

Faculty Of Pharmacy, Nursing and Health Professions

Nutrition and Diet

Ethics of nutrition and dietetics

**Electronic cigarettes**

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* **Introduction**

1. **Objective**

Our research deals with electronic cigarettes and look at the ethical issues regarding nutritional management of university students. Recently, we have noticed a large spread of electronic cigarettes in Palestine in general and in Birzeit University in specifically.

Electronic cigarette is an electronic device that simulates [tobacco smoking](https://en.wikipedia.org/wiki/Tobacco_smoking). It consists of an [atomizer](https://en.wikipedia.org/wiki/Atomizer_nozzle), a power source such as a battery, and a container such as a cartridge or tank. Instead of [smoke](https://en.wikipedia.org/wiki/Tobacco_smoke), the user inhales [vapor](https://en.wikipedia.org/wiki/Vapor). As such, using an e-cigarette is often called "vaping". The atomizer is a [heating element](https://en.wikipedia.org/wiki/Heating_element) that atomizes a [liquid solution](https://en.wikipedia.org/wiki/Solution_(chemistry)#Liquid_solutions) called [e-liquid](https://en.wikipedia.org/wiki/Construction_of_electronic_cigarettes#E-cigarette_liquid). E-cigarettes are activated by taking a puff or pressing a button. Some look like [traditional cigarettes](https://en.wikipedia.org/wiki/Cigarette), and most versions are reusable. [[1]](#footnote-1)

1. **Epidemiology**

E-cigarettes typically contain a solution of propylene glycol or glycerin, with or without nicotine, that is vaporized upon inhalation by the user . Unlike tobacco cigarettes, e-cigarettes are free of combustion , the mechanism through which toxicants contained in burned tobacco are inhaled and absorbed by the user .

Although e-cigarettes appear to be a safer alternative than smoking cigarettes over the short term, they are not without risks, especially when used on a regular basis. Electronic cigarette causes with asthma and chronic obstructive pulmonary disease. A systematic review found that e-cigarettes were associated with myriad respiratory health effects such as exacerbations of asthma, eosinophilic pneumonia, epiglottitis, bronchitis, and acute respiratory distress. Other notable symptoms in regular teenage vapers have included headaches, generalized coughing, insomnia, weakness, and pain in the chest area. also, Dual smoking and e-cigarette use compounds public health risks, May increase the risk of respiratory health problems, May increase the risk deficits in cognition, brain development, effort-reward imbalances in the brain in children and teenagers also, Long-term effects on health are unknown.

The recent outbreak of e-cigarette or vaping-product use–associated lung injury (EVALI) is alarming. As of October 18, 2019, 33 deaths and nearly 1500 hospitalizations associated with e-cigarette use have been reported in 49 states and the US Virgin Islands. Initial epidemiologic investigations of EVALI cases in Illinois and Wisconsin identified that more than 80% of the reported cases occurred in young white male subjects who presented with respiratory, gastrointestinal, and constitutional symptoms that rapidly progressed to severe acute lung injury.[1](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7081413/#R1) Interestingly, underlying asthma was reported in 30% of these cases, which is much higher than the 8% to 10% of asthmatic patients seen in the general population. Although many questions regarding the safety of e-cigarettes have come to the forefront with the emergence of EVALI, health care providers and concerned parents are also asking what might be causing this outbreak and who might be susceptible to EVALI.(2)

1. **Smoking E-cigarette and Nutrition**

The nutritional needs of smokers and non-smokers are not much different. Smokers need more Vitamin C each day - about what you would get in half an orange but other than that they can meet their nutritional needs every day by eating a variety of [healthy foods](https://food-guide.canada.ca/en/).

There are concerns about weight gain when smokers try to stop. These are unfounded. Quitting does not need to result in weight gain for everyone. Being active and eating three healthy meals and one to two healthy lower calorie snacks every day can help with cravings and keep your weight in check.

**Do I need to take a vitamin C supplement if I smoke E-cigarette ?**

No , Vitamin C is important for preventing uncomfortable bleeding of your gums and getting the extra 35 mg/ day of vitamin C needed by smokers can be easy. Focus on eating lots of vegetables and fruits each day, plus add one more vitamin C.

