# E-Cigarettes

## Countering Industry Arguments

**Tobacco and e-cigarette companies oppose regulating e-cigarettes because restricting the marketing, flavors, use, and sales of these addictive products are a threat to their business. Below are common arguments used by the companies against proposals to strictly regulate (including ban) e-cigarettes and evidence-based counterarguments.**

**INDUSTRY ARGUMENT: Using e-cigarettes is less harmful than smoking conventional cigarettes.**

**Response:** Many things are less harmful than smoking conventional cigarettes. They are a uniquely deadly product that kills millions of people every year. However, e-cigarettes are not harmless. The World Health Organization (WHO) is clear that e-cigarettes are "undoubtedly harmful."[1] The vast majority of e-cigarettes contain nicotine, which is addictive. When nicotine is absorbed into the bloodstream, it can increase blood pressure, heart rate, and, over time, narrow arteries (the vessels that carry blood), leading to heart disease and stroke. The use of nicotine in any form by pregnant women and youth is dangerous because it carries health risks for the developing fetus' brain and lungs[2,3] and can cause harmful changes to the developing adolescent brain.[4] E-cigarette emissions also contain many other harmful constituents, including 80 compounds such as formaldehyde (a known carcinogen), acetaldehyde (a possible carcinogen), acrolein (toxin) and metals such as nickel, chromium and lead.[5]

The health risks of e-cigarette use are also very user dependent. If a smoker only uses e-cigarettes sometimes, for example in places where smoking is prohibited, and continues to smoke otherwise (a behavior known as "dual use"), they are not reducing their health risks.[3,4] Exclusive e-cigarette use still carries more health risks than quitting smoking entirely.[4,5]

**INDUSTRY ARGUMENT: Using e-cigarettes long-term is not as bad as smoking.**

**Response:** The health impacts of long-term e-cigarette use are not well understood since they have been in widespread use for less than 15 years. It may be a long time before conclusive evidence on the harms of long-term e-cigarette use at the population-level emerges. However, long-term exposure to the metals founds in e-cigarette emissions, such as nickel, chromium, manganese and lead, has been linked to some cancers, organ damage and other negative health effects.[6,7] It is reasonable to assume that long-term e-cigarette use could lead to a range of negative health impacts.

Most e-cigarettes contain nicotine, which is highly addictive, and can cause harmful changes to the developing adolescent brain and has been linked to negative health outcomes for the developing fetus.[3] It took many decades for the full extent of the devastating health impacts of cigarettes to be understood, we should not make the same mistake with e-cigarettes.

**INDUSTRY ARGUMENT: Youth should not smoke nor use e-cigarettes. However, some are going to engage in risky behavior. Using e-cigarettes is better than smoking.**

**Response:** Many things are less harmful than smoking conventional cigarettes. They are a uniquely deadly product that kills millions of people every year. However, e-cigarettes are not harmless. E-cigarettes contain nicotine, which is highly addictive. In addition, the use of nicotine in any form by youth can cause harmful changes to the developing adolescent brain.[4] E-cigarette emissions also contain many harmful constituents, including 80 compounds such as formaldehyde (a known carcinogen), acetaldehyde (a possible carcinogen), acrolein (toxin) and metals such as nickel, chromium and lead.[5]

Another troublesome impact of e-cigarette use among youth concerns a possible "gateway effect" in which e-cigarette use leads to smoking. According to the U.S. National Academies of Sciences, Engineering, and Medicine (NASEM), there is substantial evidence that e-cigarette use increases the risk of smoking initiation among youth and young adults.[5]

**INDUSTRY ARGUMENT: E-cigarettes are 95% safer than smoking conventional cigarettes.**

**Response:** The argument that using e-cigarettes is 95% safer than cigarette smoking is based on opinion and not on real evidence. The figure "95%" emerged from a two-day workshop in 2013, where 12 participants, none of whom were experts in tobacco control and some with financial ties to the e-cigarette and tobacco industry, discussed their perceptions of the relative harm of e-cigarettes compared to conventional cigarettes.[8] The prestigious scientific journal *The Lancet* has called the basis of this claim "extraordinarily flimsy." [9]

The current body of independent scientific evidence finds that e-cigarettes are not a safe product. This is because most e-cigarettes contain nicotine, which is an addictive chemical that can cause serious health harms such as cardiovascular disease and stroke. In addition, the use of nicotine in any form by youth is unsafe and can damage the developing adolescent brain.[3] E-cigarette emissions also contain other harmful constituents, including 80 compounds such as acetaldehyde (possible carcinogen), formaldehyde (known carcinogen), acrolein (toxin) and metals such as nickel, chromium and lead.[4]

**INDUSTRY ARGUMENT: Banning flavors (other than tobacco flavor) will mean less smokers switch and maybe even returning to smoking.**

**Response:** Smokers who switch to e-cigarettes because they want to stop smoking are motivated by health concerns not because they want to use flavored e-cigarettes. Given how e-cigarettes are marketed, flavors are clearly intended to entice young people — many of whom are not smokers — to use the product.

