



Know the Facts on Electronic Cigarettes and Vaping

A Tobacco Free Wichita Coalition Position Paper

Purpose: *The purpose of this paper is to educate the community and our partners about the most up-to-date research on Electronic Nicotine Delivery Systems (ENDS), electronic smoking devices, and other vaping products. For the purpose of this paper, these devices will collectively be referred to as “ENDS”.*

Position: It is the position of Tobacco Free Wichita Coalition that enough information is available to determine that **the use of ENDS is harmful.**

ENDS expose users and non-users to harmful chemicals.

1. Nicotine is a poison.

- Nicotine has a relatively high toxicity. Historically, nicotine has been used as an agricultural insecticide. However, incidents of worker-related nicotine poisoning led to the more common use of alternative insecticide products¹.
- Certain concentrations of liquid nicotine can be harmful—and even lethal—to children in doses as small as one-half teaspoon².
- Nicotine poisoning symptoms, such as vomiting, dizziness, headache, fast/irregular heartbeat, seizures, and death can occur through ingestion, inhalation, and skin contact³.
- Kansas Poison Control Center received 110 calls involving ENDS and liquid nicotine from 2014-2015, a significant increase from previous years⁴

2. Aerosol from ENDS is not “harmless water vapor”.

- ENDS aerosol is a new source of Volatile Organic Compounds and ultrafine/fine particles in the indoor environment, resulting in “passive vaping”.⁵
- Exhaled ENDS aerosol has been found to contain: heavy metals, nicotine, diacetyl (causes “popcorn lung”), carcinogenic tobacco-specific nitrosamines, diethylene glycol, propylene glycol, acetone, formaldehyde, and many others.
- Human lung cells that are exposed to ENDS aerosol and flavorings—especially cinnamon—show increased oxidative stress and inflammatory responses⁵.
- Exposure to ENDS aerosol has demonstrated absorbed nicotine (measured as cotinine) in FDA studies at rates comparable to persons exposed to secondhand cigarette smoke⁵.
- There is a risk of thirdhand exposure to nicotine released from ENDS aerosol that deposits on indoor surfaces⁵.

¹ <http://www.toxipedia.org/display/toxipedia/Nicotine+Toxicity>

² <http://www.aapcc.org/prevention/tobacco-liquid-nicotine/>

³ <http://www.drugs.com/sfx/nicotine-side-effects.html>

⁴ University of Kansas Hospital – Poison Control Center – Kansas E-Cigarette Related Poisonings 2014-2015

⁵ <http://www.no-smoke.org/pdf/ecigarette-secondhand-aerosol.pdf>

ENDS are not proven effective for tobacco cessation.

- A 2014 study of Kansas ENDS users found that the vast majority also continue to smoke conventional cigarettes (a.k.a. dual-use)⁶.
- The U.S. Preventive Services Task Force (USPSTF) concluded that current evidence is insufficient to recommend ENDS for tobacco cessation in adults, including pregnant women.
- The American Academy of Family Physicians (AAFP) recommends that clinicians direct patients who use tobacco to other FDA-approved cessation interventions with established effectiveness and safety.⁷ Further, AAFP encourages all members to screen for ENDS use in all age groups and to recommend evidence-based smoking cessation interventions⁸.

Worksites should include ENDS in tobacco free policies.

- A report from the National Institute for Occupational Safety and Health (NIOSH) recommends that all workplaces become tobacco free and include ENDS in the policy, to protect workers from the occupational hazards of tobacco and the effects of secondhand exposure to tobacco smoke and emissions from ENDS⁹.

ENDS and Youth

- **Since 2011, ENDS use among high schoolers has increased ten-fold (16%) with a nearly nine-fold increase in use among middle school students (5.3%)¹⁰.**
- Use of ENDS by youth exceeded cigarette use for the second year in a row in 2015¹⁰.
- Over 20% of middle school students who used ENDS had never smoked traditional cigarettes; thus creating a new nicotine user¹¹.
- Tobacco companies are now the largest manufacturers of ENDS worldwide. Big Tobacco continues to target their products to young people using celebrities and candy-like flavors.
- Regulations by the U.S. Food and Drug Administration (FDA) in 2016 make it illegal for anyone younger than 18 to purchase ENDS¹².
- It has been illegal for minors to purchase ENDS in Kansas since 2013¹³.

(KSA 79-3321): It shall be unlawful for any person:

- to sell, furnish or distribute cigarettes, electronic cigarettes or tobacco products to any person under 18 years of age.
- who is under 18 years of age to purchase or attempt to purchase cigarettes, electronic cigarettes or tobacco products.
- who is under 18 years of age to possess or attempt to possess cigarettes, electronic cigarettes or tobacco products¹³.

⁶ <http://www.sciencedirect.com/science/article/pii/S0091743514003417>

⁷ <http://www.aafp.org/news/health-of-the-public/20150924finaltobaccorec.html>

⁸ <http://www.aafp.org/about/policies/all/nicotine-tobacco-prevention.html>

⁹ <http://www.cdc.gov/niosh/updates/upd-04-02-15.html>

¹⁰ <https://www.tobaccofreekids.org/research/factsheets/pdf/0380.pdf>

¹¹ <http://www.ncbi.nlm.nih.gov/pubmed/24005229?dopt=Abstract>

¹² <http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm506676.htm#new>

¹³ <http://www.ksrevenue.org/pdf/CigTobaccoTaxLawsRegs.pdf>