**Will I gain weight if I quit smoking E-cigarette?**

Not everyone gains weight after quitting. Since food tastes better, some people find they eat more. As well, their metabolism will go back to a normal, slightly slower rate which may result in some weight-gain. Others might use higher calorie foods as a way to deal with cravings or stress. The good news is that this is all manageable so try not to worry too much about your weight for now. Your primary goal is to quit and stay smoke free.

Good to know:

Are you worried about the negative health impact of gaining weight by quitting smoking E-cigarette?

-Focus on quitting and staying smoke-free and take small steps to help manage your weight when you are ready.

-Being active reduces weight gain over time. Making regular exercise that you enjoy part of your routine can reduce anxiety, help your mood, improve the quality of your sleep, and lower blood pressure.  In the long term, exercising lowers the risk of heart disease, stroke, type 2 diabetes, dementia, depression, and cancer.  It improves bone health and balance and co-ordination

-Plan healthy meals ahead of time. Include more fruit, vegetables and wholegrain foods

# The Best Foods for Smokers' Health

Common sense and most reliable sources of nutrition information advise eating a plant-based diet featuring fresh fruits and vegetables, particularly those high in antioxidants.

Cruciferous vegetables such as broccoli, Brussels sprouts and cauliflower contain high levels of chlorophyll, which, according to [Manipal Hospitals](https://www.manipalhospitals.com/blog/6-healthy-foods-to-detoxify-smokers-lungs/), can also help your body process toxins more efficiently because the vitamin C they contain supports your immune system.

So, a diet high in food good for smokers' lungs, such as tomatoes, apples, broccoli, Brussels sprouts, cauliflower and other fruits and vegetables high in vitamin C and antioxidants, may help undo some of the damage caused by smoking.

## Most Effective Herbs and Aromatics

One of the three foods that proved very effective in alleviating lung damage due to smoking was green tea. Prized for its high concentration of catechins, green tea was about as effective as tomatoes and apples at slowing the decreased lung capacity that comes with age and which is exacerbated by smoking.

According to the experts at Manipal Hospitals , the catechins in green tea can break up and loosen deposits of mucus in the lungs. [Green tea also has antimicrobial properties](https://www.manipalhospitals.com/blog/6-healthy-foods-to-detoxify-smokers-lungs/). Turmeric, a powerful anti-inflammatory, and garlic, which contains allicin, an antimicrobial, are also effective in alleviating the damage done to your body by smoking.

* Methodology

In introduction, I looked up at the National Center Library on internet about definition of electronic cigarettes.

To know the epidemiological effect of electronic cigarettes, I read many articles, but I got the information from the natinal library medical website. The article titled E-cigarettes, vaping-related pulmonary illnesses, and asthma: A perspective from inhalation toxicologists

To search for topics related to the nutritional management of electronic cigarette smokers, I initially searched for the relationship of nutrition to smoking in general from UnlockFood.ca, and I looked at the questions that come to the smoker's mind, should smokers take nutritional supplements? And if the smoker wants to quit, what is its relationship to weight gain? What are the foods that should be available in the smokers' diet? I found many answers to these questionsin the same website

As for the ethical issues, we first searched for questions about electronic cigarettes and searched for solutions to them from various websites, such as the National Center for Biotechnology Information.

* Ethical issues and solution

Several ethical issues have been identified pertaining to their use both as recreational products and harm reduction devices, including their potential appeal to non-smokers, their potential to act as a gateway to cigarette smoking, and their potential to renormalize a public smoking culture.

What is the efficacy of nicotine and non-nicotine e-cigarettes for smoking cessation and reduction?

there is no clear evidence of a difference in effect between nicotine containing e-cigarettes and NRT on incidences of smoking cessation at 24–26 weeks, and substantial uncertainty remains.

What is the long-term impact of dual use of e-cigarettes and tobacco cigarettes on health outcomes?

Recent studies have shown that dual users are associated with a higher risk of cardiovascular disease (CVD) than cigarette-only smokers. In addition to harmful substances in cigarettes and e-cigarettes, several modifiable psychosocial and behavioural risk factors are associated with an increased risk of CVD

How many youth initiating e-cigarettes transition to other tobacco products, including cigarettes?

