

## Fact sheets 2021

### What are e-cigarettes?

Electronic cigarettes (e-cigarettes) are hand-held battery powered devices that deliver a liquid which is heated and inhaled as an aerosol. The aerosol is commonly referred to as 'vapour'. Using an e-cigarette is commonly referred to as 'vaping' (ADOH, 2019).

The liquid solution usually comprises propylene glycol and glycerol, with or without nicotine and flavours, which is stored in disposable or refillable cartridges or a reservoir. E-cigarettes may look like cigarettes, cigars, pipes, pens or memory sticks. Newer versions, called box or 'squonk' mods, are bulkier and box-like in shape.

In Australia, it is illegal to sell or buy nicotine for use in e-cigarettes. Nicotine is a dangerous poison under The Poisons Standard. In most states and territories, it is also illegal to use e-cigarettes in places where smoking is illegal (ADOH, 2019).

E-cigarettes are often marketed as a way to quit smoking, however, there isn't enough conclusive evidence to support their legalisation as a therapeutic product. In Australia, you can't sell products that claim to help people quit smoking unless the Therapeutic Goods Administration (TGA) has approved them for this purpose. The TGA has not approved any e-cigarettes for sale to help people quit smoking (ADOH, 2019).

### What are the effects?

E-cigarettes provide taste and throat sensations ('throat hit') similar to smoking. Depending on the content of the e-liquid, they can produce a large vapour which may be satisfying for some users. Producing large vape clouds or 'cloud chasing' is an emerging hobby.

If e-cigarettes contain nicotine, the effects may be the same as smoking tobacco cigarettes (see Tobacco fact sheet).

# Electronic Cigarettes

e-cigarettes, e-cigs, electronic nicotine delivery systems (ENDS), electronic non-nicotine delivery systems (ENNDS), alternative nicotine delivery systems (ANDS), personal vaporisers, e-hookahs, vape pens, vape mods and vapes

## E-cigarettes and COVID-19

There have been concerns that e-cigarette use may make people more susceptible to contracting and transmitting COVID-19, due to exposure of the lungs to chemical components present in e-liquid, and due to the way that e-cigarettes are used (via hand to mouth action). There has been no study examining the direct association between e-cigarette use and COVID-19. There is some evidence that e-cigarettes expose the lungs to chemicals and may increase the vulnerability of lungs to respiratory disease. However, whether this exposure increases the risk of contracting COVID-19 specifically has not been tested and is not known.

## How many people use electronic cigarettes?

According to the Australian Institute of Health and Welfare, sale of e-cigarettes is becoming more common. Between 2016 and 2019, the proportion of people who had ever used e-cigarettes rose from 8.8 percent to 11.3 percent. While use of e-cigarettes rose across most age groups, the rise among young adults was particularly notable. Nearly two in three (64 percent) current smokers and one in five (20 percent) non-smokers aged 18–24 reported having tried e-cigarettes. Among those who had tried them, frequency of use also increased, with more people using them at least monthly (from 10.3 percent in 2016 to 17.9 percent in 2019) (AIHW, 2020).

## Dependence and withdrawal

If e-cigarettes contain nicotine, there may be a high risk of dependence and tolerance as with tobacco cigarettes (see Tobacco fact sheet).

## Treatment

The Australian Government Department of Health provides information about how to quit smoking and services that may assist. You can call Quitline on 137 848 between 8am and 8pm Monday to Friday, to talk to a counsellor.

If e-cigarettes contain nicotine, treatments may be the same as those for smoking tobacco cigarettes (see Tobacco fact sheet).



## What are the risks?

- > The wide variation in products and the ability of users to customise their experience makes it difficult to assess the safety and efficacy of e-cigarettes as a group, because the results from research involving one particular product may not be applicable to all e-cigarettes or all users.
- > E-cigarettes may expose users to chemicals and toxins at levels that have the potential to cause health effects. These include solvents such as propylene glycol, glycerol or ethylene glycol, which may form toxic or cancer-causing compounds when vaporised. Although these chemicals are typically found in lower concentrations than in tobacco cigarettes, in some studies e-cigarettes and tobacco cigarettes were found to produce similar levels of formaldehyde, which is classified as a cancer-causing agent. E-cigarette liquids or vapour may also contain potentially harmful chemicals that are not present in smoke from tobacco cigarettes (NHMRC, 2017).
- > In August 2019, an outbreak of e-cigarette, or vaping, product use-associated lung injury (EVALI) cases were reported in the United States, resulting in a number of deaths. This was identified to be likely caused by a vitamin E acetate additive in THC-containing e-liquids (CDC, 2020). No cases have been identified in Australia, but there remain general concerns regarding potential lung injury from e-cigarette use.

## Emergency information

If you, or someone around you, is experiencing undesired or distressing psychological or physical symptoms from the intake of alcohol or other drugs please seek immediate medical attention.

If you need urgent help from ambulance services call Triple Zero (000). If a person has been mixing drugs with alcohol or other drugs, tell the paramedic exactly what has been taken.

## Services

For free and confidential advice about alcohol and other drugs, call the National Alcohol and Other Drug hotline on **1800 250 015**.

The hotline will automatically direct you to the Alcohol and Drug Information Service in your state or territory.

## More resources

- The Illicit Drug Reporting System is an Australian monitoring system that identifies emerging trends of local and national interest in illicit drug markets.
- The Ecstasy and Related Drugs Reporting System is an Australian monitoring system for ecstasy and related drugs that identifies emerging trends of local and national interest.
- The Clinician's Guide to Illicit Drugs and Health examines the health effects of each of the major illicit drugs.
- The Australian Institute of Health and Welfare collects information on alcohol and tobacco consumption, and illicit drug use among the general population in Australia.
- The Australian Bureau of Statistics is Australia's national statistical agency, providing official statistics on a range of economic, social, population and environmental matters of importance to Australia.

## Sources

Australian Government Department of Health (2019). *Smoking and tobacco laws in Australia*. Retrieved from <https://www.health.gov.au/health-topics/smoking-and-tobacco/about-smoking-and-tobacco/smoking-and-tobacco-laws-in-australia#ecigarette-laws>

Australian Government Department of Health (2019). *Smoking and Tobacco*. Retrieved from <https://www.health.gov.au/health-topics/smoking-and-tobacco>

Australian Institute of Health and Welfare (2020). *National Drug Strategy Household Survey 2019*. Retrieved from <https://www.aihw.gov.au/reports/illicit-use-of-drugs/national-drug-strategy-household-survey-2019/contents/table-of-contents>

CDC, Centers for Disease Control and Prevention (2020). *Outbreak of Lung Injury Associated with the Use of E-Cigarette, or Vaping, Products*. Retrieved from [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/severe-lung-disease.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html)

National Health and Medical Research Council (2017). *NHMRC CEO Statement: Electronic Cigarettes (E-Cigarettes)*. Retrieved from <https://www.nhmrc.gov.au/about-us/resources/ceo-statement-electronic-cigarettes>