



Evidence: Young People and Vaping

Vaping: nicotine dependence, attitudes and perceptions to vaping and health effects

Vaping and nicotine dependence

Most young people who try vaping do not get addicted to nicotine. Dependence on vaping as assessed in 2021 appears lower than on smoking for young people. However, there are indications that young people who are reporting vaping, may be more dependent than previously reported. In the recent ASH survey, 44% of 11-17-year-old current vapers reported strong, very strong or extremely strong urges to vape (compared with 26% in 2020), and in those that also smoked cigarettes, urges to vape were similar to urges to smoke.¹

Further research on vaping dependence is needed including by type of vaping product used, nicotine type and nicotine strength. But given the majority of young people, at this current time, were vaping single-use (disposable) devices which are usually 20mg/ml or 2% (the maximum legal limit of mg/ml) then nicotine dependence in some regular vapers is highly likely.

In an international survey – the ITC (International Tobacco Control Policy Evaluation Project) Youth survey, assessing 16- to 19-year-olds, across 3 countries (United States, Canada and England), the proportion of young people reporting they were ‘a little’ or ‘very addicted’ to vaping has increased substantially between 2017-2023 in all countries, including England². In England, 32% of 16–19-year-old current vapers surveyed did not feel addicted to vaping, but 43% perceived that they were ‘a little’ addicted, and 21% reported they felt ‘very addicted’. In comparison, 41% of 16–19-year-old current smokers did not feel addicted to smoking, and the same proportion as vapers (43%) reported they were a little addicted to smoking, and only 13% perceived that they were ‘very addicted’ to smoking.²

Attitudes towards vaping

In the most recent Smoking, Drinking and Drug Use among Young People in England survey in 2023, the majority (96%) of 11–15-year-olds reported they are aware of vapes³. Of the young people that were surveyed in 2023, 29% thought it was OK for people their own age to *try a vape to see what it’s like*, and 21% thought it was OK to *use a vape once a week*. Attitudes which haven’t changed much since 2021. The older the young person, the more likely they were to think that trying a vape and vaping once a week were OK³.

Disposable Devices

Young people’s perceptions of single-use (disposable) vapes, were recently explored through focus groups with 82, 11-16-year-olds in Scotland, of which 76% were never-smokers and 39%

had used a vape. Single-use vapes were described as “cool”, “fashionable” and a modern lifestyle “accessory”. As well as the flavour, participants described design characteristics that appeared to be targeted to a younger audience including: the small, compact design; bright, colourful appearance; and resembling other objects such as highlighters or tins of mints.

Harm Perceptions

There has been a worsening of the misperceptions of harms in young people, since 2022.¹ With an increasing proportion of young people incorrectly thinking that vaping is *about the same or more harmful* than cigarettes. In the recent ASH survey 58% of 11–17-year-olds believed vaping is about the same or more harmful compared to cigarettes¹.

Studies suggest that accurately perceiving vaping as less harmful than smoking predicted subsequent increases in vaping (including starting vaping) among young people. With perceptions that vaping was harmful being associated with not started vaping among young people.¹

Awareness of vape promotions

There has been a significant increase in awareness by young people, of the promotion of vapes. The majority (55%) of 11-17-year-olds reported exposure to promotion of vapes in shops in 2024, an increase from 37% in 2022². Awareness of online promotions is not reported as high (29%), but when it is noticed online, it's more likely to be on TikTok (52%), YouTube (32%) and Instagram (28%)¹, similar trends since in the previous year (2023).

Vaping on young people's health

There is strong evidence that vaping is less harmful than smoking, but it is not risk free and should not be used among young people, especially those who have never smoked⁷. The reported short-term effects of vaping can include coughing, dizziness, headaches, and a sore throat. The evidence is lacking on whether short term or intermittent vape use in young people can lead to negative health outcomes later in life. There is no current evidence on the potential long-term harms of vaping in the absence of a history of tobacco smoking, so the potential health harms of vaping are unknown. But the health harms are likely to be substantially lower than smoking. A new 10-year study investigating the long-term health effects of vaping on young people's health and well-being has now been launched, to help address this knowledge gap⁶.

Young people can become addicted to the nicotine in vapes, and dependence has been implied in some current vapers (see above section on vaping and nicotine dependence) which can then lead to irritability, cravings, low mood, anxiety, trouble sleeping and difficulty concentrating, withdrawal symptoms on stopping (similar symptoms seen when people stop smoking). These nicotine withdrawal symptoms can then drive and reinforce further vaping.

Relative to smoking, vaping is considered to be safer⁵, however young people may conflate safer with safe, and they may underestimate the absolute effects of vapes and vaping. Even still young people have been shown to be knowledgeable about the health effects associated with vaping but were choosing to vape anyway⁷.

Nicotine harms

The evidence on the harmful effects of nicotine exposure per se, in young people is far from conclusive, and the majority of the evidence comes mainly from animal studies and epigenetics (changes to DNA in laboratory settings)⁸. The extent to which these findings can be extrapolated and generalised to humans is therefore unclear. In 2020 the Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT)⁹ noted that while brain development in humans continues to around 25 years of age, there was the *potential* for nicotine to have adverse neurodevelopment effects. However, on further review of the effects of nicotine in adolescents and young adults they found no data on the direct effects of nicotine in humans.

Other substances and Illegal products

There are additional health concerns when vape devices are used for consuming illicit substances (e.g. cannabis, spice). The extent to which using nicotine vapes for this purpose is intentional, incidental or accidental is currently unclear.

Illicit use of substances and the use of illicit vape products in general, increases the unintended consequences from use. Many adverse health effects associated with vape use and related to either the use of other substances e.g. cannabis, or illicit vapes which are not compliant with current regulation. In 2022 a programme of test purchasing vapes by the Chartered Trading Standards Institute (CTSI) carried out by young people found that a quarter of the products purchased did not comply with UK requirements.

References

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