These smokers deserve to have easy access to proven cessation methods such as cessation counseling and nicotine replacement therapies (NRTs), and they should live in countries that strictly regulate tobacco so that they are not enticed into wanting to smoke by aggressive advertising, smelling cigarette smoke in public places and seeing smoking and people engaged in behaviors that resemble smoking in public places.

There are valid reasons for being concerned about flavors in e-cigarettes. A report by the US Surgeon General published in 2016 stated, "While some of the flavorings used in e-cigarettes are generally recognized as safe for ingestion as food, the health effects of their inhalation are generally unknown." The report continued, noting that some of the flavorings found in e-cigarettes have been shown to cause serious lung disease when inhaled.[4]

Banning flavored e-cigarettes is therefore warranted given that e-cigarettes are not effective cessation devices for smokers who want to quit and there are legitimate concerns about flavors attracting youth to an addictive product and about the health impacts of flavorings.

**INDUSTRY ARGUMENT: If e-cigarettes are available, more people will quit smoking and they will be healthier.**

**Response:** While some smokers may have successfully quit smoking solely by using e-cigarettes, at a population level, significant declines in smoking rates solely attributable to e-cigarette use have not been documented. In many countries, research shows that many smokers who start using e-cigarettes become dual users of both products, which increases their health risks. [10,11,12] Another concern is that in many countries where e-cigarettes are accessible, youth uptake has rapidly increased and surpassed adult use.

**INDUSTRY ARGUMENT: E-cigarettes have helped smokers quit in the United Kingdom.**

**Response:** When industry allies cite studies saying smokers quit using e-cigarettes, it is important to consider what tobacco control policies may have been in effect. For example, in the United Kingdom, the government has adopted a tobacco tax regime that has made cigarettes much less affordable. Increasing the price of tobacco products is the strongest policy for driving smokers to quit smoking. It could be that e-cigarettes may have helped former smokers remain addicted to nicotine.

**INDUSTRY ARGUMENT: Making e-cigarettes widely accessible is part of a valid harm reduction approach for smokers trying to quit.**

**Response:** It is important to distinguish between the type of harm reduction promoted by the tobacco and e-cigarette industries and harm reduction as the valid public health approach strategy that aims to reduce the harms stemming from risky behaviors through supervision, regulated access and the engagement of medical or public health professionals. It is grounded in principles of social justice, evidenced-based, and informed by the needs of local communities. [13,14]

The harm reduction approach promoted by the tobacco and e-cigarette industries is different and simplistic: allow widespread and unrestricted access to addictive products. It is promoted by corporations, not local communities. It is driven by profits, not

social justice and independent research. Above all, it rejects strict regulation of, and access to, these harmful products.

**INDUSTRY ARGUMENT: E-cigarettes were developed to help smokers quit.**

**Response:** While commercial e-cigarettes may have been developed initially as a smoking cessation aid, the marketing and targeted user for e-cigarettes has greatly evolved to clearly reach non-tobacco users. Today, young people, regardless of smoking status, appear to be a key target for e-cigarette marketing. E-cigarettes are promoted as a modern lifestyle product and its marketing relies heavily on social media platforms and influencers who are paid to promote e-cigarettes to their followers, many of whom are young. [15,16,17] E-cigarette products also come in flavors that appeal to youth, such as mint, berry, and cotton candy. These marketing tactics may explain why youth e-cigarette use is often higher than adult use (Table 1).

Table 1 Youth and adult e-cigarette prevalence in select countries

| Current e-cigarette use (%) | | |
|---|---|---|
| **Country** | **Youth** | **Adult** |
| Canada | 10.0 | 2.9 |
| Bulgaria | 10.8 | 4.6 |
| Czechia | 11.2 | 5.2 |
| Switzerland | 16.8 | 1.5 |
| Italy | 17.5 | 2.1 |
| Ukraine | 18.4 | 1.7 |
| United States | 27.5 | 3.2 |

**Sources:** WHO Report on the Global Tobacco Epidemic 2019. Appendix XI. Table 11.2. and Table 11.4.

All commercial enterprises ultimately are driven by profits. E-cigarette and tobacco companies are no different and claims about having a public health motive should not be accepted at face value. If claims about wanting to help smokers quit were true, the industry would focus on selling their products as cessation aids, subjecting their products to a more rigorous medicinal product regulatory regime, as with other nicotine replacement therapies. However, there is currently no e-cigarette on the market that has been licensed as a smoking cessation aid anywhere in the world.[20]

