



Royal College
of Physicians



Nicotine without smoke

Tobacco harm reduction

A report by the Tobacco Advisory Group
of the Royal College of Physicians



Nicotine without smoke: Tobacco harm reduction

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This report provides an update on the use of harm reduction in tobacco smoking, in relation to all non-tobacco nicotine products but particularly e-cigarettes. It shows that, for all the potential risks involved, harm reduction has huge potential to prevent death and disability from tobacco use, and to hasten our progress to a tobacco-free society.

Key recommendations

- Smoking is the **biggest avoidable cause** of death and disability, and social inequality in health, in the UK.
- Provision of the nicotine that smokers are addicted to without the harmful components of tobacco smoke can prevent most of the harm from smoking.
- Nicotine replacement therapy (NRT) is most effective in helping people to stop smoking when

used together with health professional input and support, but much less so when used on its own.

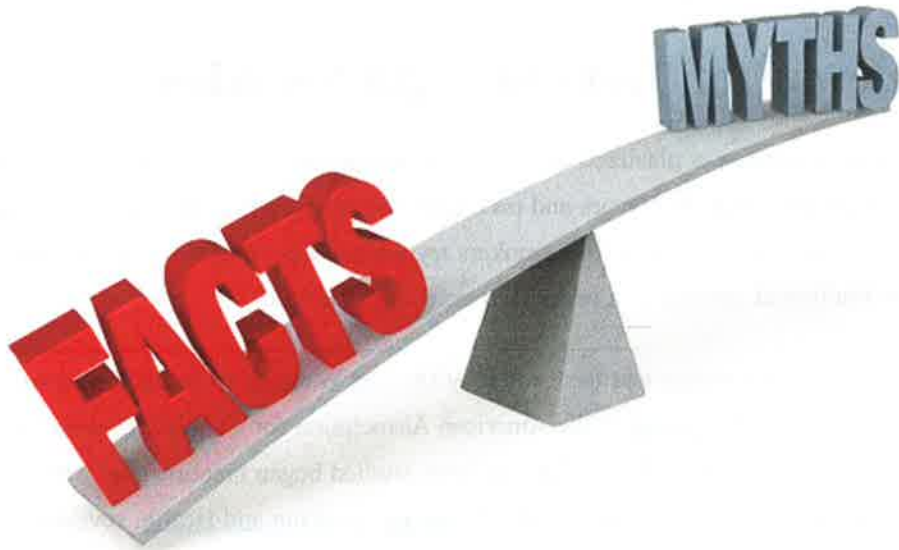
- E-cigarettes are marketed as consumer products and are proving much more popular than NRT as a substitute and competitor for tobacco cigarettes.
- E-cigarettes appear to be effective when used by smokers as **an aid to quitting smoking**.
- E-cigarettes are not currently made to medicines standards and are probably more hazardous than NRT.
- However, the hazard to health arising from long-term vapour inhalation from the e-cigarettes available today is unlikely to exceed **5% of the harm from smoking tobacco**.
- Technological developments and improved production standards could reduce the long-term hazard of e-cigarettes.
- There are concerns that e-cigarettes will increase tobacco smoking by renormalising the act of smoking, acting as a gateway to smoking in young people, and being used for temporary, not permanent, abstinence from smoking.
- However, the available evidence to date indicates that e-cigarettes are being used almost exclusively as safer alternatives to smoked tobacco, by confirmed smokers who are trying to reduce harm to themselves or others from smoking, or to quit smoking completely.
- There is a need for regulation to reduce direct and indirect adverse effects of e-cigarette use, but this regulation should not be allowed significantly to inhibit the development and use of harm-reduction products by smokers.
- However, **in the interests of public health it is important to promote the use of e-cigarettes, NRT and other non-tobacco nicotine products** as widely as possible as a substitute for smoking in the UK.

