



Department of **Education**

Department of **Health**

WA SCHOOLS

ANTI-VAPING TOOLKIT



Department of **Education**

Department of **Health**

ANTI-VAPING TOOLKIT USER GUIDE

This User Guide is to be used as an adjunct to the Department of Education WA and WA Department of Health guidelines.

ANTI-VAPING TOOLKIT

USER GUIDE

This User Guide is to be used as an adjunct to the Department of Education WA and WA Department of Health guidelines.

The purpose of this user guide is to explain how communication resources in the *Anti-vaping toolkit* can be used by schools.

ABOUT THE ANTI-VAPING TOOLKIT

The *Anti-vaping toolkit* is a collection of resources and creative assets designed to raise awareness of the health risks of using electronic cigarettes (e-cigarettes, vapes).

These resources can be used by young people, parents and carers, teachers and schools.

The *Anti-vaping toolkit* aims to:

- increase awareness about vapes and the health risks of vaping
- address the myths and misperceptions around vaping

WHAT IS INCLUDED IN THE ANTI-VAPING TOOLKIT?

The resources available for download include:

- factsheets
- email and newsletter content
- video (for use with the Teacher Resource only)
- posters.

Please note that the toolkit will be continually updated with new resources.

BACKGROUND AND MESSAGING

The *Anti-vaping toolkit* sits alongside the *Do you know what you're vaping?* campaign. The campaign was developed by NSW Health in consultation with young people, parents and carers, creative partners, education partners and healthcare organisations.

The *Do you know what you're vaping?* concept was tested with a diverse group of 300 young people aged 14 to 21 years: 51% had previously used an e-cigarette and 26% had used tobacco cigarettes.

The *Anti-vaping toolkit* has been adapted for use in Western Australia (WA) by the Department of Education and Health with permission from NSW Health.

ADAPTING THE MATERIALS AND BRANDING

The Department of Education WA and the WA Department of Health acknowledge NSW Health's authorship and ownership of these materials.

The toolkit contains letters and newsletter content. Schools may insert local details where specified to create localised communications. However, it is recommended that content provided is not modified.

PREFERRED IMAGERY

Evidence shows vapour in advertisements has been found to increase viewers' desire to vape. Caution should be used around showing e-cigarette vapour, however showing e-cigarette devices may be educational so people know what to be aware of.

HOW TO ENSURE ACCESSIBILITY

The Department of Education accessibility and inclusivity design standards should be followed. For example, images should include alternative (Alt) text: short and descriptive text to describe what is in the image that can be read aloud to users by screen reader software.

Include headings rather than bold text and keep tables to a minimum.

PREFERRED LANGUAGE

Please ensure content is written in plain English – avoid using jargon, avoid acronyms where possible (if needed, spell out acronyms at first mention), and be concise.

Ensure language is appropriate for the target audience. Balance the use of colloquial language with key health information. Provide clear explanations: for example, when mentioning ‘nicotine’ it may be helpful to provide a description: ‘nicotine, the highly addictive chemical found in cigarettes’.

For language consistency, please:

- refer to ‘people who vape’ not ‘vapers’
- use both ‘e-cigarettes’ and ‘vapes’ / ‘vaping’ (young people commonly refer to ‘vaping’)
- refer to ‘quitting from vapes’ not ‘vape quitting’ or ‘quit vapes’ (as the latter may be confused with using vapes to quit smoking)
- refer to ‘young people’ not ‘youth’ (as a noun)
- refer to ‘public school’ and ‘secondary schools’ rather than ‘government’ or ‘high schools’
- replace technical terms such as ‘carcinogens’ with descriptions, for example ‘cancer causing chemicals’.

INFORMATION ABOUT SUPPORT

Promotion of the resources should include information about how to access support to quit vaping:

- Quitline counsellors are available to answer any questions you may have about e-cigarettes on 13 7848 (13 QUIT). Quitline is a telephone based service, offering information and advice. Quitline counsellors provide tips and strategies, and help you to plan your quit attempts, based on your own needs and preferences. Aboriginal counsellors are available on request. For people who prefer to speak in a difference language, Quitline uses the Telephone Interpreter Service (TIS).

For information about the laws regarding e-cigarettes, visit [Healthy WA](#).

The Make Smoking History campaign, base at Cancer Council WA provides information about quitting smoking. Visit makesmokinghistory.org.au.

Too much nicotine from e-cigarettes can cause nicotine poisoning. If you suspect a student has swallowed or had skin contact with liquid from an e-cigarette:

- call the WA Poisons Information Centre immediately on **13 11 26** if the student is conscious and alert
- call **000** for an ambulance if the student is unconscious.

FURTHER INFORMATION

Get the facts at education.wa.edu.au

For information, please contact Road Safety and Drug Education on **9402 6415**.



Department of Education

Department of Health

THE FACTS ABOUT VAPING

E-cigarettes, often called 'vapes', are electronic devices designed to deliver vapourised liquids into the lungs.

There are now many different styles of vapes available and they can be difficult to spot. The main ingredient in vapes is propylene glycol, vegetable glycerine or glycerol. Vapes often also contain nicotine, flavours and other chemicals. Vapes may contain harmful chemicals that aren't listed on the pack.

The biggest misunderstanding about vapes, is that they are harmless compared to cigarettes. This is not true. **Vapes are not safe.**

As a first step to help protect young people, learn about the different types of vapes and the risk vaping poses for young people.

DO YOU KNOW WHAT THEY'RE VAPING?



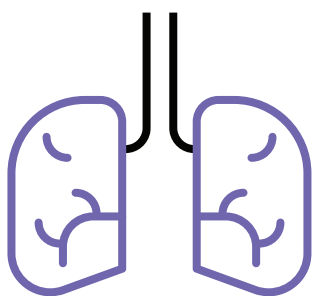
Many vapes contain nicotine making them **very addictive**



The nicotine in 1 vape can
= 50
cigarettes



Young people who vape are **3 times** as likely to take up smoking cigarettes



Vaping has been linked to **serious lung disease**



Vapes can contain the same **harmful chemicals** found in cleaning products, nail polish remover, weed killer and bug spray

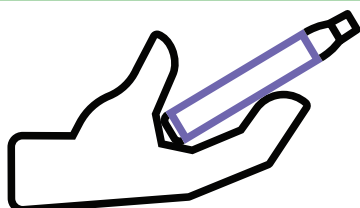
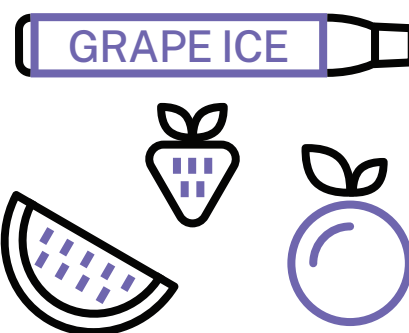


Vapes come in a variety of designs and styles and can be **easy to conceal**

VAPES APPEAL TO YOUNG PEOPLE

The flavours (e.g. watermelon, grape, caramel, bubble-gum, vanilla and mint) and colourful packaging used for vapes make them appealing to young people. **Many vapes also contain nicotine, which young people can become addicted to very quickly.**

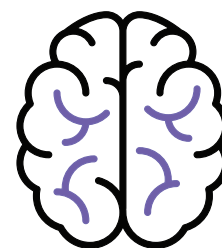
Tobacco companies are continuously looking for new customers. Vapes are a new way to get young people addicted to nicotine, which is often difficult to quit.



