

Vaping and e-cigarettes

Electronic or e-cigarettes are devices which heat liquid (called 'e-liquid') into an aerosol (or vapour) which is then inhaled into a person's lungs. They are also commonly referred to as 'vapes' and can either be refillable or disposable. Most e-liquids are flavoured, with some containing nicotine, and others not.

E-cigarettes were developed as an alternative nicotine delivery system for adult smokers and have been promoted as an effective way to quit or reduce smoking. Research is still being conducted to establish the harms related to e-cigarette use.

Vaping may be safer than smoking but not vaping at all is the safest option.

In Australia, it is illegal to buy, possess or use nicotine devices or liquid nicotine for vaping without a medical prescription.

It is illegal for someone under the age of 18 to buy e-cigarettes or e-cigarette accessories and for anyone to sell, market or promote e-cigarettes to people under the age of 18, whether they contain nicotine or not.

What is vaping?

Vaping is the act of inhaling and exhaling an aerosol, (referred to as a vapour), which is produced by an e-cigarette. An aerosol is a mixture of ultrafine liquid particles that contain a range of chemicals.

What is an e-cigarette?

In 2003, the first e-cigarette was developed by a Chinese pharmacist as a quitting aid for adult smokers. E-cigarettes vaporise a liquid containing nicotine, providing an alternative way to inhale the drug. Originally called 'electronic nicotine delivery systems' (ENDS), these devices were promoted as an effective way of quitting smoking. They simulated the cigarette smoking sensation and also enabled users to circumvent smoke-free laws.

A wide range of vaping devices are available, including 'cigalikes' (which look like cigarettes), pod vapes, vape pens and 'mods' (advanced modifiable devices). They all consist of a mouthpiece, a tank or pod containing the e-liquid, a heating component (or atomiser) and a battery. When used, the battery heats up the atomiser, turning the e-liquid into an aerosol which can then be inhaled into the lungs and exhaled into the environment.

What is a 'disposable vape'?

There are many different types of e-cigarettes, or vapes, with the devices undergoing significant design changes since they were first developed.

They can either be refillable (i.e., e-liquids can be purchased separately and used to refill the tank or pod) or disposable (i.e., once the e-liquid has been used the device is thrown away).

Disposable vapes appear to be the devices preferred by Australian young people. These are usually brightly coloured and are available in a wide range of flavours. They are also small and easy to conceal, making them appealing to those young people who wish to vape without detection.

Why do people vape?

Some people choose to vape as an alternative to smoking traditional cigarettes. Many of these are smokers who are trying to reduce their risk of harm from smoking, as vaping exposes them to less chemicals than smoking whilst still satisfying their need for nicotine. They may also be using them to try to quit or reduce their smoking.

There is concern that there may be others, particularly teenagers, who have never smoked who may start vaping. Their reasons for experimenting with these devices may be due to curiosity, social and peer pressure or they may choose to vape for entertainment reasons, particularly the performance of tricks with the exhaled vapour. Common tricks include the 'Ghost Inhale' and 'The Dragon'.

Medical Disclaimer

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Published February 2022.

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What is in the e-liquid?

The e-liquid is usually a propylene glycol and vegetable glycerine-based liquid with a flavouring added. There are thousands of e-liquid flavours available, including fruit, sweet and chocolate varieties.

Some e-liquids contain nicotine. These are illegal to purchase in Australia without a medical prescription. There are also vape products that contain THC oil. THC is the main psychoactive component of cannabis.

Is vaping 'safe'?

There is no evidence to support that vaping is 'safe', i.e., they are completely risk-free.

It is important to remember that vaping is a fairly new phenomenon and, as such, we know little about the long-term harms associated with the use of these devices. As with any new product, it is possible that some harms may emerge over time and it is important that vaping is monitored carefully for any possible adverse effects.

Is vaping 'safer' than smoking?

The harms associated with smoking are well known and the e-cigarette was developed to provide a safer alternate nicotine delivery system for long-term smokers addicted to the drug. Even so, we do not know enough about vaping to say that it is a 'safe' alternative to cigarette smoking. Vaping may be safer than smoking but not vaping at all is the safest option.