Related content

- 'The next steps in the long journey to tobacco harm reduction' ([/news/next-steps-long-journey-tobacco-harm-reduction](#)) - Professor John Britton, the RCP's special adviser on tobacco, reflects on recent developments in tobacco control and the introduction of standardised packaging.
- *Harm reduction in nicotine addiction: helping people who can't quit* (<http://shop.rcplondon.ac.uk/products/harm-reduction-in-nicotine-addiction-helping-people-who-cant-quit?variant=6509405637>) - A report by the Tobacco Advisory Group of the RCP, published October 2007, which argued for the application of harm-reduction strategies to tobacco dependence.
- *Smoking and health* ([/projects/outputs/smoking-and-health-1962](#)) - The 1962 RCP report that highlighted the link between smoking and lung cancer, other lung diseases, heart disease, and gastrointestinal problems.

Eight Myths About E-Cigs Debunked

👁 1,130 Views 📖 5 Min Read



In this age of fast paced news and sensational headlines, there is a constant stream of new reports on e-cigarettes, some true, and some... well not so much. Here are some of the most common myths you'll find out there, disproved and debunked.

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Using E-Cigarettes is the Same as Smoking Cigarettes

It is unfortunate that they are even called e-cigarettes, as it so closely ties them to regular cigarettes. Most people lump e-cigarettes right in with regular ones, causing them to be considered more bad than good. [E-cigarettes are very different from regular cigarettes.](#)

First developed in China, the [e-cigarette](#) was introduced to the U.S. market in 2007. The appearance of many e-cigarettes may be one clue into why e-cigarettes are mistaken for a regular tobacco product, but educated users know the difference. E-cigs are vaporizers. They do not burn tobacco, but instead heat up the [e-liquid](#), turning it into a vapor. When you describe it, it doesn't sound like a cigarette at all. That's because it's not.

E-Cigarettes are a Tobacco Product

ingredients: water, vegetable glycerin or propylene glycol, flavoring, and nicotine. Compare that ingredient list to that of [traditional cigarettes](#), which has over 600 ingredients in them. When burned, cigarettes introduce their users to more than 7,000 chemicals. Of these 7,000 chemicals, 69 of them are known to cause cancer and many others are poisonous. E-cigarettes are far different from a tobacco product, and while they are often lumped together with these toxic and chemical laden cigarettes, they are clearly a different animal.

They are a Gateway for Teens to Begin Smoking

The myth that e-cigarettes are a gateway is plastered all over the news and social media almost every time someone writes on e-cigarettes. Some propose that the flavors and packaging are enticing to adolescents and teens, but the science seems to dispute this fact. Very few first-time smokers try e-cigarettes. Even if they did, there is no evidence they would progress to traditional smokes as a result of their e-cigarette use.

A study focusing on the gateway hypothesis was performed by Dr. Ted Wagener from the University of Oklahoma Health Sciences Center. He presented his [research](#) at the American Association for Cancer Research last year and he concluded that only one young person out of 1,300 college students studied began nicotine user with vapor products rather than traditional cigarettes. Another survey, completed by the [Action on Smoking and Health](#), revealed that experimenting with electronic cigarettes, or using them on a regular basis, is linked closely to pre-existing smoking habits.

The study revealed that children and young people who were smokers of traditional cigarettes were the ones more likely to have experimented with e-cigarettes rather than those who had never smoked.

Anyone, Even Kids, can Buy E-Cigarettes

It's true that in 8 states (Massachusetts, Maine, Montana, North Dakota, Texas, Pennsylvania, New Mexico and Oregon) there is no law against selling e-cigarettes to minors, but in 42 states that is not the case. However, just because there is no state law, does not mean that store owners are selling e-cigarettes to minors. Most business owners adhere to common sense restrictions and do not allow sales to children and adolescents. E-cigarettes are safer, it is true, but no one wants kids to become addicted to nicotine.