HOW BIG IS THE PROBLEM?

As you may be aware, the uptake of vaping by young people is increasing. Research shows that in WA, **13.5% of school students aged 12 to 17 years have tried an e-cigarette.** Of those who had tried 2 out of 3 (66%) had not used one in the last 30 days. Young people who vape are 3 times as likely to take up smoking cigarettes.

NICOTINE IS HARMFUL FOR YOUNG PEOPLE



Nicotine is a drug that is often present in vapes and it is especially addictive for young brains.

It can cause long-lasting negative effects on brain development.

Nicotine changes the way the brain synapses are formed in young people.

The impacts can include impaired attention, learning, memory and changes in mood.

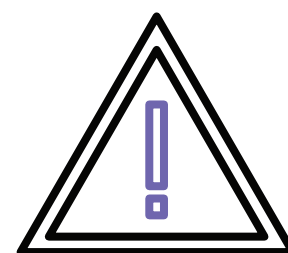
RISKS TO PHYSICAL AND MENTAL HEALTH

Vapes may expose young people to chemicals and toxins at levels that have the potential to cause adverse health effects. **Vapes can leave a young person at increased risk of depression and anxiety.** Vaping has also been linked to serious lung disease. Importantly, many of the long-term harms of vaping are still unknown.

The liquid in vapes and the vapour is not water. Vapes can expose young people to:

- the same harmful chemicals found in cleaning products, nail polish remover, weed killer and bug spray.
- toxins such as formaldehyde and heavy metals.
- ultrafine particles that can be inhaled deep into the lungs.
- flavouring chemicals such as diacetyl (a chemical linked to a serious lung disease).

Vapes have even been known to explode causing serious burns.



DO YOU KNOW WHAT THEY'RE VAPING?

THE LAWS AROUND SELLING VAPES IN WA

It is reported that young people often purchase vapes online, from retail stores or from friends and contacts in the community. However, it is illegal in WA to sell e-cigarette devices and nicotine vaping products to anyone regardless of age, unless they are prescribed by a doctor for smoking cessation purposes and obtained with a prescription from a pharmacy.

In WA e-cigarette devices and their components, whether or not they contain nicotine, cannot be sold by tobacco or general retailers. It is also illegal to sell vapes to friends at school or in the community. If you suspect someone is selling vapes or e-cigarettes and their components, you can report it to the Department of Health by emailing TobaccoPolicy@health.wa.gov.au.

MISLEADING AND DANGEROUS LABELLING



Vaping products are often not labelled or are incorrectly labelled. The labels may state that vapes are nicotine free, but **many of these products contain nicotine and a lot of other chemicals.**

They just don't put it on the pack.

WHAT CAN SCHOOL STAFF DO?



Smoking and vaping is banned within the grounds of, and within five metres of an entrance to, all schools in WA. It is important to reinforce this message with students and consistently apply your school and broader education sector policies. Educating students about vaping risks can take place through curriculum delivery or wellbeing programs.

All staff have a key role to play in supporting and protecting student health and wellbeing. Take the opportunity to talk to students about vaping.

Make sure students know the facts and understand all the risks.

Be patient and ready to listen.

Young people may perceive vaping as safe and common behaviour. If you hear young people say they are only 'casually' or 'socially' vaping, point out it is easy to get hooked on vaping because vapes often contain high levels of nicotine and there isn't the harsh taste to deter them in the early stages as there is with smoking.

Teaching and learning resources and professional learning on e-cigarettes is available from the Department of Education via myresources.education.wa.edu.au/vaping.

WHERE TO GO FOR MORE INFORMATION

More information is available from:

[HealthyWA](#)

[Make Smoking History \(Cancer Council WA\)](#)



DO YOU KNOW WHAT THEY'RE VAPING?

myresources.education.wa.edu.au/vaping



Department of Education

Department of Health

THE FACTS ABOUT VAPING

There are many different styles of electronic cigarettes or 'vapes' available.

The biggest misunderstanding about vapes is that they are harmless compared to cigarettes.

This is not true. Vapes are not safe. Spotting vapes can be difficult because they often resemble common school items like highlighter pens, markers and USB drives. Knowing the different shapes and types of vapes is a first step to help protect young people from the risks of vaping.

COMMON VAPES



Disposable vapes are the most common vapes used by young people. They can contain between 300 to over 4,000 'puffs' in each device. They often range in price from \$15 to \$50, depending on the number of 'puffs' the device contains. Many of these vapes contain nicotine, despite often not being labelled as containing nicotine.



Vapes can also come in pod-style or refillable devices, where the user refills the device with e-liquids or new pods containing e-liquids.

These devices don't seem to be as popular with young people.

DO YOU KNOW WHAT THEY'RE VAPING?

myresources.education.wa.edu.au/vaping



Department of Education

Department of Health

WHAT CAN SCHOOL STAFF DO ABOUT VAPING?

- Ensure your students understand **vaping is banned** on school grounds and within 5 metres of an entrance.
- Point out it is **easy to get hooked** on vaping because vapes often contain high levels of nicotine and there isn't the harsh taste to deter people using them like with cigarettes.
- Deliver prevention education / activities using the **WA schools anti-vaping toolkit**.
- Provide parents and carers with information about ways they can help **prevent children from vaping**.
- Use your school's **behaviour management** policy to guide disciplinary approaches.
- **Report incidents** of use through your school and system reporting.
- **Use caution** when handling devices. They can combust.
- Dispose of devices through a **waste removal service** that can dispose of lithium batteries and liquid nicotine.
- Call the WA Poisons Information Centre on **13 11 26** if a student has swallowed or touched e-liquid. Call **000** for an ambulance if the student is unconscious.
- Implement a **whole school** alcohol and other drugs education plan including procedures for incident management and intervention support.

Talk to your students about the harms of vaping. Make sure they know the facts and understand all the risks. Be patient and ready to listen.

DO YOU KNOW WHAT THEY'RE VAPING?

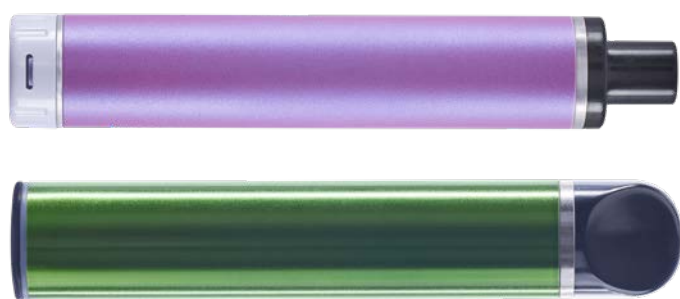
myresources.education.wa.edu.au/vaping | 9402 6415



Department of Education

Department of Health

LEARN TO SPOT A VAPE



Disposable vapes are the most common vapes used by young people. They can contain between 300 to over 4,000 'puffs' in each device. They often range in price from \$15 to \$50, depending on the number of 'puffs' the device contains. Many of these vapes contain nicotine, despite often not being labelled as containing nicotine.



