The World Foundation for Natural Science

Is Vaping Safer than Tobacco?

Do you think electronic cigarettes are healthy? They may look cool and trendy, what with the newer generation pods that look like computer flash drives! Juul, Logic, myBlu, MYLE, PHIX etcetera all look really high tech but are they safe? Juul has been labelled the iPhone of e-cigarettes and its uptake in the United States is in part to its looks. Electronic cigarette use has increased by 78 % in just one year in high schools where 3 million kids now vape; that's 1-in-5 teenagers! The US Food and Drugs Administration has declared vaping an "epidemic" and has threatened strong sanctions against e-cigarette companies, especially Juul.

E-cigarette companies know how to tap into youth culture: Juul heavily promoted its product on social media using the same imagery as tobacco companies to entrap a new generation of smokers through sex appeal, rebelliousness and independence. This marketing promotes the message that e-cigarettes are cool, fun, even a necessity, and safe. The British agency, Public Health England, has helped promote e-cigarettes the most by stating they are 95 % safer than tobacco. But are they really?



Nearly all e-cigarettes contain nicotine, which is an extremely addictive drug; nicotine is as addictive as heroin. For teenagers, nicotine is proven to alter normal brain function. Nicotine also increases the risk of heart and lung disease, gastrointestinal disorders, decreases immune response, and reduces reproductive health. Nicotine damages the normal development of foetuses and can cause post-natal babies to suffer nicotine withdrawal symptoms. Nicotine also triggers cancer cells into becoming more aggressive.

E-cigarette flavours such as cotton candy, gummy bears, bubble gum and fruit flavours are highly attractive to teenagers and children alike. Once you start vaping, you enjoy these sweet flavours and want more, but that craving for more is also driven by the nicotine you have become addicted to. Flavours have been demonstrated again and again to hook children and youth into vaping. The tobacco industry did the same thing with flavoured tobacco cigarettes to hook children into smoking, until those flavours were banned.

Do Electronic Cigarettes Contain Anything Harmful?

Electronic cigarette vapour contains a mixture of dangerous carcinogens and toxins, such as acrolein, arsenic, benzene, cadmium, diacetyl, formaldehyde, lead and toluene. Nicotine in its liquid form is deadly if ingested and, sadly, children and pets have already been killed from eating or drinking e-liquid. Vaping is shown to cause the early signs of cardiovascular disease, lung diseases including emphysema and COPD, gum disease, oral cancer and in foetuses, forces changes in brain gene expression that can lead to mental health and development problems. E-cigarette vapour causes necrosis of skin tissue around wounds making healing much more prolonged. All of these health effects are similar to the effects of smoking. Nicotine salts used in the new pods were originally developed in the 1940s as insecticides!

Electronic cigarettes have also become a popular

Ingredient	Effect
Acrolein (aldehyde)	Strongly linked to lung cancer
Acetaldehyde	Class 1 carcinogen; damages DNA
Nicotine	Extremely addictive; can trig- ger cancer
Propylene Glycol (anti-freeze)	Eye, throat and airway irritati- on, asthma
Toluene	Damages kidneys and repro- ductive capabilities

Tab. 1: E-cigarettes contain many of the same harmful substances as tobacco cigarettes.

way for people to smoke cannabis. It's a fact that cannabis can permanently damage brain development of young people. Cannabis has many other negative health effects including addiction, neurosis and physical health problems. Take a look at our cannabis brochure for more information.

Do Electronic Cigarettes Help People Quit Smoking or Do They Act as a Gateway to Smoking?

The evidence shows that smokers who turn to vaping are up to 28% less likely to quit smoking! Around 85% of smokers who take up e-cigarettes in order to quit don't succeed and continue to smoke. E-cigarettes are just a different way to get a nicotine hit! Smokers who vape use the opportunity to vape in places where they are not permitted to smoke but continue to smoke in places where they can.

Once you start vaping you are more likely to try tobacco cigarettes. Repeated studies show in the USA and the UK that children and teenagers who take up vaping are 4- to 6-times more likely to try a tobacco cigarette than those who never vaped. It's even been found that young adults (18-30 years) who never smoked but took up vaping are nearly 7 times more likely to go on to try a tobacco cigarette! There's no doubt that vaping acts as a gateway to smoking!

Second-Hand Vaping

When someone exhales a vapour cloud near you, you will breathe in ultrafine particles of nicotine, carcinogens and other toxins, especially in indoor spaces. Parents who vape around their children should think again and should refrain from vaping in a car as this could be very dangerous for their children or pets. It's even been identified that thirdhand vaping is a fact. Ultrafine particles of nicotine are found on surfaces that the vapour has contacted which might be absorbed into the skin if touched.

Are There Long-Term Benefits to Vaping, Called Population "Harm Reduction"?

The US National Academy of Sciences conducted a review of 800 published studies on e-cigarettes. Though it's hard to tell the long term effects as vaping is new, NAS concluded that because of the massive take-up by children and young adults of e-cigarettes, the long-term picture (50 years from now when children who now vape reach their mid-60s) indicates the population's health will most likely be worse. Given that vaping is a proven gateway to smoking, it's logical to conclude this. Vaping will cause massive health problems in the years to come in the same way that tobacco continues to do as the evidence points to similarly negative health effects. 7 million people die from tobacco smoking annually around the world. Soon this figure will be added to by that of e-cigarette users!

What Can You Do?

- 1. Set a good example to yourself, your family and friends by not vaping, smoking or taking any drugs.
- 2. Educate yourself and then your family, friends and school about the harm of vaping. Look at our Fact Sheet for more detailed information.
- 3. Write to your local councils and demand smokeand vape-free outdoor and indoor areas for children especially and for a complete ban on all

sweet and fruit-flavoured e-liquids in stores and a ban on e-cigarette stores.

- 4. Write to your politicians to present the facts about vaping and ask for electronic cigarettes to be treated the same as tobacco—and kept from public view in shops and petrol stations, with a public-spaces ban on vaping, including parks and playgrounds.
- 5. If you know someone who vapes, some of the best advice on how to quit completely comes from Allen Carr's Easyway approach.



We are always happy to answer more questions!

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