Although vaping nicotine may expose users to fewer toxic chemicals than conventional cigarettes, the extent to which this reduces harm to the user is yet to be determined. Research has found that the aerosols produced by vaping are not harmless and can, at the very least, worsen asthma and cause cough and lung irritation. In addition, some of the flavourings used in e-liquids have been found to contain potentially toxic chemicals when heated. It is also important to remember that some vaping products are not well regulated, particularly the disposable vapes which are preferred by young people and sold illegally in Australia, so it is difficult to know what exactly is being inhaled.

Put simply, we still do not know the full impact or long-term effects of vaping on those who use these devices.

Is vaping nicotine dangerous?

Nicotine is an addictive chemical and is classified as a Schedule 7 'dangerous poison' in Australia.

Due to it being addictive, once you begin using the drug, it can be extremely difficult to stop.

Vapes were first developed to help people quit smoking because they had become addicted to nicotine. Smokers who try to quit aren't addicted to the smoking, nicotine is the issue. Vaping may have removed many of the smoking-related harms for long-term smokers, but it has also provided young people access to an addictive drug that many of them may otherwise never have tried.

In addition to nicotine, regular tobacco cigarettes contain over 7000 chemicals, many of which are toxic. Whilst vaping may expose you to fewer chemicals than smoking, vaping nicotine is still harmful to health, particularly young people, and is illegal in Australia without a medical prescription.

What about disposable vapes?

We know little about specific risks associated with the use of the illicit disposable vapes sold in Australia, as research has been conducted on vaping more generally rather than specific devices.

Around 90% of all disposable vapes are made in China, with some factories producing half a million of these devices per day. They do not undergo any local quality checks when they enter Australia and, as a result, very little is known about their contents. Many disposable vapes bought in Australia are not sold with packaging, and as a result the buyer has no knowledge of what is contained in the device. This lack of accurate information on the contents of the product increases the potential risks associated with these devices. There have been reports of defective batteries that have resulted in vapes exploding, causing burns and other injuries.

It is also important to remember that e-cigarettes, particularly disposable devices, pose a serious environmental threat. They introduce a range of waste, including plastic, nicotine salts, heavy metals, lead, mercury, and flammable lithium-ion batteries into waterways, soil, as well as to wildlife. Unlike

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cigarette butts, vape waste does not biodegrade even under severe conditions.

Haven't some people died from vaping? What caused those deaths?

In the US there have been cases of a lung disease that has been associated with vaping. In 2019, sixty-eight people died and more than 2000 people developed serious lung damage due to a poisoning outbreak that was linked to vaping devices used for THC. This condition was named EVALI (e-cigarette or vaping product use associated lung injury) and has been linked to vitamin E acetate, an ingredient which is added to illicit cannabis vaping liquids. It appears that it was this substance that led to the deaths and hospitalisations.

As much as these deaths are highly unusual, they do highlight one of the risks associated with purchasing vaping products, particularly the unregulated disposable devices sold in Australia, i.e., it is impossible to know what it is that you are using.

Does vaping help people quit smoking?

Research is still being conducted to establish the harms related to e-cigarette use and debate continues on whether they offer an alternative nicotine replacement (NR) option for smokers.

Currently, no vaping product is approved by the Therapeutic Goods Administration (TGA) as a smoking cessation tool. There are many aids that have been approved by the TGA that are safe to use and are shown to improve long-term quitting rates such as patches, gum, lozenges and medications.

Is vaping legal?

E-cigarettes that do not contain nicotine are legal for sale and use by adults in all states and territories. WA is the exception, with the sale of these devices being illegal in that state if they resemble a tobacco product.

In Australia, it is illegal to buy, possess or use liquid nicotine for vaping without a medical prescription. Even so, until recently people were accessing nicotine devices and liquids from overseas websites. Legislation in this area has now been formalised and since 1 October 2021 large fines have been applied to those who attempt to purchase these products without first getting a prescription from a doctor.

It is illegal for someone under the age of 18 to buy e-cigarettes or e-cigarette accessories. It is also against the law for anyone to sell, market or promote e-cigarettes to people under the age of 18.