

## Common Fallacies or Myths Associated with Use of Electronic Nicotine Devices (ENDS) Popularly Called E-Cigarettes

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### Abstract

It is unfortunate that the misinformation about e-cigarettes is so widespread and prevalent globally that they are now accepted as tobacco cessation devices. More no. of youths and adolescents are becoming addicted to these because of appealing packaging and pleasant flavors. There is as yet no evidence that electronic cigarettes help in tobacco cessation. Quitting means quitting all nicotine products. But the use of these products lead to supplementation rather than replacement of nicotine because of dual usage. Stringent laws with regulatory mechanisms are urgently required to control marketing and advertising in order to save kids and youth from harms and addiction to nicotine.

**Keywords:** E-Cigarettes; Tobacco Cessation; Nicotine Dependence; Tobacco Harm Reduction; Nicotine Replacement

### Introduction

E-cigarettes containing nicotine and other additives are detrimental to Health and also highly addictive. Studies consistently show that young people consuming e-cigarettes are almost three times more likely to use cigarettes later in life. Children aged between 13 - 15-years have a higher rate of e-cigarettes consumption as compared to adults in all WHO regions. In Canada, the usage of E-cigarettes has doubled among 16 - 19-year-age groups between 2017 - 2022 and tripled in the past three years in the UK [1].

"Kids and youth are aimed at a young age to use e-cigarettes and get addicted to nicotine," said Dr Tedros Adhanom Ghebreyesus, WHO Director-General. "I wish that the whole world would enforce strict actions so as to protect the citizens, especially the adolescents and youth" [1]. Governments in various countries are now recognizing the alarming trend of growing numbers of adolescents and young adults succumbing to E Cigarette use. In a decisive move to safeguard public health, Australia had taken a major step by banning E cigarettes in May 2023. The government's action was prompted by the rising trend of e-cigarettes use among teenagers. Public Health specialists in the United Kingdom are alarmed by an E-Cigarette 'epidemic' among youngsters, warning that almost all could be using ENDS within the next few years if the current growth rate continues. It is noteworthy that ENDS and Heated Tobacco Products are already prohibited in India [2]. A 2023 survey by Action on Smoking and Health (ASH) revealed that 2 out of 5 (40%) young individuals tried using E Cigarettes out of curiosity, while 1 in 5 (20%) succumbed to peer pressure.

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Majority of e-cigarettes consist: (A) a cartridge that loads liquid composition in the form of varying amounts of nicotine, and other chemicals; (B) a heating device (vaporizer); and (C) a power source (usually a rechargeable battery). Taking a drag ignites the battery vaporizes the liquid in the cartridge. The resulting aerosol, or vapor, is then inhaled, known as vaping. Advanced models allow users to adjust the voltage from the battery to regulate the intensity of the heating element. As the solution gets hotter, it escalates the effect of the nicotine. These devices are manufactured either as their conventional (tobacco products) counterparts or like pens and USB memory sticks so that the common man cannot figure it out. Amount of nicotine, however instead of getting delivered into the bloodstream through the lungs, travels through the soft tissue of the buccal mucosa lining inside the mouth [3].

These products have gained significant popularity over social media and becoming trendsetters among the young population. Even the renowned public figures such as politicians, and celebrities are also being influenced by industries which are promoting E-cigarettes as a much safer and healthier alternative. With involvement of tobacco Industry, the trade of E-Cigarettes is further expanding [4]. There is free flow of E-cigarettes in the open market which opens the gate for easy accessibility. Moreover, only 34 countries prohibit the sale of e-cigarettes, 88 countries have not set the minimum age at which e-cigarettes can be purchased and 74 countries have no regulations for monitoring such harmful products. E-cigarettes attract children through social platforms, influencers and varied flavors, at least 16000 [1].

The World Health Organization (WHO) has called for governments to ban all flavors in E cigarettes and tobacco products. As per WHO there is not much evidence that ENDS promote tobacco cessation. These products can rather lead to addiction. As most e-cigarettes contain nicotine and other harmful chemicals, their use by youth can lead to addiction and can harm the developing adolescent brain, disrupting attention and learning. Also, nicotine in e-cigarettes can have serious adverse effects on the development of the fetus, via the mother, during pregnancy. Nicotine itself may not be a carcinogen, it may act as a “tumor promoter” and can lead to degeneration of nerve cells. In addition to nicotine, e-cigarette aerosols can contain heavy metals, ultrafine particles and toxicants that may increase the risk of cancer, pulmonary and cardiovascular disease [2].

