

E-Cigarettes

What are E-cigarettes?

E-cigarettes are battery-operated devices that resemble tobacco cigarettes, cigars or pipes except that they do not contain tobacco. The device allows users to inhale nicotine and other chemicals in a vapour form rather than smoke. There are also a number of non-nicotine devices that contain a variety of ingredients and flavours like fruit, confectionary, coffee or alcohol flavours.¹

Some devices resemble conventional cigarettes, cigars or pipes where others look like everyday items such as pens, USB memory sticks, and larger cylindrical or rectangular devices.²

E-cigarette products can be readily bought on-line from overseas markets, which raise safety concerns about the lack of regulation governing their manufacture and distribution. Most countries have no regulations governing e-cigarette design and product approval, which raises product safety concerns. There have been frequent reports about nicotine poisonings as well as injuries and property damage arising from product malfunctions.²

E-cigarettes are sometimes mistaken for approved nicotine replacement therapy as some manufacturers market them as devices designed to help people overcome tobacco dependency. While it has not been ruled out that e-cigarettes can be used as a quitting aid in the future, there is no conclusive evidence to date to suggest their effectiveness. Similarly, there is also limited evidence on the risks associated with the other chemicals found in e-cigarettes as well as by-standers exposed to the vapours.³

Other names

Electronic cigarettes, electronic nicotine delivery systems (ENDS), e-cigs, ecigarro, electro-smoke, green cig and smartsmoker.³

How are they used?

E-cigarettes contain nicotine solution, flavour and other chemicals in a disposable cartridge that can be replaced or refilled. E-cigarettes use heat to transform nicotine solution into vapour which enters the respiratory tract before being absorbed into the bloodstream.⁴

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People may use e-cigarettes for various reasons including:

- to help them reduce or quit smoking
- to avoid disturbing other people with smoke
- in smoke-free places
- to cough less, improve their breathing or physical fitness
- for the flavour or sensation of inhalation.⁵

Do they help people quit smoking?

As yet, there is very little available research that indicates if e-cigarettes can help people quit smoking as the results of studies on individual brands vary. Their effectiveness in helping people give up tobacco can only be assessed by the Therapeutic Goods Administration (TGA), which to date has not occurred.

While it has been suggested e-cigarettes may offer a safer alternative to smoking, other research points to a potential rise in smoking rates by re-normalising smoking, reducing a smoker's motivation to quit or indirectly encouraging non-smokers to take up the habit.⁶

Are they safer than traditional cigarettes?

Research into health risks associated with smoking e-cigarettes is extremely limited. However, there are known risks associated with nicotine exposure on brain development meaning that pregnant women and adolescents should avoid smoking them. They should also not be smoked around children. There are also risks linked to nicotine poisoning via ingestion and skin contact¹

While it is thought that e-cigarettes may pose less harm than conventional cigarettes because they do not contain tobacco⁶, significant differences in product designs and individual smoking patterns make it difficult to determine the potential level of nicotine toxicity in e-cigarettes².

The limited research to date does not distinguish between the many brands and models containing different e-liquids, batteries, heating elements, nicotine concentrations and flavourings. Nor differentiate between the chemical compositions of e-liquid and aerosols that users inhale.⁶

There is also insufficient research examining significant public health issues such as:

- the chemicals used in them;
- their health effects on smokers or bystanders;
- their marketing as safe alternatives to tobacco products; and,
- their appearance making them attractive to non smokers, including children.³

Limited research into passive exposure to e-cigarette chemicals suggests pollutant levels are lower than normal cigarettes.

There are safety concerns from prolonged exposure if smokers inhale vapour many times a day for many months.

E-cigarettes contain chemicals that may be acceptable for use in foods and cosmetics but it is unclear if the vapours are safe when inhaled into the lungs³. Some e-cigarettes contain propylene glycol and glycerol (purified vegetable glycerine) that are potentially toxic⁶ and may cause throat irritation⁷. Some e-cigarette manufacturers now use distilled water and glycerine instead of propylene glycol vapour in an attempt to address such safety concerns⁷.

While e-cigarettes may spare bystanders from second-hand smoke that typically comes from traditional cigarette tips, known as the sidestream, the limited research into passive exposure to e-cigarette chemicals suggests pollutant levels are lower than normal cigarettes.^{6,1}

The law

Currently, it is illegal to sell, use or possess electronic cigarettes that contain nicotine. The laws could change if the Therapeutic Goods Administration (TGA) approves individual e-cigarette brands in the future. In the meantime, it might be possible to import nicotine for use in an e-cigarette if people are able to comply with the Therapeutic Goods Personal Importation Scheme that, among other things, requires a medical prescription. Some doctors, however, might not be willing to prescribe a product that remains unapproved in Australia.¹

Also, consumers should always double check with relevant government departments before ordering nicotine products online to see if there are any legal restrictions prohibiting the importation, or use, of nicotine products in their state or territory.¹

In most cases it is legal to sell electronic cigarettes that do not contain nicotine provided the products are not promoted with 'therapeutic' claims stating they can assist people to quit smoking tobacco cigarettes.¹

As it is illegal to sell a product that resembles a tobacco product in South Australia and Western Australia, many e-cigarette brands are likely to fall in this category.¹

Queensland and New South Wales, the only states with laws specifically targeting the sale and use of e-cigarettes, prohibit the sale of e-cigarettes to minors or displaying the products in retail stores. In Queensland, e-cigarettes are also banned in smoke-free places. The restrictions also extend to non-nicotine products and will also apply to any nicotine product approved by the TGA in the future.¹

References for this fact sheet are available at: druginfo.adf.org.au.

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Further Information

The Druginfo website has information on:

- Help & support services
- Treatment
- Fetal Alcohol Spectrum Disorders
- Standard drinks
- Guidelines for low-risk drinking
- Binge drinking

Go to druginfo.adf.org.au

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