E-Cigarettes Devices Explode

The headlines have become more and more prevalent, shocking stories about how someone just dodged death or serious injury as [their electronic cigarette exploded](#). Upon closer examination, however, you will find these so called explosions are attributed to using the wrong charging cord. When a different charger, one not provided with the device, is used there is a slight chance that the wrong voltage could be sent to the device and cause it to overheat. This is actually a danger with many chargeable devices, not just e-cigarettes.

Your E-Liquid Contains Anti-Freeze

Of all the convoluted myths out there, this one is perhaps the most prevalent. However, it is highly untrue as well. Some e-liquids contain propylene glycol (PG), an ingredient found in anti-freeze. The FDA has categorized PG as “generally



Because E-Cigarettes Contain Nicotine, They Are Bad for You

Most e-cigarettes do contain nicotine, which is an addictive product, and that cannot be denied. While it is addictive, however, nicotine does not promote the development of cancer. [The Royal College of Physicians in London](#) says there are grounds to assert that nicotine alone has long-term health effects. The researchers go so far as to say, “Electronic cigarettes and other nicotine-containing devices offer massive potential to improve public health, by providing smokers a much safer alternative to tobacco. They need to be widely available, and affordable to smokers.”

Second Hand Vapor is Dangerous

Why, more and more cities and businesses are enacting bans on the public’s use of e-cigarettes. While there is still little evidence of the effect of second-hand vapor, the vapor is almost night and day different from tobacco smoke. [Researchers at University of Southern California](#) found second-hand vapor from e-cigarettes exhibited an overall 10-fold decrease in exposure to harmful particles when compared to cigarette smoke.

With so much misinformation about e-cigarettes swirling around the media and the Internet, it is important to adopt a filter to decipher myth from fact. There is still much to be researched and discovered about e-cigarettes and their long-term effects. The public needs to stay informed and look beyond the sensational headlines, for a real change in public health to take place.



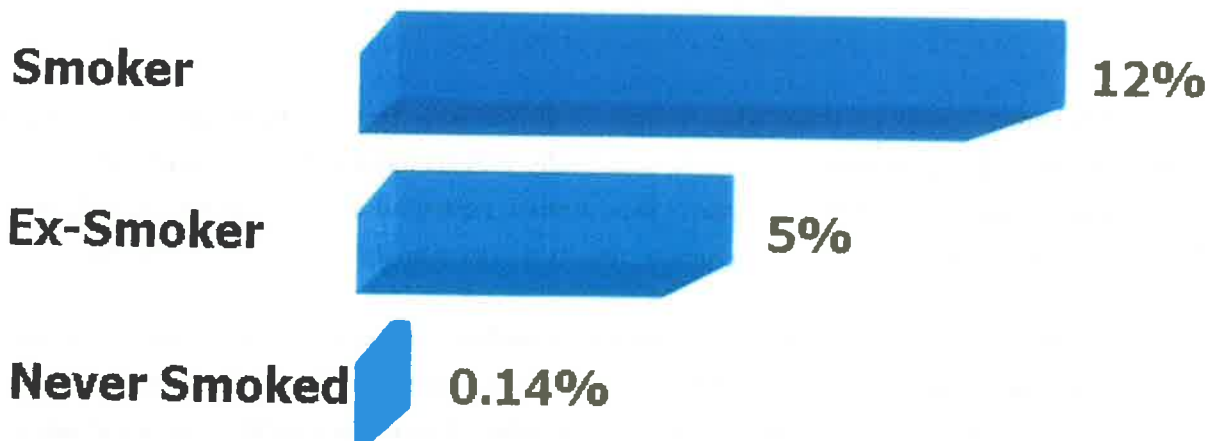
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New Study Shows E-cigarettes are Not Attracting New Users

👁 369 Views 📖 5 Min Read

Percentage of E-Cigarette Users, by Smoking Status



Source: Opinions and Lifestyle Survey - Office for National Statistics

A recent study by the Office for National Statistics (ONS) in Great Britain is showing some enlightening facts about who really is using e-cigarettes. The data from the ONS showed, among other interesting facts, that in 2014

A recent [study](#) by the Office for National Statistics (ONS) in Great Britain is showing some enlightening facts about who really is using e-cigarettes. The data from the ONS showed, among other interesting facts, that in 2014 only 0.1% of people who had never smoked before were smokers of e-cigarettes. Researchers are suggesting that this indicates that e-cigarettes truly do not attract people who never smoked before to use them.