### Fallacies or myths associated with E-cigarettes

#### E-cigarettes are 95 percent less harmful as compared to tobacco cigarettes

##### Fact

The statistic comes from a research paper published in 2014. The discussions held by a group of researchers who attended the meeting where the statistic was created were supporters of e-cigarettes and some were funded by an organization with links to the tobacco industry. Despite the authors of the paper noting that they lacked hard evidence to support the 95 percent statistic, it continues to be published and used in defense of e-cigarettes more than seven years later.

E-cigarettes are not harmless, the smoke contains harmful products including formaldehyde, tobacco-specific specific nitrosamines, nitrosamines, nicotine, nicotine, and heavy metals. The long-term health consequences of e-cigarette use is beginning to emerge linking use with cell death, reduced lung function, stiffness of the arteries and increased risk of cardiovascular disease and metabolic syndrome etc.

#### E-cigarettes can be used as tobacco cessation devices

##### Fact

There is evidence to suggest that this significantly increases smokers’ urge to smoke tobacco cigarettes. Dual use is common among smokers. Finally, any product that is considered ‘therapeutic’ must be approved as such by the FDA/DCGI. To date, the assessment indicates that e-cigarette use contributes to more population-level harms than benefits.

### Children and non-smokers are not targeted by the e-cigarette industry

#### Fact

The tobacco and E-cig industries need a new population of individuals to become addicted to nicotine to drive their profits. The increasing use of e-cigarettes among adolescents and non-smokers speaks to the e-cigarette industry's continued targeting of these population segments via the development of new youth-oriented E-liquid flavors (like bubblegum, popcorn, Red Bull, fruit loops, Skittles, and unicorn milk). The industry also uses appealing E-liquid packaging (cartoons on labels or E-liquid boxes that resemble fruit juice cartons) and develops e-cigarettes that resemble USB drives, asthma inhalers, pens, remote controls, and hoodie drawstrings (thus promoting 'stealth e-cigarette use'). Toy pods are available in Thailand and some other countries.

### Tobacco industry aim at a 'smoke-free world'

#### Fact

To ensure its corporate survival in the future, PMI needs to achieve two primary objectives: "shape public opinion" and "play the political game". As part of this guide, the e-cigarette use/tobacco industries hijack behavioral science by funding "independent" research and burying conflicts of interest at the end of a report or article. Financing "independent" research is a means by which industry promotes their agenda - it legitimizes their activities and enhances their credibility. E-cigarettes are part of big tobacco's product diversification strategy to deliver new and upcoming nicotine delivery devices, especially those that have maximum appeal to young people.

If the e-cigarette usage and tobacco industries' goal was to genuinely support smokers to quit and exit the market altogether, with no uptake by non-smokers, both industries would cease to exist within the next few decades. Ultimately, the goal of the e-cigarette use/tobacco industries is the maximization of sales and profits, which is contradictory to their harm.

### Conclusion and Recommendations

The public and senior officials in the Government sector need to be sensitized about the fact that nicotine addicts need to quit the use of tobacco or nicotine in all forms and quitting does not mean replacing an addicting product with another addicting product. The harm reduction is a misnomer as no novel tobacco or nicotine product is free of harm and also may promote dual use.

An urgent and practical approach is required to curb the commercialization (sale, importation, distribution, and manufacture) of e-cigarettes as commodities. Countries should hold hands in monitoring, and surveillance, and enforce new public health policies. It is difficult to regulate the manufacture and sale of E-Cigarettes as has been the experience with regulating tobacco products. It is better to comprehensively prohibit these harmful products before their sale and use reach an epidemic proportion.

### Conflict of Interest

There is no financial interest or any conflict of interest exists.

### Bibliography

1. <https://www.who.int/news/item/14-12-2023-urgent-action-needed-to-protect-children-and-prevent-the-uptake-of-e-cigarettes#:~:text=%E2%80%9CKids%20are%20being%20recruited%20and,their%20children%20and%20young%20people.%E2%80%9D>
2. <https://www.hindustantimes.com/lifestyle/health/who-calls-for-ban-on-flavoured-vapes-6-ways-e-cigarettes-can-damage-health-101702560329403.html>

3. [https://www.bstquarterly.com/Assets/downloads/BSTQ/Articles/BSTQ\\_2017-10\\_AR\\_Myths-and-Facts-E-Cigarettes.pdf](https://www.bstquarterly.com/Assets/downloads/BSTQ/Articles/BSTQ_2017-10_AR_Myths-and-Facts-E-Cigarettes.pdf)
4. <https://www.vpci.org.in/uploads/Article-11-Short%20Comm.pdf>

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