

Controversial e-cigarette

In brief

- E-cigarettes evaporate a nicotine-containing liquid and are therefore deemed less harmful to health than traditional cigarettes. They can also help with smoking cessation.
- Opponents emphasize the risk of easier entry as well as the simple increase of the nicotine dose. In addition, increased risk of vascular disease, myocardial infarction or stroke is still associated with vaping.
- Advocates and opponents hold never-ending debates on health implications, psychological and economic effects. Both sides refer to scientific results. Genuine long-term studies are still missing.

What is it about?

Health implications: There are no smouldering burns in e-cigarettes and similar devices. The atomised, nicotine-containing liquid therefore contains no tar and fewer other harmful substances and is thus less harmful than tobacco smoke. In this context, advocates often refer to a study by *Public Health England*, according to which e-cigarettes are likely to be only about 5 % as harmful as conventional cigarettes. The effects on passive consumers are also negligible. Critics, on the other hand, cite scientific studies which show that the vapour also contains carcinogenic substances such as nitrosamines, formaldehyde or heavy metals, albeit in smaller doses. Nevertheless, these are detectable, for example, in the urine of users. There is an increased risk of adverse health effects such as vascular disease, myocardial infarction, stroke or erectile dysfunction.

Psychological effects: The e-cigarette can help smokers to quit. In Austria, about two-thirds of the smokers who are trying to quit smoking do not use any aids. Twenty percent use nicotine patches or similar, and with ten percent, the e-cigarette already comes third. A study shows that the same effectiveness is achieved here as is the case with prescription nicotine-replacement drugs.



Image: pixabay.com/de/e-cigarette-vaping-1301664/

Vaping vs. smoking – regulation remains controversial

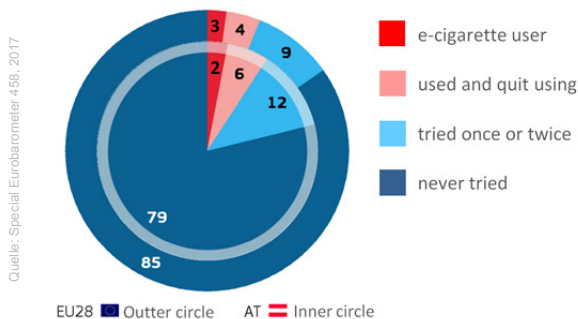
Doctors and youth protection organisations criticise the high level of nicotine content (up to 20 milligrams per millilitre) in freely-available solutions as defined in an EU directive. Overall, nicotine dependency can be prolonged because consumers can increase their dose much more easily than in smoking, and also because vaping is promoted as being healthier. Young people in particular would be at greater risk to actually start smoking through freely-available e-cigarettes. The wide range of harmless-looking flavours such as gummy bears, cherry or cotton candy increases the risk of uptake. E-cigarettes also contribute to undermining tobacco regulation, for example when vaping is allowed in smoke-free public buildings or in the hospitality industry. These arguments are rejected by advocates who cite their scientific results – for example, there has been no increase in the numbers of (e-) cigarette users amongst non-smokers or adolescents. However, such studies investigated only short periods of a few years. Long-term studies are still missing.

Technology of e-cigarettes

E-cigarettes essentially consist of three components: a tank or a replaceable cartridge contains a solution containing nicotine (liquid); an atomiser which vaporises the liquid by means of heating coils and liquid carriers; a (rechargeable) battery supplies the necessary energy.

Key results

The Association of Austrian Pulmonary Specialists has been calling for an equal treatment of vaping and smoking since 2014. In 2014, the EU had set out first steps to regulate the market by adopting the Tobacco Products Directive (TPD). E-cigarettes are thus treated the same as tobacco products in terms of legal aspects. In 2014, the Austrian Parliament had already limited the sale of e-cigarettes to tobacco shops. The Austrian Constitutional Court (VfGH) dropped this classification under the tobacco legislation one year later, which allowed specialist vaping shops to continue to sell. The Austrian implementation of the EU directive took place in 2016. Amongst other things, it also prohibited online sales. Following a complaint, the VfGH examined this ban, and in early 2017, the VfGH ruled that it was constitutional. On 20th May 2017, a revised EU Directive (TPD2) became effective. It prohibits older models of e-cigarettes, certain flavours and fragrances, and limits nicotine dosage to 20 mg per ml. Nicotine-free liquids are also covered by this regulation. The sale may only take place in smaller units (10 ml) and packaging must now have warnings about risks. In addition, liquids with additives such as vitamins or caffeine can no longer be advertised as promoting health.



Comparison of e-cigarette use in Austria and the EU

Critics of the equal treatment of smoking and vaping criticise, above all, the ban on online sales as an unnecessary hurdle for consumers, thus preventing a reduction of damage to health. More stringent critics perceive the ban on online trade as direct protection of the tobacco industry against the growing competitor vaping. In addition, the pharmaceutical industry and its lobbyists see vaping as a new competitor in the significant market for nicotine-replacement products. E-cigarettes and accessories are mainly manufactured by smaller companies; the large tobacco companies are, however, increasingly entering the market, mainly by takeovers. If smoking and vaping were not treated equally, the Austrian state is also risking part of the annual tax revenue from tobacco products, which amounts to approx. 1.6 billion Euros.

What to do?

The controversial debate around e-cigarettes is seemingly without end. Although it has been scientifically proven that they are less harmful to health than conventional smoking, long-term studies, which satisfactorily clear up all medical and psychological effects, are still missing.

The closing of such knowledge gaps is a particularly urgent matter, especially in light of evidence-based policies.

- Legislators should promote independent, transnational, long-term studies which provide information about knowledge gaps regarding health implications, psychological and economic effects.
- Considering all effects, the results of such long-term studies could then result in graduated fiscal treatment of e-cigarettes.
- The added value of e-cigarettes as therapeutic tool for nicotine withdrawal should also be examined in more detail.

Further reading

The Parliamentary Office of Science and Technology (2016) Electronic Cigarettes – POSTNote 533. Houses of Parliament, United Kingdom
http://researchbriefings.parliament.uk/ResearchBriefing/Summary/POST-PN-0533?utm_source=directory&%20utm_medium=website&utm_campaign=PN533

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