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# Busting the myths about nicotine

Nicotine is one of the most misunderstood chemicals on the planet. It is the most well-known chemical in tobacco smoke and many people incorrectly believe it is the main cause of the death and illness from smoking as well. Even doctors are confused.

Nicotine is habit-forming but is otherwise relatively benign and has some positive effects. Let's find out more and bust some myths!

This is a summarised extract from my book, *Start Smoking Stop Vaping*, which examines the scientific evidence for vaping and nicotine and provides step-by-step advice on how to make the switch from smoking tobacco.

Is nicotine harmful to the body?

Nicotine is a toxic poison in its highly concentrated form but the low concentrations in smoke and vapour cause little harm with normal use. According to Public Health England, 'Nicotine use per se represents minimal risk of serious harm to physical health'. The UK Royal College of Physicians concluded "Use of nicotine alone, in the doses used by smokers, represents little if any hazard to the user."

Nicotine does not cause cancer or lung disease and plays only a minor role in heart disease. These conditions are caused by the 7,000 toxic chemicals in smoke from burning tobacco. Nicotine increases the heart rate and blood pressure and narrows the blood vessels, much like mild exercise. It may exacerbate existing heart conditions and can trigger an irregular heartbeat in some cases. However, the effects are minor compared to tobacco smoking.

Nicotine reduces the blood flow to wounds and can delay healing, for example after surgery and can raise blood sugar levels.

Does nicotine harm the adolescent brain?

There is no evidence so far that nicotine harms the human brain in adolescence. Concerns of harm to brain development

from nicotine are based on rat and mouse studies.

However, laboratory tests often use unrealistic doses in an artificial setting and are far more sensitive to nicotine than humans. As one review concluded, animal tests generally 'fall far short of being able to predict human responses.'

However, further research is needed to identify any possible long-term effects.

Is nicotine harmful in pregnancy?

Nicotine has been linked to harmful effects on the foetus in mouse and rat studies. However, there is no clear evidence that these findings apply to humans.

Nicotine replacement products such as patches, gums and lozenges are approved for use in pregnancy in Australia and have not shown any clear harms.

Nicotine may not be completely safe for the pregnant mother and foetus, but it is always safer than smoking.

How strong is dependence on nicotine?

Dependence on nicotine varies with how it is administered, how quickly it reaches the brain and how much is used. Dependence is most potent from smoking because high doses of nicotine get to the brain very quickly, within ten to fifteen seconds — faster than intravenously injected heroin. Vaping and nicotine replacement therapy deliver nicotine more slowly and usually to lower levels. Many studies have found that vaping nicotine causes less dependence than smoking.

Is long-term use of nicotine harmful?

We know that the long-term use of nicotine is low-risk from decades of use of 'Swedish snus'. Snus is a moist, pasteurised, finely-ground form of tobacco usually sold in a pouch like a small teabag. It is placed under the upper lip where it slowly releases similar levels of nicotine to tobacco smoking.

A review by Public Health England concluded that 'long-term use of nicotine as snus ... has not been found to increase the

risk of serious health problems in adults.'  
There is also no evidence of harm from long-term use of nicotine in nicotine replacement therapy.  
Does nicotine have positive effects?  
Many smokers enjoy the effects of nicotine. Nicotine releases the pleasure hormone 'dopamine' in the brain creating pleasure and a sense of reward.  
You may have noticed that nicotine improves your concentration, alertness and memory. It also has a temporary calming effect and can improve your mood.  
Nicotine reduces your appetite and can help to reduce weight gain.  
Nicotine is also beneficial for schizophrenia, ADHD, ulcerative

colitis, Parkinson's disease and reduces pain.  
Dr Colin Mendelsohn is a medical practitioner who works exclusively in tobacco treatment, helping smokers quit. He is a member of the committee that develops the RACGP Australian national smoking cessation guidelines and is the Founding Chairman of the Australian Tobacco Harm Reduction Association.  
He is actively involved in research, writing and teaching about smoking cessation and tobacco control

[https://www.quitclinics.com/blog/busting-the-myths-about-nicotine-dr-colin-mendelsohn/?fbclid=IwAR00tV6Qo-P2sht4M58-d5BejjnrB7wZnBi5EhV5c-YvP-eMgIsQCs\\_Xr8k](https://www.quitclinics.com/blog/busting-the-myths-about-nicotine-dr-colin-mendelsohn/?fbclid=IwAR00tV6Qo-P2sht4M58-d5BejjnrB7wZnBi5EhV5c-YvP-eMgIsQCs_Xr8k)