Vapes can also come in pod-style or refillable devices, where the user refills the device with e-liquids or new pods containing e-liquids. These devices don't seem to be as popular with young people.

Spotting vapes can be difficult because they often resemble common school items like highlighter pens, markers and USB drives.

Knowing the different shapes and types of vapes is a first step to help protect your students from the risks of vaping.

DO YOU KNOW WHAT THEY'RE VAPING?

myresources.education.wa.edu.au/vaping



Department of Education
Department of Health

KEY FACTS TEACHERS SHOULD KNOW ABOUT VAPING



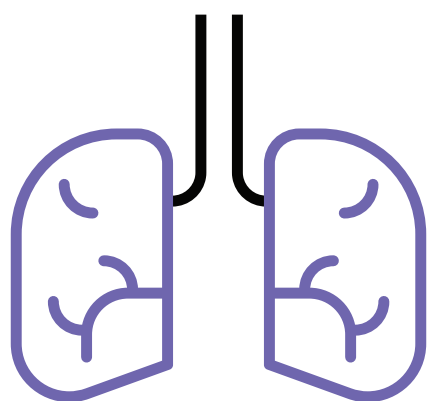
Many vapes
contain nicotine
making them
very addictive



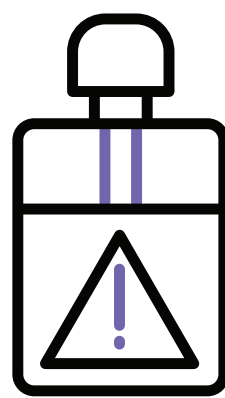
The nicotine
in 1 vape can
= 50
cigarettes



Young people who
vape are **3 times**
as likely to take
up smoking



Vaping has
been linked to
**serious lung
disease**



Vapes can contain
the same **harmful
chemicals** found in
cleaning products, nail
polish remover, weed
killer and bug spray



Vapes come in a
variety of designs
and styles and can
be **easy to conceal**

The biggest misunderstanding about vapes is that they are harmless compared to cigarettes. This is not true. Vapes are not safe.

DO YOU KNOW WHAT THEY'RE VAPING?

myresources.education.wa.edu.au/vaping



Department of Education

Department of Health

THE FACTS ABOUT VAPING

Electronic cigarettes or e-cigarettes, often called 'vapes', are electronic devices designed to deliver vapourised liquids into the lungs. There are many different styles of vapes available and they can be difficult to spot.

The main ingredient in vapes is propylene glycol, vegetable glycerine or glycerol, and they often also contain nicotine, flavours and other chemicals. Vapes may contain harmful chemicals that aren't listed on the pack.

The biggest misunderstanding about vapes is that they are harmless compared to cigarettes. This is not true. **Vapes are not safe.**

DO YOU KNOW WHAT THEY'RE VAPING?



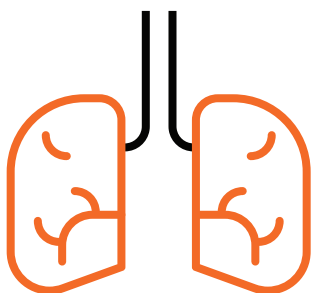
Many vapes contain nicotine making them **very addictive**



The nicotine in 1 vape can
= 50
cigarettes



Young people who vape are **3 times** as likely to take up smoking



Vaping has been linked to **serious lung disease**



Vapes can contain the same **harmful chemicals** found in cleaning products, nail polish remover, weed killer and bug spray

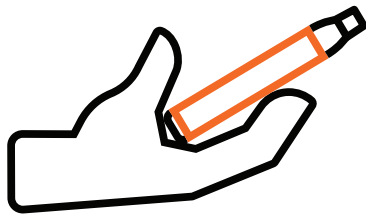
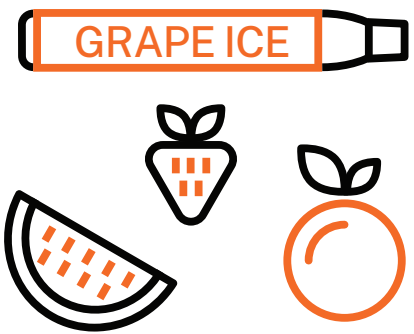


Vapes come in a variety of designs and styles and can be **easy to conceal**

VAPES APPEAL TO YOUNG PEOPLE

The flavours (such as watermelon, grape, caramel, bubble-gum, vanilla and mint) and colourful packaging used for vapes make them appealing to young people. **Many vapes also contain nicotine, which young people can become addicted to very quickly.**

Tobacco companies are continuously looking for new customers. Vapes are a new way to get young people addicted to nicotine, which is often difficult to quit.

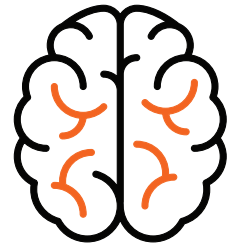


HOW BIG IS THE PROBLEM?

As you may be aware, the uptake of vaping by young people is increasing. Research shows that in WA, **13.5% of school students aged 12 to 17 years have tried an e-cigarette.**

Of those who had tried 2 out of 3 (66%) had not used one in the last 30 days. Young people who vape are 3 times as likely to take up smoking cigarettes.

NICOTINE IS HARMFUL FOR YOUNG PEOPLE



Nicotine is a drug that is often in vapes and is highly addictive for young brains.

It can cause long-lasting negative effects on brain development.

Nicotine changes the way brain synapses are formed in young people.

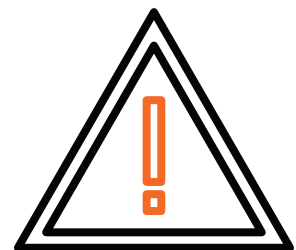
The impacts can include impaired attention, learning, memory, and changes in mood.

RISKS TO PHYSICAL AND MENTAL HEALTH

Vapes may expose young people to chemicals and toxins at levels that have the potential to cause negative health effects. **Vapes can leave a young person at increased risk of depression and anxiety.** Vaping has also been linked to serious lung disease. Importantly, many of the long-term harms of vaping are still unknown. The liquid in vapes and the vapour is not water. Vapes can expose young people to:

- the same harmful chemicals found in cleaning products, nail polish remover, weed killer and bug spray.
- toxins such as formaldehyde and heavy metals.
- ultrafine particles that can be inhaled deep into the lungs.
- flavouring chemicals such as diacetyl (a chemical linked to serious lung disease).

Vapes have even been known to explode causing serious burns.



DO YOU KNOW WHAT THEY'RE VAPING?

THE LAWS AROUND SELLING VAPES IN WA

It is reported that young people often purchase vapes online, from retail stores or from friends and contacts in the community. However, it is illegal in WA to sell e-cigarette devices and nicotine vaping products to anyone regardless of age, unless they are prescribed by a doctor for smoking cessation purposes and obtained with a prescription from a pharmacy.

