

Health impacts of e-cigarettes for children, young people and adults

What are e-cigarettes?

An electronic cigarette, or e-cigarette, is a handheld electronic device used to simulate the experience of smoking a cigarette. It consists of a mouthpiece, a battery and a cartridge to hold the e-liquid or 'e-juice'. E-cigarettes work by heating a liquid which generates an aerosol or 'vapour' that is inhaled by the user. Using e-cigarettes is commonly referred to as vaping.

What are the health risks?

E-cigarettes are relatively new products so the evidence is still evolving around their health impacts. Studies have shown that people who vape have slower wound healing and irritated airways. Vaping also has a negative impact on asthma control. Animal studies suggest that vaping may be associated with later development of emphysema, lung and bladder cancer and heart disease. There have also been some reports of e-cigarettes exploding and causing fires and injuries.

E-liquids used in e-cigarettes often contain nicotine—a type of poison. E-liquid containers bought online often don't conform to Australian standards, which include having child resistant closures and appropriate labelling. Refill bottles may contain highly concentrated nicotine solutions and just one millilitre can be lethal if swallowed by a child. An infant died in Victoria in early 2019 following exposure to liquid nicotine.

Ingredients in e-cigarettes

Studies have shown that e-cigarettes are often either unlabelled or inaccurately labelled so you can never be quite sure what's in them. E-liquids generally contain flavours in combination with propylene glycol, and glycerol. The coil of the e-cigarette releases heavy metals, such as lead and this is inhaled when the e-cigarette is used. Toxic contaminants are also often found in e-liquids, and so is nicotine.

Under state and territory poisons legislation, the commercial supply of nicotine for use in e-cigarettes is illegal, however recent testing of online and over the counter e-liquids, labelled as 'nicotine free', found that 60 per cent contained nicotine. The same testing also found contamination by body fluids (e.g. urine) probably due to poor hygiene practices.

Isn't vaping a good way to stop smoking?

There is currently insufficient evidence to show that e-cigarettes are effective in helping people to quit smoking. No brand of e-cigarette has been assessed by the Therapeutic Goods Administration as a smoking cessation aid.

There has been some recent media reporting about a British study that has found that e-cigarettes may be more effective for quitting tobacco smoking than nicotine-replacement therapy. It is important to note that the data from this study show that people who used e-cigarettes as a tobacco cessation aid generally stayed addicted to nicotine and just switched to e-cigarettes. People in the study who successfully used nicotine replacement therapy to quit tobacco smoking were more likely to quit use of all nicotine sources.

Young people and e-cigarettes

The brains of young people are at a higher risk of developing nicotine addiction than adults and most smokers commenced their addiction under the age of 21. Nicotine can affect learning, memory and attention in teenagers.

Young people usually start vaping out of curiosity. Some studies have found that young vapers may be unaware that their vape devices are e-cigarettes, or that they may contain nicotine. They are usually sold as vape pens, vape pod kits, starter kits, vape tanks etc.

In 2017, 10.5 per cent of surveyed ACT high school children aged 12 to 17 reported having tried e-cigarettes, including 18.4 per cent of 16 to 17 year olds. Males (12.5 per cent) were more likely than females (7.8 per cent) to report ever using e-cigarettes.

In 2018, 9.3 per cent of young Australian adults, aged 18-25, reported using e-cigarettes in the previous 30 days. 64 per cent of these young adult vapers actively chose to use e-cigarettes containing nicotine and 77 per cent preferred sweet flavours.

What do e-cigarettes look like?

E-cigarettes come in a wide variety of shapes, sizes and styles. Online e-cigarette advertising uses the same marketing techniques that were once used to promote tobacco to children and young people. This advertising is illegal in the ACT, but the sellers are based interstate or overseas and the ACT Government has no jurisdiction over online advertisements. E-liquid flavours are often sweet and may look and sound like confectionary. Some of the packaging is likely to be attractive to children, as well as to young adults. See some examples below.



Below are some examples of the Pod style 'stealth' e-cigarettes that are available online, these are small devices that may look like everyday items such as USB drives, pens or jewellery.



Don't you have to be 18 to buy e-cigarettes?

Yes, it is illegal to sell e-cigarettes to people under the age of 18 and nicotine is prohibited in e-cigarettes sold in the ACT. Most children access e-cigarette products through a friend or family member. In addition, young people may purchase e-cigarettes online where there are no effective safeguards to stop them from accessing it.



What is the government doing to protect children from accessing e-cigarettes?

In 2016, the ACT Government changed its tobacco legislation to regulate e-cigarettes as smoking products. In March 2019 the ACT Government asked the Federal Department of Health to expand the scope of its tobacco legislation to include e-cigarettes. While this is being considered, the ACT Health Directorate is raising community awareness of this issue.

Other resources

National Health and Medical Research Council (NHMRC) Statement on Electronic Cigarettes 2017: nhmrc.gov.au/about-us/publications/ceo-statement-electronic-cigarettes

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