# Smoke without fire

Govts and organisations continue to look for ways to reduce the practice of smoking and its accompanying health risks. Everyone around the world is working on saving lives one way or another. The governments are playing their role to avoid conflicts among countries. Major steps are being carried out to stop Covid-19 and other diseases from spreading. The law and order forces are trying to maintain peace in the cities. At the same time, there is a silent killer that needs to be stopped or reduced its damage. It's the damage done by cigarette smoking, and as it is difficult for the smoker to quit altogether. For this reason, scientists have invented some better alternatives that can reduce the risk of cigarette smoking by 95 per cent, called e-cigarettes. As per the report, 'The Economics of Tobacco and Tobacco Taxation in Pakistan' conducted in 2014, Pakistan has one of the largest tobacco users globally, with over 22 million adults ages 18 or older smoking cigarettes, water pipes, and some other tobacco product. This causes Pakistan a heavy burden due to the diseases caused by combustible smoking. The total cost of all smoking-attributable to illnesses and deaths in 2019 in Pakistan was \$3.85 billion.

Pakistan, home to millions of smokers, is a potential market where the use of e-cigarette can help cigarette smokers reduce their health risks.  
According to the Alternative Research Initiative's (ARI) survey, with no exact estimates about the number of vapers in Pakistan, their number may be around 30,000 to 35,000. Currently, in Pakistan, there are more than 100 vape stores, and the number is steadily increasing, mainly in the cities including Karachi, Lahore, Islamabad, Rawalpindi, and Peshawar. The prices of vaping products are higher than conventional cigarettes. The most expensive duty paid cigarette packet in Pakistan costs a little more than a dollar, while the price of vaping kit starts from 24 dollars and goes up to 162 dollars. This is mainly because vaping products are imported, the kits from China, and the flavors from the US, UK and Malaysia.

In Pakistan, some organisations believe that e-cigarettes affect the brain development of the younger generation. But there is no evidence that proves these claims. The reported diseases are linked to the use of poor quality flavor for e-cigarettes that are illegally sold worldwide.  
While there is an ongoing debate on the reduced risk by



e-cigarettes, the experts at the Alternative Research Initiative (ARI) Pakistan believe that more effective and affordable smoking cessation services should be provided in Pakistan and make tobacco harm reduction part of the national policy by introducing innovative solutions for ending smoking. The study by ARI on 'Rapid Assessment of Smoking and Vaping in Pakistan during Covid-19 Lockdown' indicates that "the rate of quitting smoking in Pakistan is one of the lowest in the world – 2.6 per cent. On the other hand, Safer Nicotine Delivery Systems (SNDS) is a nascent phenomenon in Pakistan as there are no regulations for the use of SNDS, including imports, manufacturing or product. The people and business operators of SNDS stay restrained to avoid issues that could affect their business concerns. In Pakistan e-cigarettes are the main SNDS used, mainly by the users from the middle, upper-middle and upscale urban localities." Tobacco harm reduction works as almost all disease risks are attributed to the smoke that carries the particles of tar and toxic gases inhaled from burning tobacco. If smokers can find satisfactory alternatives to cigarettes that do not involve combustion but provide nicotine, they would avoid almost all disease risks.  
They were also the opinion that to achieve a smoke-free Pakistan before 2030, effective cessation services should be made accessible and affordable, and tobacco harm reduction is made part of the national tobacco control policy. While most countries in the world have succeeded in reducing the number of smokers through their progressive regulations on less harmful alternatives, it is about the time when Pakistan also starts working on this.

<https://tribune.com.pk/story/2336771/smoke-without-fire>

## New Zealand to ban cigarettes for future generations

New Zealand will ban the sale of tobacco to its next generation, in a bid to eventually phase out smoking. Anyone born after 2008 will not be able to buy cigarettes or tobacco products in their lifetime, under a law expected to be enacted next year.

"We want to make sure young people never start smoking," Health Minister Dr Ayesha Verall said.

The move is part of a sweeping crackdown on smoking announced by New Zealand's health ministry on Thursday. Doctors and other health experts in the country have welcomed the "world-leading" reforms, which will reduce access to tobacco and restrict nicotine levels in cigarettes. "It will help people quit or switch to less harmful products, and make it much less likely that young people get addicted to nicotine," said Prof Janet Hook from the University of Otago. The crackdown has been met with mixed reactions.

"I reckon it's a good move, really," one man told Reuters news agency. "Because right now there's a lot of young kids walking around with smokes in their mouth. Public are asking how they're getting these smokes.

"And it's also good for myself too because I can save more money."

However, others have warned that the move may create a black market for tobacco - something the health ministry's official impact statement does acknowledge, noting "customs will need more resource to enforce border control". "This is all 100% theory and 0% substance," Sunny Kaushal, chairman of the Dairy and Business Owners Group, a lobby group for local convenience stores, told New Zealand's Stuff news site. "There's going to be a crime wave. Gangs and criminals will fill the gap".