E-cigarette use in never-smoking youth may increase risk of subsequent initiation of cigarettes and other combustible products during the transition to adulthood when the purchase of tobacco products becomes legal. Stronger associations in participants with no intention of smoking suggests that e-cigarette use was not simply a marker for individuals who would have gone on to smoke regardless of e-cigarette use.

What are the public health implications of tobacco industry ownership of major e- cigarette brands?

As cigarette companies have acquired the largest e-cigarette brands, they currently benefit from a dual market of smokers and e-cigarette users while simultaneously presenting themselves as agents of harm reduction. This raises concerns about the appropriateness of endorsing a product that directly profits the tobacco industry. Importantly, profit alone is unlikely to increase their market share, particularly in the highly restrictive regulatory environment in which tobacco companies operate. In addition, the unequivocal refusal to associate with the tobacco industry which appears, if only for self-serving reasons, to support tobacco harm reduction, could unintentionally damage the credibility of the tobacco control community. Regardless of their industry ownership, e-cigarette companies would nevertheless have a vested interest in maximizing the number of long-term product users. The ethical onus then falls on governments to restrict the influence of industry through appropriate regulations targeting product manufacturing, availability, and use, devised in light of public health interests.

What is the long-term impact of passive vaping and second-hand vapor exposure?

Ethical concerns surrounding second-hand vaping stem from the unknown health effects of vaporized e-liquid in the presence of potentially vulnerable bystanders. Although e-cigarettes emit significantly fewer toxins than tobacco cigarettes, vaporized e-liquid produces ultrafine particles and volatile organic compounds, including nicotine, which are released into the surrounding air. One study concluded that aerosolized ingredients contained in e-liquid should be of little concern to bystanders as their exposure is likely orders of magnitude lower than that of e-cigarette users and is unlikely to produce adverse health effects. However, studies examining the cytotoxicity of e-liquid flavorings found toxicity to be greater in undifferentiated embryonic stem cells relative to human pulmonary fibroblasts, raising potential concerns about exposure risks for pregnant women . Beyond any immediate emission concerns however, the ethical arguments surrounding second-hand vapor exposure are those that apply to tobacco cigarettes: exposure to e-cigarettes should not be imposed upon those who do not choose to use them, providing a strong argument for use restrictions in public places.

How are the increased use of e-cigarettes affecting perceptions of cigarette smoking?

E-cigarettes theoretically have the potential to subvert decades’ worth of anti-smoking efforts by renormalizing the act of public smoking and the visual presence of smoke-like vapor. This phenomenon could unintentionally encourage the acceptability and eventual uptake of tobacco cigarettes. However, the likelihood of such a phenomenon is difficult to assess and is premised upon e-cigarettes’ potential to act as a gateway to cigarette smoking. One possibility is that the increased conspicuousness of smoke-like vapor may sustain cigarette smoking among smokers who might otherwise have quit. Conversely, the growing acceptability of e-cigarettes could increase pressure on current smokers to quit tobacco cigarettes by virtue of these becoming perceived as socially undesirable predecessors of a “cleaner,” smoke-free device. This question should be continuously revisited as the long-term implications of e-cigarette use become increasingly clear

* Conclusion

In light of incomplete information concerning the safety and efficacy of e-cigarettes as smoking cessation aids, thresholds of reasonable risk must be established through a frequently revisited balance of probable benefits and harms with which they are associated. Their exponential growth in consumer markets has outpaced the development of an ethical framework with which to establish the appropriate conditions for their availability and use. Current evidence suggests that e-cigarettes have the potential to make significant public health gains through their role as tobacco harm reduction devices. In clinical practice, physicians have an ethical duty to provide their patients with evidence-based comparative risk assessments to allow them to make informed choices with respect to their smoking status. At its core, the objective of the smoking cessation agenda should be to improve population health, which will likely require some concessions in the form of harm reduction.while protecting broader public health interests. Although caution in this regard is requisite, caution alone should not obstruct the ethical imperative to explore the product’s potential further.

We hope that there will be greater awareness campaigns, understanding and awareness by users about the great danger and health problems caused by electronic cigarettes

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1. [↑](#footnote-ref-1)