and triacetyl.<sup>iv</sup>

## MORE INFORMATION ABOUT E-CIGARETTES

### 1) Minors should not have access to e-cigarettes/vapor products.

- The nicotine present in e-cigarettes can negatively affect the developing brain.<sup>v</sup> E-cigarettes/vapor products should therefore not be made available to minors.
- E-cigarette/vapor product use is increasing among middle and high school students, while the use of combustible cigarettes among youth is decreasing.
  - Between 2013 and 2015, there was an 8.8% decrease in combustible cigarette use among Oklahoma high school students, and a 14.6% decrease in combustible cigarette use among Oklahoma middle school students.<sup>vi</sup>
  - Between 2013 and 2015, there was a 201.6% increase in e-cigarette use among Oklahoma high school students, and a 157.7% increase in e-cigarette use among Oklahoma middle school students.<sup>vi</sup>

### 2) There are safer and more effective ways to quit smoking combustible cigarettes.

- Cigarettes and other combustible tobacco products are so harmful that quitting cigarettes completely is the only way to achieve health benefits. Vapers who use e-cigarettes while continuing to use combustible cigarettes are not improving their health.
- E-cigarettes/vapor products contain cancer-causing chemicals (carcinogens) and nicotine.<sup>vii</sup>
  - Nicotine is as addictive as heroin and cocaine<sup>viii</sup> and is toxic at certain doses.<sup>ix</sup>
  - Nicotine affects the nervous system and heart and can be absorbed into the body through inhalation, ingestion and skin contact.<sup>ix</sup>
  - Refill cartridges for e-cigarettes with high nicotine content are possibly life-threatening, particularly for children.<sup>x</sup>
- Among e-cigarette/vapor products, the concentration of chemical contaminants and nicotine has been shown to vary greatly. This means these products may provide uncontrolled doses of harmful contaminants.<sup>xi,xii</sup>
- Some survey data state that people believe e-cigarettes are less harmful than FDA-approved nicotine replacement products such as patches, gum, or lozenges, which is untrue. FDA-approved products provide controlled doses of nicotine and have been tested and regulated as cessation products.<sup>xii</sup>
- E-cigarette and vapor products have not been adequately tested nor approved as tobacco cessation devices. The safest alternative to the use of traditional tobacco products is complete cessation.

- While some people claim to have quit combustible cigarettes using e-cigarettes/vapor products, early studies indicate that quit rates are not significantly greater with vapor products than nicotine replacement therapy products that have been licensed, tested and approved for this purpose.<sup>xiii</sup> Completion of the Oklahoma Tobacco Helpline’s multi-unit call program when combined with FDA-approved nicotine replacement therapy has been shown to result in a significantly higher quit rate.<sup>xiv</sup>

### 3) E-cigarettes/vapor products should not be considered “clean” indoors.

- According to one study, within three minutes, e-cigarettes emit particulate matter (PM<sub>2.5</sub>) in indoor air that exceeds the WHO air quality guideline value for short term exposure.<sup>x</sup>
- The vapor produced from an e-cigarette or vaping device is *not* water vapor. E-cigarettes/vapor products emit elevated levels of chemicals, including propylene glycol, glycerine, tobacco specific nitrosamines and other tobacco-related contaminants.<sup>xii</sup>
  - Propylene glycol may cause respiratory irritations and possibly increase the risk for asthma.<sup>x</sup>
  - Glycerine may cause lipid pneumonia on inhalation.<sup>x</sup>
- In addition, certain cancer-causing (carcinogenic) substances and nicotine are also present in the vapor produced by e-cigarettes at some level.<sup>xii</sup>
- E-cigarettes and vapor products should not be used indoor or in cars, or around children. Secondhand vapor carries toxins with it that impact non-smokers/non-vapers. Studies have shown that non-smokers who are passively exposed to e-cigarettes absorb nicotine.<sup>xv</sup>
- MRI images indicate that there are changes in the brain after one hour of moderate secondhand smoke exposure to cigarettes, most likely due to nicotine exposure.<sup>xvi</sup> Nicotine and other cigarette contaminants are released in the vapor of e-cigarettes exposing bystanders to harmful chemicals at some level. Indoor spaces should be free of these contaminants to minimize negative health consequences.

**We need much more research on the impact of vaping on cancer, heart disease, long-term health consequences and youth initiation to tobacco products.**

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