New Zealand is determined to achieve a national goal of reducing its national smoking rate to 5% by 2025, with the aim of eventually eliminating it altogether.

At the moment, 13% of New Zealand's adults smoke, with the rate much higher among the indigenous Maori population, where it soars to almost a third. Maori also suffer a higher rate of disease and death.

New Zealand's health ministry says smoking causes one in four cancers and remains the leading cause of preventable death for its five million strong population. The industry has been the target of legislators for more than a decade now. As part of the crackdown announced on Thursday, the government also introduced major tobacco controls, including significantly restricting where cigarettes can be sold to remove them from supermarkets and corner stores. The number of shops authorised to sell cigarettes will be drastically reduced to under 500 from about 8,000 now, officials say.

In recent years, vaping - smoking e-cigarettes which produce a vapour that also delivers nicotine - has become far more popular among younger generations than cigarettes. New Zealand health authorities warn however, that vaping is not harmless. Researchers have found hazardous, cancer-causing agents in e-cigarette liquids as well. But in 2017 the country adopted vaping as a pathway to help smokers quit tobacco.

<https://www.bbc.com/news/world-asia-59589775>

## The first step towards improved health for smokers

By Rozina Khan

Cigarette smoking kills more than 7 million people each year, translating to one smoking-related death every five seconds. If the pattern of smoking all over the globe doesn't change, more than 8 million people a year will die from diseases related to tobacco use by 2030. National and international organizations, governments, activists and various other authorities have been working to reduce the burden of tobacco smoking but the number of smokers in the world are testament to the fact that it is not as easily achievable - the WHO estimates that by 2025 there will still be more than 1 billion people in the world who will continue to choose to smoke.

So, what can be done to reduce harm caused by smoking? To find out how we can reduce the said harm, we first need to understand what actually causes that harm. Out of all the components of a cigarette, the one that makes it so dangerous is the smoke produced when tobacco is burned. When a cigarette is lit, it burns tobacco to generate smoke which contains thousands of chemicals, a majority of which pose numerable risks to the health of smokers and their surroundings. To reduce tobacco harm, it is necessary to avoid burning of tobacco and the subsequent release of toxic smoke.

Tobacco harm reduction strategies reduce the health risks of smoking by eliminating the production of smoke. Keeping in view the difficulty of quitting smoking and the increasing number of smokers, many products have been designed with the aim to reduce tobacco harm, some of which are e-cigarettes, vapes and heated tobacco products (HTPS). These less harmful alternatives effectively reduce tobacco harm by preventing release of tobacco smoke while delivering nicotine to satisfy nicotine cravings. This is made possible by heating the tobacco instead of burning it, which is the root cause of the harm. Among these products, the HTPs are based on the heat-not-burn principle. They heat the tobacco at a certain temperature instead of burning it. E-cigarettes and vapes on the other hand heat the liquid present inside the devices. Both technologies effectively curb the emission of cigarette smoke.

While not risk-free, the overwhelming scientific research shows that these products expose the user to far lower levels of toxic and harmful compounds than cigarettes. Where, without any doubt, absolute cessation of the habit is the best bet for a smoker, these less-harmful alternatives can prove to be an effective first step to better health for smokers who would otherwise continue to smoke. According to Public Health England, these products are 95% less harmful than combustible cigarettes. If a smoker switches completely from smoking he/she is likely to benefit from substantial improvements in health. Although the goal is to fully erase the harm, it is far better to switch to these better alternatives long-term than to relapse - or to not quit at all.

[https://nation.com.pk/19-Dec-2021/the-first-step-towards-improved-health-for-smokers?fbclid=IwAR0Zp-\\_tKHSLJ9M7VNRmhNgll5KJP\\_A0JSSAvs1PDS6grhqtPE1LV234Fo](https://nation.com.pk/19-Dec-2021/the-first-step-towards-improved-health-for-smokers?fbclid=IwAR0Zp-_tKHSLJ9M7VNRmhNgll5KJP_A0JSSAvs1PDS6grhqtPE1LV234Fo)

# Vaping helps heavy smokers in quitting smoking

BUFFALO, N.Y. — A new study from the Roswell Park Comprehensive Cancer Center in Buffalo shows that daily vaping can drastically increase the likelihood of quitting in heavy smokers.