In WA e-cigarette devices and their components, whether or not they contain nicotine, cannot be sold by tobacco or general retailers. It is also illegal to sell vapes to friends at school or in the community. If you suspect someone is selling vapes or e-cigarettes and their components, you can report it to the Department of Health by emailing TobaccoPolicy@health.wa.gov.au.

IS YOUR CHILD VAPING?

You may not know your child is vaping as vapes are small and resemble common items like lighters, pens and USB drives. They are also not easy to smell.

Tell-tale **signs that your child might be vaping include the symptoms of nicotine addiction** such as your child feeling irritable or anxious. If your child is vaping, encourage them to stop and let them know that help is available and you are there for them. Stopping vaping can sometimes be hard and your child may need advice from a GP.

It also helps to set a good example by being tobacco and vape-free yourself.



MISLEADING AND DANGEROUS LABELLING

Vaping products are often not labelled or are incorrectly labelled.

The labels may state that vapes are nicotine free, but **many of these products contain nicotine and a lot of other chemicals.**

They just don't put it on the pack.



THE IMPORTANCE OF TALKING TO YOUR CHILD

If you suspect your child is vaping, take the time to talk to them about it and help them understand all of the risks.

As vaping is often common in schools, they may see it as a normal or safe thing to do, but that is not the case.

It is important to let your child know the risks of vaping. Try to start the conversation with your child in a relaxed easy-going way, perhaps taking the cue from around you, such as a note from school, a news story about it, or seeing people vaping on the street. And have your facts ready.

DO YOU KNOW WHAT THEY'RE VAPING?

education.wa.edu.au



Department of Education

Department of Health

THE FACTS ABOUT VAPING

There are many different styles of electronic cigarettes or 'vapes' available.

The biggest misunderstanding about vapes is that they are harmless compared to cigarettes.

This is not true. Vapes are not safe. Spotting vapes can be difficult because they often resemble common school items like highlighter pens, markers and USB drives. Knowing the different shapes and types of vapes is a first step to help protect young people from the risks of vaping.

COMMON VAPES



Disposable vapes are the most common vapes used by young people. They can contain between 300 to over 4,000 'puffs' in each device. They often range in price from \$15 to \$50, depending on the number of 'puffs' the device contains. Many of these vapes contain nicotine, despite often not being labelled as containing nicotine.



Vapes can also come in pod-style or refillable devices, where the user refills the device with e-liquids or new pods containing e-liquids.

These devices don't seem to be as popular with young people.

DO YOU KNOW WHAT THEY'RE VAPING?

education.wa.edu.au



Department of Education

Department of Health

THE FACTS ABOUT VAPING

Vapes are electronic devices designed to deliver vapourised liquids into your lungs when you breathe in. Vapes aren't water. The main ingredient in vapes is propylene glycol, vegetable glycerine or glycerol, and they often also contain nicotine, flavours and other chemicals. Vapes may contain harmful chemicals that aren't listed on the pack.

The biggest misunderstanding about vapes is that they are harmless compared to cigarettes. This is not true. **Vapes are not safe.**

DO YOU KNOW WHAT YOU'RE VAPING?



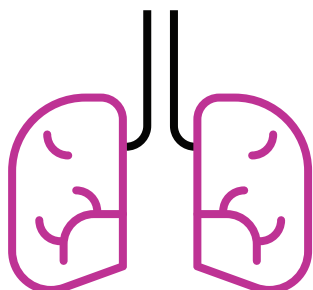
Many vapes contain nicotine making them **very addictive**



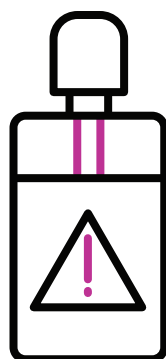
The nicotine in 1 vape can
= 50
cigarettes



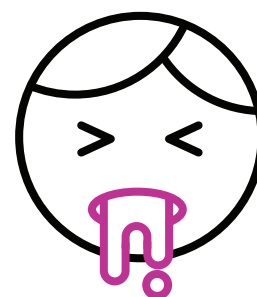
If you vape you are **3 times** as likely to take up smoking cigarettes



Vaping has been linked to **serious lung disease**



Vape aerosol **is not**
water vapour

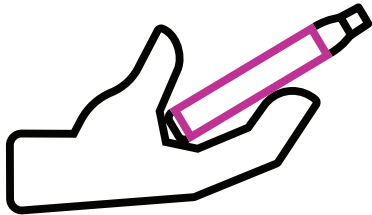
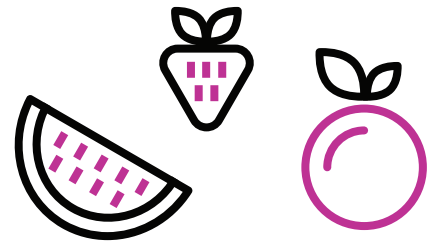


Vapes can contain the same **harmful chemicals** found in cleaning products, nail polish remover, weed killer and bug spray.

VAPES ARE DESIGNED TO BE APPEALING TO YOU

The flavours (e.g. watermelon, grape, caramel, bubble-gum, vanilla and mint) and colourful packaging used for vapes make them appealing. **Many vapes also contain nicotine, which you can become addicted to very quickly.**

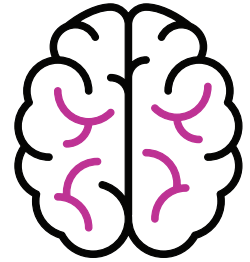
Tobacco companies are continuously looking for new customers. Vapes are a new way to get young people addicted to nicotine, which is often difficult to quit.



MOST YOUNG PEOPLE DO NOT VAPE

Vaping may seem popular, but in fact, research shows that more than 4 in 5 (86.5%) young people **do not vape**. You might think vaping is harmless, but it isn't, and the serious consequences of vaping are just starting to emerge.

NICOTINE IS HARMFUL FOR YOUR YOUNG BRAIN



Nicotine is a drug that is in many vapes and is very addictive for young brains. **It can cause long-lasting negative effects on your brain development.**

Nicotine changes the way brain synapses are formed in young people.

This can harm your ability to pay attention, learn and affect your mood and memory.

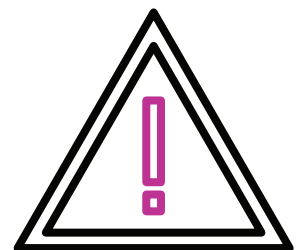
RISKS TO YOUR PHYSICAL AND MENTAL HEALTH

Vapes may expose you to chemicals at levels that have the potential to cause negative health effects. Vaping can impact your lungs and fitness. It can also leave you at increased risk of depression and anxiety. **Vaping has been linked to serious lung disease.** Importantly, many of the long-term harms of vaping are still unknown.

You're not vaping water. When you inhale from a vape you can be exposed to:

- the same harmful chemicals found in cleaning products, nail polish remover, weed killer and bug spray.
- toxins such as formaldehyde and heavy metals.
- ultrafine particles that can be inhaled deep into the lungs.
- flavouring chemicals such as diacetyl (a chemical linked to serious lung disease).

Vapes have even been known to explode causing serious burns.



DO YOU KNOW WHAT YOU'RE VAPING?

