

Statistics

Electronic Cigarettes:

- Entered the market in 2007
- Marketed as safer than cigarettes
- Unregulated tobacco products
- “Nicotine free” contain nicotine
- 500 brands, 7,700 flavors, 12 billion dollars in annual sales
- Aggressive marketing to youth-cartoons and candy flavors
- Advertised on prime time television, the internet, and social media sites
- Teen vapers are four times as likely to smoke cigarettes
- Gateway to smoking
- 2011-2015: 900% increase in e-cig use among high school students

(ALA, 2017; Alawsi, Nour, & Prabhu, 2015; “Gateway to”, 2015; Grana, 2013; Primack, Soneji, Stoolmiller, Fine, & Sargent, 2015; Raloff, 2014; Rosen & Raloff, 2015; Wills, Knight, Williams, Pagano, & Sargent, 2015; Zimlich, 2015)

Toxins

- Nicotine
- Silicate
- Metals such as silver, iron, and aluminum
- Dangerous nanoparticles including tin, chromium, and nickel
- Solvents such as glycerin, propylene glycol, diethylene glycol, carbonyls, and formaldehyde
- Diacetyl in flavored e-cigs
- US Surgeon General Public Statement: e-cig aerosol is unsafe, and teen vapers pose a significant public health concern

(ALA, 2017; Raloff, 2014; Williams, Villarreal, Bozhilov, Lin, and Talbot, 2013)

Health Risks For Teens

- Toxic substance concentration levels equal to or higher than traditional cigarette smoke
- Known carcinogens
- Nicotine is an addictive substance
- Detrimental to adolescent brain development
- Brief nicotine exposure may condition adolescent brain for future substance abuse
- May increase likelihood of lasting psychiatric disorders
- May impact memory, emotion, and behavioral regulation
- Lung irritation with eventual respiratory disease
- Second hand emissions contain carcinogens
- Poisonings with cartridge leaks
- Explosions leading to burns
- Nanoparticle size most toxic - can leave permanent deposits in the lung’s tiniest deepest airways
- Irreversible lung damage
- triggers inflammation linked with asthma, stroke, heart disease, and diabetes
- Diacetyl in flavored e-cigs-banned from popcorn flavoring due to devastating and irreversible lung disease and related deaths-reemerged in e-cigs

(ALA, 2016; ALA, 2017; Grana, 2013; Raloff, 2015; Williams et al., 2013; Yuan, Cross, Loughlin, and Leslie, 2015)