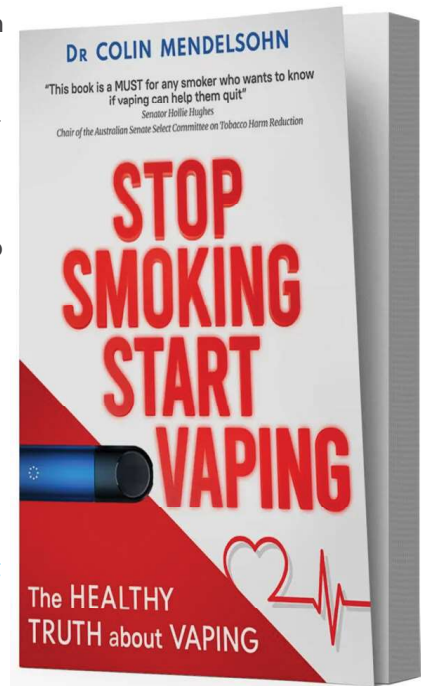
The study monitored 1,600 smokers who didn't plan to quit over five years. Researchers found those who used e-cigarettes daily were eight times more likely to quit than those who didn't vape.

Andrew Hyland, chair of health behavior at Roswell Park, says the study is unique because it targets e-cigarette use among smokers who have little to no motivation to quit.

"We added into that the transition of just moving to less than daily cigarette smoking," said Hyland. "So smoking more occasionally. So just on Sundays but not every day. In addition to those, those people who started vaping daily, almost half of them ended up quitting or moving to a non-daily cigarette use pattern."

Hyland says Roswell Park's study calls for greater consideration about the health impact of vaping in the United States.

[https://spectrumlocalnews.com/nys/rochester/health/2021/12/30/roswell-park-study-shows-vaping-increases-likelihood-of-quitting-in-heavy-smokers?fbclid=IwAR2\\_KtSnZ-9rQRFSGrjau0H\\_mldIJ0UvscLP6ny0CjEbSzogWhOFTJs88o0](https://spectrumlocalnews.com/nys/rochester/health/2021/12/30/roswell-park-study-shows-vaping-increases-likelihood-of-quitting-in-heavy-smokers?fbclid=IwAR2_KtSnZ-9rQRFSGrjau0H_mldIJ0UvscLP6ny0CjEbSzogWhOFTJs88o0)



## Alternatives

The WHO has released a report 'Saving lives, spending less' listing "the health and economic benefits of implementing the most cost-effective and feasible interventions to prevent and control non-communicable diseases (NCDs) in low- and lower-middle-income countries". The report's suggestions of increasing taxes on tobacco use, large graphic warnings, banning tobacco advertising, making public places smoke free, and educating people about the health hazards involved are all commendable. However, it is high time that the WHO gave tobacco harm reduction a chance.

Adult smokers need every possible incentive to give up the habit of smoking. It has been scientifically proven that tobacco harm reduction helps smokers switch to less harmful alternatives or quit altogether. The method works because the alternatives used have fewer harmful chemicals and often do not produce smoke – the biggest cause of diseases. Alternatives to cigarettes not involving combustion, chances of getting diseases would reduce significantly. The WHO needs to make tobacco harm reduction one of its best buys for reducing smoking rates.

Junaid Ali Khan  
Islamabad

<https://www.thenews.com.pk/print/918411-alternatives>

## THR Graduate Awarded For Contribution to Smoking-Related Health Research in Africa

A young pharmacist and health researcher from Nigeria, has recently been honored with a Diana Award for his role in advancing research related to reducing the death and disease caused by smoking.

Yusuff received the nomination based on his dedication in advancing research related to reducing the harm caused by smoking in Nigeria and across the globe. The nominee is also a graduate of the KAC Tobacco Harm Reduction (THR) Scholarship Programme and an advocate for the role harm reduction can play.

The Diana Award is a prestigious accolade presented to young people who are working in social action or humanitarian work. The Award takes its name from Diana, the late Princess of Wales, and was established in 1999. Yusuff Adebayo Adebisi was nominated by his mentor, Dr Don-Eli-seo Lucero-Priso of the London School of Hygiene and Tropical Medicine, and the founder of Global Health Focus, an initiative that aims to develop critical thinkers and leaders in global health.

[https://www.vapingpost.com/2021/12/20/thr-graduate-award-ed-for-contribution-to-smoking-related-health-research-in-africa/?fbclid=IwAR23iPE\\_nyCdPZkhEs7tY7OMNQ54aaryEqV1bWcZNPuSNNnj\\_WbAIR9-SMO](https://www.vapingpost.com/2021/12/20/thr-graduate-award-ed-for-contribution-to-smoking-related-health-research-in-africa/?fbclid=IwAR23iPE_nyCdPZkhEs7tY7OMNQ54aaryEqV1bWcZNPuSNNnj_WbAIR9-SMO)

Established in 2018, ARI is an initiative aimed at filling gaps in research and advocacy on ending combustible smoking in a generation. Supported by the Foundation for A Smoke-Free World (FSFW), ARI established the Pakistan Alliance for Nicotine and Tobacco Harm Reduction (PANTHR) in 2019 to promote innovative solutions for smoking cessation.

To know more about us, please visit: [www.aripk.com](http://www.aripk.com) and [www.panthr.org](http://www.panthr.org)

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