THE LAWS AROUND SELLING VAPES IN WA

In WA, e-cigarette devices and their parts cannot be sold by tobacco or general retailers.
It is also illegal to sell vapes to friends at school or in the community.

You may have heard that nicotine vapes are available with a prescription from a doctor. This is only to help people quit smoking, and even then, doctors will explain the risk of using vapes to their patients.

If you suspect someone is selling vapes or e-cigarettes you or your parents can report it to the Department of Health by emailing TobaccoPolicy@health.wa.gov.au.

THE SIGNS YOU ARE ADDICTED TO VAPING



How do you know you are getting hooked on vaping?

Nicotine addiction from vapes is the same as for smokers.

This can mean feeling irritable or anxious, as well as craving to vape.

You may also experience a lack of concentration when you can't vape and you can have trouble sleeping.



MISLEADING AND DANGEROUS LABELLING

Vaping products are often not labelled or are incorrectly labelled.

Most vapes with labels that claim to be nicotine free contain nicotine and a lot of other chemicals.

They just don't put it on the pack.



GOOD REASONS TO NOT VAPE

You don't want vaping to come between you and your friends.

Have a reason or two that you can tell your mates why you don't want to vape.

For example, "Vaping is not for me because I don't know what's in it" or "I care about my health and fitness and don't want vaping to ruin it" or "Vapes may taste or smell good, but I've heard they can contain nicotine and I don't want to get hooked like a cigarette smoker".

DO YOU KNOW WHAT YOU'RE VAPING?

If you need support, speak with your teacher or student services staff.



Department of Education

Department of Health

THE FACTS ABOUT VAPING



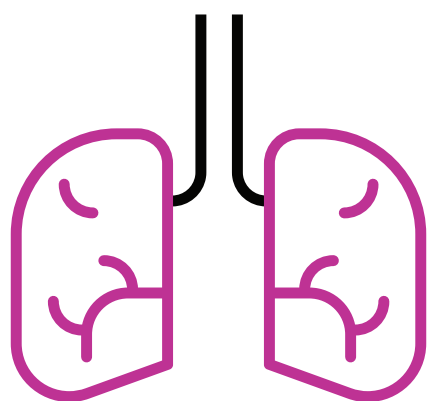
Many vapes
contain nicotine
making them
very addictive



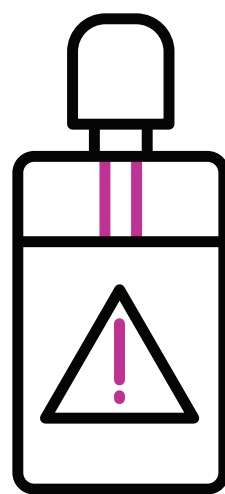
The nicotine
in 1 vape can
= 50
cigarettes



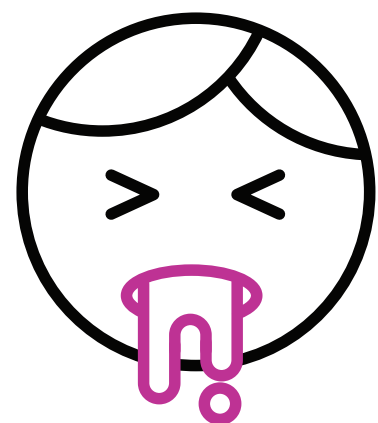
Young people who
vape are **3 times**
as likely to take
up smoking



Vaping has
been linked to
**serious lung
disease**



Vape aerosol
**is not
water vapour**



Vapes can contain
the same **harmful
chemicals** found in
cleaning products, nail
polish remover, weed
killer and bug spray.

The biggest misunderstanding about vapes is that they are harmless compared to cigarettes. This is not true. Vapes are not safe.

DO YOU KNOW WHAT THEY'RE VAPING?

If you need support, speak with your teacher or student services staff.



DO YOU KNOW WHAT YOU'RE VAPING?

Vapes can have the same harmful chemicals like in cleaning products, weed killer, bug spray and nail polish remover.

They just don't put it on the pack.

If you need support, speak with your teacher or student services staff at your school.



DO YOU KNOW WHAT YOU'RE VAPING?

Vapes can have the same harmful chemicals like in cleaning products, weed killer, bug spray and nail polish remover.

They just don't put it on the pack.

If you need support, speak with your teacher or student services staff at your school.

DO YOU KNOW WHAT YOU'RE VAPING?



Vapes can have the same harmful chemicals like in cleaning products, weed killer, bug spray and nail polish remover.

They just don't put it on the pack.

If you need support, speak with your teacher or student services staff at your school.

DO YOU KNOW WHAT YOU'RE VAPING?



Vapes can have the same harmful chemicals like in cleaning products, weed killer, bug spray and nail polish remover.

They just don't put it on the pack.

If you need support, speak with your teacher or student services staff at your school.

DO YOU KNOW



WHAT YOU'RE VAPING?

Vapes can have the same harmful chemicals like in cleaning products, weed killer, bug spray and nail polish remover.

They just don't put it on the pack.

If you need support, speak with your teacher or student services staff at your school.

HEALTH RELATED FREQUENTLY ASKED QUESTIONS

WHAT DO VAPES LOOK AND SMELL LIKE?

Vapes come in many shapes and sizes and can be made to look like everyday items including highlighters, pens, or USB memory sticks.

Vapour from vapes does not usually have a strong odour but they may have a sweet smell depending on the flavour.

WHAT IS IN A VAPE?

Vape aerosol is not water vapour. The main ingredient in vapes is propylene glycol, vegetable glycerine or glycerol.

Vapes and e-liquids can contain a range of chemicals such as acetone found in nail polish remover, acrolein found in weed killer and 2-chlorophenol found in cleaning products and bug spray.

Vapes come in a number of flavours such as blueberry or bubble gum that make them appealing.

Many vapes also contain nicotine, the same highly addictive substance found in tobacco cigarettes.

Testing vapes has shown that those labelled 'nicotine-free' can still contain high nicotine levels. People can think they are using nicotine-free vapes and can unknowingly quickly develop a nicotine addiction.

Vapes are often available in different flavours which can be appealing to young people and children. While some chemicals in vapes are also used in food production and are generally considered safe when eaten, this does not mean they are safe when they are inhaled directly into the lungs.¹

DO VAPES LIST ALL THE INGREDIENTS THEY CONTAIN ON THE PACK?

Vapes are often labelled incorrectly and can contain nicotine, even when they claim not to. The ingredients listed on vape packaging are commonly inaccurate and/or incomplete.

Although vape packaging might list some ingredients, it may not include all chemicals in the vapour. Researchers have found that many of the substances identified in vapes were contaminants from either the e-liquid, the device itself, or emissions following heating of the e-liquid.^{2,3}

Below are some of the chemicals that have been found in vapes. These chemicals are not listed on the pack:

- 2-chlorophenol used in disinfectant/cleaning products and insecticide^{3,4}
- Acetone used in nail polish remover^{3,5,6}
- Pulegone used in insecticide^{3,6,7}
- Acrolein used in herbicides^{3,8}

Australian research has examined vapes to determine their content^{4,9}. Researchers have found a range of chemicals – many of them harmful.