The WHO does not endorse e-cigarettes as cessation aids. In the 2019 *Report on the Global Tobacco Epidemic*, WHO concluded that, "unlike the tried and tested nicotine and non-nicotine pharmacotherapies that are known to help people quit tobacco use, WHO does not endorse e-cigarettes as cessation aids." [2]

For tobacco companies, e-cigarettes offer a promising way to help maintain or grow their customer base. Given the addictive nature of nicotine, e-cigarettes carry the possibility that users will transition to smoking conventional cigarettes (a "gateway effect"). Tobacco use is so deadly that, in order to stay in business, the tobacco industry must prioritize hooking a new generation of customers. Tobacco companies began investing heavily in promoting next-generation nicotine products, including e-cigarettes, as global cigarette sales plateaued then steadily declined. [21,22]

**INDUSTRY ARGUMENT: There is no evidence that young people who experiment with e-cigarettes start smoking cigarettes later.**

**Response:** According to the U.S. NASEM, there is substantial evidence that e-cigarette use increases the risk of smoking initiation among youth and young adults.[5] While the risk of youth e-cigarette users becoming smokers may be country dependent, this should not be acceptable anywhere.

**INDUSTRY ARGUMENT: Getting nicotine from vaping is better than from smoking.**

**Response:** Supporters of e-cigarettes emphasize their delivering nicotine as opposed to the other carcinogens in conventional cigarettes. The truth is that many other substances are delivered into the bloodstream when using an e-cigarette, including carcinogens, toxins, and metals. It is still too early to know the long-term impact of inhaling these substances on the human body, but it is clearly misleading to suggest that an e-cigarette only delivers nicotine.

## REFERENCES


1. WHO Report on the Global Tobacco Epidemic, 2019. Geneva: World Health Organization; 2019.
2. U.S. Department of Health and Human Services. The Health Consequences of Smoking — 50 Years of Progress: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.
3. U.S. Centers for Disease Control and Prevention. Substance Use During Pregnancy. Reviewed July 2019. Accessed June 2020.
4. U.S. Department of Health and Human Services. E-Cigarette Use Among Youth and Young Adults: A Report of the Surgeon General — Executive Summary. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2016.
5. National Academies of Sciences, Engineering, and Medicine. 2018. Public health consequences of e-cigarettes. Washington, DC: The National Academies Press.
6. Mishra VK, Kim KH, Samaddar P, et al. Review on metallic components released due to the use of electronic cigarettes. Environmental Engineering Research. 2017;22(2): 131 :131-140.
7. Aherrera, A, Olmedo P, Grau-Perez, et al. The association of e-cigarette use with exposure to nickel and chromium: A preliminary study of non-invasive biomarkers. Environ. Res. 159, 313–320 (2017).
8. Nutt DJ, Phillips LD, Balfour D, et al. Estimating the Harms of Nicotine-Containing Products Using the MCDA Approach. Eur Addict Res 2014; 20:218-225.
9. E-cigarettes: Public Health England's evidence-based confusion. 2015. The Lancet. 386(9996): 829.
10. Owusu D et al. Patterns and trends of dual use of e-cigarettes and cigarettes among U.S. adults, 2015–2018. Preventative Medicine Reports. 2019; 16:101009.
11. Goniewicz et al. Dual use of electronic and tobacco cigarettes among adolescents: a cross-sectional study in Poland. International Journal of Public Health. 2016;61:189–197.
12. Gravely S et al. Prevalence of awareness, ever-use and current use of nicotine vaping products (NVPs) among adult current smokers and ex-smokers in 14 countries with differing regulations on sales and marketing of NVPs: cross-sectional findings from the ITC Project. Addiction. 2019:114;1060–1073.
13. National Harm Reduction Coalition. Available at: https://harmreduction.org/about-us/principles-of-harm-reduction/
14. Harm Reduction International. Available at: https://www.hri.global/what-is-harm-reduction
15. Padon, A., E. Maloney, J. Cappella. 2017. Youth-targeted e-cigarette marketing in the US.
16. Lee WB. E-cigarette marketing targeted to youth in South Korea. Tobacco Control 2017;26:e140-e144.
17. Jiang N, Ho SY, Lam TH. Electronic cigarette marketing tactics in mainland China. Tobacco Control 2017;26:230-232.
18. 2019 National Youth Tobacco Survey. U.S Food and Drug Administration, 2019.
19. Creamer MR, Wang TW, Babb S, et al. Tobacco Product Use and Cessation Indicators Among Adults — United States, 2018. MMWR Morb Morbidity and Mortality Weekly Report 2019, 68(45);1013-1019.
20. Campaign for Tobacco-Free Kids. Regulating E-cigarettes. 2019.
21. Euromonitor International, 2018.
22. Euromonitor International. What's Happening in Tobacco? Q4 2018. January 2019.