

Current Health Evidence on Exposure to E-cigarettes

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Components of E-cigarette Vapor

Nicotine, propylene glycol, glycerin and flavorings.

Most flavorings designated as generally-recognized-as-safe (GRAS) by the FDA, but designations are for consumption in food, not inhalation.

Creates an aerosol that may contain formaldehyde, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbon, tobacco-specific nitrosamines, nickel, chromium, diacetyl, silicate particles, nicotine, and other elements.

(National Academies, 2018; WHO, 2016)



Impacts on Air Quality

Conclusion 3-1. There is conclusive evidence that e-cigarette use increases airborne concentrations of particulate matter and nicotine in indoor environments compared with background levels.

“...e-cigarettes can contribute to substantial air pollution, especially in places with a large number of vapers”

(National Academies, 2018)



Potential Health Impacts

Conclusion 5-1. There is conclusive evidence that in addition to nicotine, most e-cigarette products contain and emit numerous potentially toxic substances.

Chemicals and ultrafine particles known to be toxic, carcinogenic, and/or to cause respiratory and cardiac disease.

“...e-cigarettes likely have cardiovascular and noncancer lung disease risks similar to those associated with smoking conventional cigarettes” (Glanz and Bareham 2018)

(National Academies, 2018)



Secondhand vapor

“... vaping contributes to some level of indoor air pollution, which, although lower than what has been observed from secondhand combustible tobacco cigarettes, is **above the smoke-free level recommended by the U.S. Surgeon General...**

As with secondhand smoke, children, pregnant women, the elderly, and patients with cardiorespiratory diseases may be at special risk.”

-National Academies of Sciences, Engineering, and Medicine 2018

Vaping in the Workplace

“Because e-cigarettes are a potential source of pollutants (such as airborne nicotine, flavorings, and thermal degradation products), **their use in the indoor environment should be restricted, consistent with current smoking bans**, until and unless research documents that they will not significantly increase the risk of adverse health effects to room occupants.”



(American Industrial Hygiene Association, 2014)

Emerging Best Practices

“State, local, tribal, and territorial governments should implement population-level strategies to reduce e-cigarette use among youth and young adults, **such as including e-cigarettes in smokefree indoor air policies...**”

(U.S. Surgeon General Report, 2016)

E-Cigarette Use Among Youth and Young Adults

A Report of the Surgeon General



U.S. Department of Health and Human Services

Emerging Best Practices

The World Health Organization has called on governments to consider banning vaping in places where smoking is prohibited.

As of April 2018, **13** US states and **620** localities prohibit the use of e-cigarettes in places where conventional cigarette smoking is prohibited.



**World Health
Organization**

(WHO, 2016; American Nonsmokers' Rights Foundation, 2018)