ABC News published a story about the 'suite of chemicals' in the liquids used in vapes, some at 'dangerously high' levels.¹⁰

2021 Australian research⁴ analysed 65 samples of Australian e-liquids labelled as 'non-nicotine'. Every sample contained at least one potentially harmful chemical and all samples were mislabelled, highlighting concerns that consumers are misinformed. Six of the samples contained nicotine, despite being marketed as nicotine-free. They found most of the substances found in vapes are not identified on the pack, raising concerns about what people are inhaling.

For more information visit [Tobacco in Australia: Safety and health risks of e-cigarettes](#).

HOW BIG IS THE PROBLEM?

As you may be aware, the uptake of vaping by young people is increasing. Research shows that in WA, 13.5% of school students aged 12 to 17 years have tried an e-cigarette. Of those who had tried 2 out of 3 (66%) had not used one in the last 30 days. Young people who vape are 3 times as likely to take up smoking cigarettes.²¹

WHAT ARE THE SHORT-TERM RISKS OF YOUNG PEOPLE WHO VAPE?

Short-term health effects of vaping include nausea, vomiting, mouth and airway irritation, chest pain and palpitations.¹²

Vaping can increase the odds of being diagnosed with asthma.¹³

Nicotine vapes can weaken the immune system.¹⁴

Regular nicotine use can also worsen stress and anxiety and can make you more susceptible to depressive symptoms.¹⁴ Conversely, quitting nicotine can lead to reduced stress, anxiety and depression.¹⁵

WHAT IS NICOTINE POISONING?

Too much nicotine from vapes can cause nicotine poisoning. Symptoms can vary, but can include sweating, racing heart rate and increased blood pressure, shaking and vomiting.

If you think someone has been poisoned by liquid nicotine, please call the WA Poisons Information Centre on **13 11 26** immediately or **000** if it is an emergency. For more information see the WA Poisons Information Centre.

WHAT ARE THE LONG-TERM HEALTH RISKS FOR YOUNG PEOPLE WHO VAPE?

Vapes can contain cancer-causing agents, toxins, heavy metals, and very fine particles that can cause adverse health effects.¹

Vaping can have harmful, life-long impacts, especially on young people's growing brains and bodies.

Vapes can contain high levels of nicotine. Adolescence is a critical period for brain development and exposure to nicotine can have long-term health consequences, impacting memory, attention and learning.¹⁶

Even vapes that do not contain nicotine are still not safe and can have negative, long-lasting health outcomes for young people.¹⁷

DO PEOPLE WHO USE VAPES GO ON TO USE TOBACCO CIGARETTES?

Most adults who smoke cigarettes became addicted to nicotine as teenagers.¹⁸

Nicotine is highly addictive and research suggests that young people can become more easily addicted to nicotine than adults.¹⁹

Research indicates that young people who vape may be three times as likely to go on to use regular cigarettes.^{20, 17}

WHAT CAN YOU DO AS A PARENT OR CARER?

There are ways you can help protect your children from vaping:

- Whether you suspect your child is vaping or not, take the time to talk to them about it and help them understand all of the risks. It is never too late to have the conversation.
- Try to start the conversation with your child in a relaxed easy-going way, perhaps taking the cue from around you, a note from school, a news story about vaping, or seeing people vaping on the street.
- If your child is vaping, encourage them to stop and let them know that help is available and you are there for them.
- Learn about the different types of vapes available and the risks associated with using these products.
- Set a good example by being tobacco or vape free.
- If you suspect someone is selling vapes or e-cigarettes and their components, you can report it to the Department of Health by emailing TobaccoPolicy@health.wa.gov.au

REFERENCES

1. Australian Government NH&MRC. NHMRC CEO Statement: Electronic Cigarettes (E-Cigarettes). Australian Government; 2017.
2. Zhao D, Aravindakshan A, Hilpert M, Olmedo P, Rule AM, Navas-Acien A, et al. Metal/ Metalloid Levels in Electronic Cigarette Liquids, Aerosols, and Human Biosamples: A Systematic Review. *Environmental health perspectives*. 2020;128(3):36001.
3. Department of Health National Industrial Chemicals Notification and Assessment Scheme. Non-nicotine liquids for e-cigarette devices in Australia: chemistry and health concerns. 2019.
4. Larcombe A, Allard S, Pringle P, Mead-Hunter R, Anderson N, Mullins B. Chemical analysis of fresh and aged Australian e-cigarette liquids. *Medical journal of Australia*. 2021.
5. Grondin CJ, Davis AP, Wiegers JA, Wiegers TC, Sciaky D, Johnson RJ, et al. Predicting molecular mechanisms, pathways, and health outcomes induced by Juul e-cigarette aerosol chemicals using the Comparative Toxicogenomics Database. *Current Research in Toxicology*. 2021;2:272-81.
6. Sleiman M, Logue JM, Montesinos VN, Russell ML, Litter MI, Gundel LA, et al. Emissions from Electronic Cigarettes: Key Parameters Affecting the Release of Harmful Chemicals. *Environmental science & technology*. 2016;50(17):9644-51.
7. Omaiye EE, Luo W, McWhirter KJ, Pankow JF, Talbot P. Flavour chemicals, synthetic coolants and pulegone in popular mint-flavoured and menthol-flavoured e-cigarettes. *Tobacco control*. 2021;tobaccocontrol-2021-056582.
8. Kuntic M, Oelze M, Steven S, Kröller-Schön S, Stamm P, Kalinovic S, et al. Short-term e-cigarette vapour exposure causes vascular oxidative stress and dysfunction: evidence for a close connection to brain damage and a key role of the phagocytic NADPH oxidase (NOX-2). *European heart journal*. 2020;41(26):2472-83.
9. Chivers E, Janka M, Franklin P, Mullins B, Larcombe A. Nicotine and other potentially harmful compounds in “nicotine-free” e-cigarette liquids in Australia. *Medical journal of Australia*. 2019;210(3):127-8.
10. Alison Branley. New Australian vaping research finds ‘suite of chemicals’ in liquids used in vapes, some at ‘dangerously high’ levels. ABC News. 11 October 2021.
11. Centre for Epidemiology and Evidence. NSW Population Health Survey (SAPHaRI). St Leonards: NSW Ministry of Health.; 2019.
12. Gotts JE, Jordt S-E, McConnell R, Tarran R. What are the respiratory effects of e-cigarettes? *BMJ*. 2019;366:l5275-l.
13. Byrne S BE, Williams G, Anastasiou KM, Tonkin A, Battams S and Riley MD,. E-cigarettes, smoking and health. A Literature Review Update. Australia: CSIRO; 2018.
14. Christensen D. 6.9 Predictors of nicotine dependence. 2018. In: *Tobacco in Australia: Facts and issues* [Internet]. Melbourne: Cancer Council Victoria.
15. Greenhalgh E, & Scollo, MM;. InDepth 18B: Electronic cigarettes (e-cigarettes). In Scollo, MM and Winstanley, MH (editors) *Tobacco in Australia: Facts and issues*. Melbourne: Cancer Council Victoria; 2021.
16. Gotts JE, Jordt S-E, McConnell R, Tarran R. What are the respiratory effects of e-cigarettes? *BMJ*. 2019;366:l5275-l.
17. Byrne S BE, Williams G, Anastasiou KM, Tonkin A, Battams S and Riley MD,. E-cigarettes, smoking and health. A Literature Review Update. Australia: CSIRO; 2018.
18. Christensen D. 6.9 Predictors of nicotine dependence. 2018. In: *Tobacco in Australia: Facts and issues* [Internet]. Melbourne: Cancer Council Victoria.
19. Greenhalgh E, & Scollo, MM;. InDepth 18B: Electronic cigarettes (e-cigarettes). In Scollo, MM and Winstanley, MH (editors) *Tobacco in Australia: Facts and issues*. Melbourne: Cancer Council Victoria; 2021.
20. Baenziger O, Ford L, Yazidjoglou A, Joshy G, Banks E. E-cigarette use and combustible tobacco cigarette smoking uptake amongst non-smokers, including relapse in former smokers: umbrella review, systematic review and meta-analysis. *BMJ Open* 2021;11:e045603
21. Guerin, N. & White, V. (2020). ASSAD 2017 Statistics & Trends: Australian Secondary Students’ Use of Tobacco, Alcohol, Over-the-counter Drugs, and Illicit Substances. Second Edition. Cancer Council Victoria.