A spokesperson for ONS said to [BBC News](#): “E-cigarettes are almost exclusively used by smokers and ex-smokers. Almost none of those who had never smoked cigarettes were e-cigarette users.” The data comes as no shock to the hundreds and thousands of e-cigarettes users, who were once tobacco smokers. As a cessation method, users are experiencing great success with e-cigarettes, devices that are helping people the world over kick the dangerous habit of smoking.

The ONS data also showed that in general there has been a decline in the number of people smoking in Great Britain going from 20% to 19% between 2012 and 2013. The numbers in the USA are also down, and in both of these countries

likes of with very few industries have ever seen.

The survey also produced some interesting information on why people are switching over from their cigarettes to the popular vaping devices. The ONS study showed that over half of e-cigarette users said that their main reason for using e-cigarettes was to stop smoking. In addition, another one in five said the main reason for their use was because e-cigarettes are thought to be less harmful than the traditional cigarettes they used to smoke. With almost 70% of users attributing their cigarette usage to health reasons, it shows that not only are e-cigarettes considered by their users to be a healthier choice, but they are not often chosen as a first introduction to nicotine and “smoking”. This is in direct opposition to critics’ opinion that e-cigarettes are becoming a popular gateway for teens and adolescents to enter the world of “smoking”.

It is why these findings are extremely important when it comes to the war on e-cigarettes. Opponents of e-cigarettes criticize vaping and the industry for marketing to kids, specifically with the intent to lure them into a lifelong addiction. However findings, such as the ONS study, paint a more realistic portrait of the true landscape of e-cigarette use. Not only are e-cigarette companies not targeting minors; minors are not even the ones using e-cigarettes.

Again, critics may argue these simple facts. Recent studies may on the surface even seem to suggest they have a point. The Center for Disease Control recently released their findings on youth e-cigarette use. Their survey showed that 4.5% of high school aged teenagers had used an e-cigarette product at some point within the last month a figure that was up from 1.5% in 2011. These findings, however, are just part of the larger picture of a new societal trend taking effect. The trends of the teenage population are simply mimicking that of the general population around us. With sales of e-cigarettes growing approximately 25% each year, use is bound to be up across the board. These type of increases are to be expected when the popularity and accessibility of a product has grown at such an enormous rate. The accessibility youth, and all consumers, had to e-cigarettes was far different in 2011, a fact that should also be taken into consideration when examining the increased percentage in youth use.

Dr. Penny Woods, Chief Executive of the British Lung Foundation, seems to disagree with the gateway theory when attributed to e-cigarettes. She stated in response to the ONS survey that: “These data should again alleviate the fears expressed by some over an e-cigarette gateway effect – people trying e-cigarettes before moving on to the much more harmful practice of smoking. However, this is something we’ll need to keep a watchful eye on, as the situation may well change as e-cigarettes continue to become more commonplace.” While cigarettes are becoming replaced with e-cigarettes their accessibility will grow, and this fact should be well monitored to keep e-cigarettes exactly what they are, a healthier choice, rather than a gateway to addiction.

