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.
- 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.
- E-cigarette use among middle and high school students tripled between 2013 and 2015 in Oklahoma.
- Among Oklahoman adults who are current or former smokers, 27.5% have used both e-cigarettes and conventional cigarettes simultaneously.

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 diacetin, and triacetine.
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. 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.
  - 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.

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.
  - Nicotine is as addictive as heroin and cocaine and is toxic at certain doses.
  - Nicotine affects the nervous system and heart and can be absorbed into the body through inhalation, ingestion and skin contact.
  - Refill cartridges for e-cigarettes with high nicotine content are possibly life-threatening, particularly for children.
- 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.
- 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.
- 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.

Revised 10.26.16
• 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.\textsuperscript{xiii} 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.\textsuperscript{xiv}

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

• According to one study, within three minutes, e-cigarettes emit particulate matter (PM\textsubscript{2.5}) in indoor air that exceeds the WHO air quality guideline value for short term exposure.\textsuperscript{x}

• 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.\textsuperscript{xii}
  
  o Propylene glycol may cause respiratory irritations and possibly increase the risk for asthma.\textsuperscript{x}

  o Glycerine may cause lipoid pneumonia on inhalation.\textsuperscript{x}

• In addition, certain cancer-causing (carcinogenic) substances and nicotine are also present in the vapor produced by e-cigarettes at some level.\textsuperscript{xii}

• 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.\textsuperscript{xv}

• 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.\textsuperscript{xvi} 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.
REFERENCES


Revised 10.26.16