FREQUENTLY ASKED QUESTIONS FOR SCHOOLS ABOUT VAPING

WHAT ARE ELECTRONIC CIGARETTES (E-CIGARETTES, VAPES)?

Electronic cigarettes or e-cigarettes (vapes) are battery operated devices that heat a liquid (e-liquid) to produce a vapour to inhale. Using an e-cigarette is often called 'vaping'. Vapes include both disposable e-cigarettes, such as 'Cuvies' and 'Stigs', and pod devices, such as JUUL.

ARE E-CIGARETTES SAFE TO HANDLE?

Research has found that some e-liquids sold as "nicotine-free" contain nicotine. Nicotine is a highly addictive and poisonous drug.

E-liquids also pose a poisoning risk.

Reports of combustion events and burns have been reported to Worksafe WA. You can read more about this in the [Safety bulletin - 01/2021 - Hazards associated with the use of e-cigarette devices](#).

HOW DO I DISPOSE OF AN E-CIGARETTE OR VAPING DEVICE/COMPONENT?

If you find e-cigarette devices on your school site:

- Use caution when handling the devices as they can combust or cause burns.
- Store them in a dry place away from sunlight, heat (less than 35o Celsius) and humidity. Access more information about battery storage from [Planet Ark](#).
- Dispose of devices through a waste removal service that is capable of disposing lithium batteries and liquid nicotine (a poison). Do not place them in general waste.

Note:

- If your school has a current contract for waste removal services (for example, general rubbish bins, and battery collection), check with the contractor if they can provide a suitable solution for the removal of e-cigarettes.
- You may need to vary the existing contract to include this within its scope. For more information, refer to [Buy goods and services under \\$50,000](#).

If your current contractor does not have capability, or you do not have a contract for waste removal, you can engage directly with a supplier or contact 2 or 3 local suppliers and ask for quotes. For more information, refer to [Follow rules for buying goods and services](#).

WHAT ARE THE RELATED DEPARTMENT POLICIES TO ASSIST SCHOOLS TO MANAGE INCIDENTS INVOLVING THE USE OF E-CIGARETTES AND/OR VAPING DEVICES?

Department of Education policies:

- Appendix A Department Standards for Maintaining a Smoke-Free Workplace in the WHS Procedures
- Student Behaviour in Public Schools Policy
- Student Behaviour in Public Schools Procedures
- School guidelines and reporting procedures;
- School incident management and intervention support policies.

WHAT INFORMATION IS AVAILABLE TO INFORM STUDENTS, PARENTS/CARERS, STAFF ABOUT E-CIGARETTES AND/OR VAPING DEVICES?

Access resources and information about e-cigarettes and vaping on the myresource.education.wa.edu.au/vaping. This includes teaching and learning resources aligned to the Western Australian Curriculum.

WHERE AND WHO CAN I ACCESS SUPPORTING INFORMATION FROM?

Support for delivering prevention education, whole school drug education plans and strategies for schools is provided by the Department's Road Safety and Drug Education branch.

Students can access support from:

- their General Practitioner, youth health service, and other health services for young people.
 - Headspace
 - Youth Focus
 - Alcohol drug support line 1800 198 024
 - Parent and Family Drug Support Line 1800 653 203

More information is available from:

- Department of Health: https://www.health.wa.gov.au/Articles/A_E/Electronic-cigarettes-e-cigarettes
- Cancer Council Western Australia: Make Smoking History website: www.makesmokinghistory.org.au

Young people can be directed to the Quitline (13 7848) or online webchat for free advice and support on nicotine dependence related to smoking cigarettes as well as use of e-cigarettes.

IS VAPING ILLEGAL? WHAT ARE THE LAWS AROUND SELLING VAPES IN WA?

It is reported that young people often purchase vapes online, from retail stores or from friends and contacts in the community. However, it is illegal in WA to sell e-cigarette devices and nicotine vaping products to anyone regardless of age, unless they are prescribed by a doctor for smoking cessation purposes and obtained with a prescription from a pharmacy.

In WA e-cigarette devices and their components, whether or not they contain nicotine, cannot be sold by tobacco or general retailers. It is also illegal to sell vapes to friends at school or in the community. If you suspect someone is selling vapes or e-cigarettes and their components, you can report it to the Department of Health by emailing TobaccoPolicy@health.wa.gov.au.

WHAT ACTIONS ARE SCHOOLS REQUIRED TO APPLY IN THE EVENT A STUDENT IS FOUND IN POSSESSION OF, SUPPLY OF, OR USE OF A VAPING DEVICE OR E-CIGARETTE?

Step 1: Counsel the student and confirm details

- Document details and refer student to the relevant school contact e.g. Year coordinator, Student Services.
- Confirm details through discussion with student and/or other students as required.
- Staff member reinforces the schools Behaviour Policy and expectations.
- Confiscate the device and dispose the device through a waste removal service that is capable of disposing lithium batteries and liquid nicotine (a poison), not into general waste.

Step 2: Contact Parent/Carer

- Open a dialogue with the Parent/Carer in relation to the breach emphasising the illegal nature of possession of, supply of, or use of a vaping device or e-cigarette at school.
- Provide the Parent/Carer with a copy of '*The facts about vaping - for parents and carers factsheet*'.

Step 3: Schedule session with student and relevant staff member for example: School Nurse, Chaplin, Year Coordinator.

- Staff member discusses with student the harms of vaping and the legal aspects
- Provide student with a copy of '*The facts about vaping - for young people factsheet*'.

Step 4: Implement the requirements of the Student Behaviour in Public School Policy and Procedures

This may involve:

- Loss of good standing;
- Suspension. If suspension is applied, schools are to record this under category Category N8: Possession, use or supply of illegal substance(s) or objects.

WHAT DO I DO IF I SUSPECT A STUDENT HAS SWALLOWED OR HAD SKIN CONTACT WITH LIQUID FROM AN E-CIGARETTE?