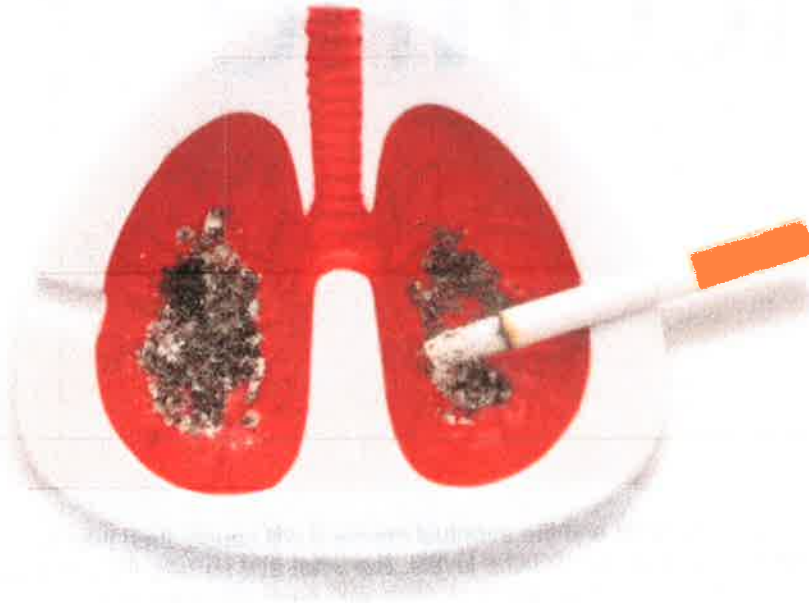
The ONS survey gives us important insight on the users of e-cigarettes, which can only help in the long run. Knowing not only who is using e-cigarettes, primarily smokers and ex smokers, but also why, will hopefully help opponents of e-cigarettes understand the benefits and let them outshine the negatives. While e-cigarette users already know who they are and why they vape, studies that show these simple facts will help e-cigarettes maintain their foothold as a benefit to society, rather than a detriment.



Does Nicotine Cause Cancer?

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Pretty much everyone understands that smoking cigarettes leads to cancer. Most people also know that cigarettes contain nicotine. Numerous Surgeon general's warnings and "stop smoking" campaigns have made it clear that nicotine is dangerous and smoking causes cancer. But does nicotine cause cancer?

The answer is no, it does not.

Nicotine has an entirely different negative effect on the body and is not directly related to the cancer-causing properties of cigarettes. All that nicotine usually does is cause addiction. If there is too much nicotine in the body, an overdose may occur. Too little nicotine causes withdrawal symptoms. But it isn't actually responsible for cancer.

You can blame that on tar. This is the sticky, black substance in cigarettes that provides the bulk of the product's flavor. If cigarette manufacturers were to get rid of tar, their cigarettes would not taste as good, and people would be far less likely to buy that particular brand.

What this means is that any nicotine product without tar is not going to cause cancer. That includes nicotine patches, nicotine lozenges, nicotine sprays, e-liquid and others. There are still plenty of negative effects to be had from these, particularly when it comes to the addictive qualities of nicotine, but cancer is not one of them.



Nicotine

If someone is concerned about the effects of tar on their body and the eventual cancer it will cause, then they have a few options. They may be inclined to try a cigarette with low tar levels or low nicotine levels. But what that usually does is cause them to just smoke more than they normally would. They may not get as much tar or nicotine with each cigarette, but they are more likely to smoke additional cigarettes just to get their nicotine fix and to find a semblance of decent flavor.

They could also take up some sort of smoking cessation product. Patches, lozenges, sprays, gums and more make for plenty of options for those wanting to quit smoking and transition away from the habit slowly. These contain no tar, but they can contain more nicotine, and they are easier to overdose on.

Smokers can also use electronic cigarettes. These contain nicotine, so they are still addictive, but they contain no tar, so they are not as hazardous. Many people have successfully transitioned from smoking cigarettes to vaping eCigs.

The best option is for smokers to quit entirely. This is not always possible and is rarely easy, but it is the most effective way to escape all the negative effects that cigarettes can have. That is not to say that some of the effects of smoking won't have long-term consequences, as they very well could. The longer someone has been smoking, the greater their risk of experiencing the worst effects that smoking has to offer, even after they quit.

So while nicotine contains nothing that can cause cancer, it is often part of the cycle that leads to cancer. The addictive quality of this chemical causes smokers to consume more tar and to eventually succumb to cancer.

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