If you suspect a student has swallowed or had skin contact with liquid from an e-cigarette:

- call the WA Poisons Information Centre immediately on 13 11 26 if the student is conscious and alert; or
- call 000 for an ambulance if the student is unconscious.
- Follow your school Health Care policy.

DO I NEED TO CONTACT THE POLICE?

E-cigarette use by students can be managed by the school through engagement with parents.

If you suspect someone is selling vapes or e-cigarettes and their components, you can report it to the Department of Health by emailing TobaccoPolicy@health.wa.gov.au.

WHAT INFORMATION IS AVAILABLE TO ASSIST CLASSROOM TEACHERS TO DELIVER PREVENTION EDUCATION ABOUT VAPING TO STUDENTS?

Access resources and information about e-cigarettes and vaping from: myresources.education.wa.edu.au/vaping

This includes teaching and learning resources aligned to the Western Australian Curriculum, as well as a variety of factsheets, posters and information for teachers and schools, parents and carers, and young people.

VAPING EVIDENCE SUMMARY

This table describes the evidence for the statements in the ‘Do you know what you’re vaping?’ campaign and the *Anti-vaping toolkit*.

As more evidence comes available, this table will be revised. Further evidence is available on the [Tobacco in Australia](#) website.

KEY MESSAGE	FACTS	REFERENCE	NOTES
Chemicals in vapes			
Acetone (found in Nail polish remover)	Acetone reported in reaction products in e-cigarette emissions (highest reported amount 1.4mg/mL liquid).	Australian Government, National Industrial Chemicals Notification and Assessment Scheme (NICNAS), Non-nicotine liquids for e-cigarette devices in Australia: chemistry and health concerns report , Department of Health, 2019.	Table 7 p.28. Australia
Acetone (found in nail polish remover)	Acetone was found in ACCC 2016 sample testing of emissions of e-liquids.	Australian Government, NICNAS, 2019.	p.36
Acetone (found in nail polish remover)	Acetone is identified in scientific literature as being of concern to human health due to the carbonyl reaction products in e-cigarette emissions.	Australian Government, NICNAS, 2019.	p.49
Acetone (found in nail polish remover)	Acetone was detected in 13 brands of Japanese e-cigarettes.	National Academy of Sciences 2018 cites Uchiyama S, Ohta K, Inaba Y, Kunugita N. Determination of carbonyl compounds generated from the e-cigarette using coupled silica cartridges impregnated with hydroquinone and 2,4-dinitrophenylhydrazine, followed by high-performance liquid chromatography. <i>Analytical Sciences</i> . 2013;29(12):1219–1222.	
Hydroxyacetone (consists of a primary alcohol substituent on acetone)	Hydroxyacetone was identified as a chemical ingredient in e-cigarette liquids.	Australian Government, NICNAS, 2019 cites Sleiman, M, Logue, JM, Montesinos, VN, Russell, ML, Litter, MI, Gundel, LA & Destailats, H 2016, ‘Emissions from Electronic Cigarettes: Key Parameters Affecting the Release of Harmful Chemicals’, <i>Environ Sci Technol</i> , vol. 50, no. 17, pp. 9644–51.	Appendix Table A2 p.66
Acetone (found in nail polish remover)	Acetone is identified as a chemical contaminant in e-cigarette liquids.	Australian Government, NICNAS, 2019 cites Sleiman et al. 2016.	Table 9 p.32, Appendix Table A3 p.74
Acetone (found in nail polish remover)	Acetone is a chemical reaction product in e-cigarette emissions during e-cigarette use	Farsalinos, Voudris, and Poulas 2015; Geiss et al. 2015; Jensen, Strongin, and Peyton 2017; Kosmider et al. 2014; Lee et al. 2017; Margham et al. 2016; Ogunwale et al. 2017; Garcia-Gomez et al. 2016; Uchiyama et al. 2016 cited by Australian Government, NICNAS, 2019.	Appendix Table A5 p.86.

KEY MESSAGE	FACTS	REFERENCE	NOTES
Acetone (found in nail polish remover)	Acetone found in JUUL e-cigarette emissions. Acetone is one of the chemicals associated with some of the same diseases as nicotine, formaldehyde and particulate matter, but also show direct relationships with 39 unique diseases including diabetes mellitus type 1 and amyotrophic lateral sclerosis.	Grondin CJ, Davis AP, Wiegers JA, Wiegers TC, Sciaky D, Johnson RJ, et al. Predicting molecular mechanisms, pathways, and health outcomes induced by Juul e-cigarette aerosol chemicals using the Comparative Toxicogenomics Database. Current Research in Toxicology. 2021;2:272-81	p.276-278.
Acrolein (found in herbicide)	Acrolein reported in reaction products in e-cigarette emissions (highest reported amount 10mg/ml liquid).	Australian Government, NICNAS, 2019.	Table 7 p.28
Acrolein (found in herbicide)	Acrolein identified as a contaminant chemical in e-liquids.	Australian Government, NICNAS, 2019.	Table 9 p32
Acrolein (found in herbicide)	Acrolein reported in the scientific literature at levels above cut-offs specified in the schedule (and relevant to e-cigarette liquids) (CAS number 107-02-8).	Australian Government, NICNAS, 2019.	p.35
Acrolein (found in herbicide)	The National Academy of Sciences conducted a comprehensive scientific review to inform understanding of the public health impact of nicotine containing e-cigarette devices (National Academies of Sciences 2018). "There is substantial evidence that some chemicals present in e-cigarette aerosols (e.g. formaldehyde, acrolein) are capable of causing DNA damage and mutagenesis. This supports the biological plausibility that long-term exposure to e-cigarette aerosols could increase risk of cancer and adverse reproductive outcomes. Whether or not the levels of exposure are high enough to contribute to human carcinogenesis remains to be determined."	National Academies of Sciences, E, and Medicine 2018, Public Health Consequences of E-Cigarettes, ed. Kathleen Stratton, Leslie Y. Kwan and David L. Eaton, The National Academies Press, Washington, DC, p. 774. Cited by Australian Government, NICNAS, 2019.	p.44
Acrolein (found in herbicide)	Acrolein is associated with irreversible lung damage, and irritation.	Allen et al. 2016; Clapp and Jaspers 2017 cited by Australian Government, NICNAS, 2019.	
Acrolein (found in herbicide)	Research confirms the presence of diacetyl and other flavouring chemicals in flavoured e-cigarettes, of concern due to the association between diacetyl and bronchiolitis obliterans and other severe respiratory diseases among workers inhaling heated vapours containing diacetyl.	Allen, JG, Flanigan, SS, LeBlanc, M, Vallarino, J, MacNaughton, P, Stewart, JH & Christiani, DC 2016, 'Flavoring Chemicals in E-Cigarettes: Diacetyl, 2,3-Pentanedione, and Acetoin in a sample of 51 Products, Including Fruit-, Candy-, and Cocktail-Flavored E-Cigarettes', Environ Health Perspect, vol. 124, no. 6, pp. 733-9.	
Acrolein (found in herbicide)	Common flavouring agents, which are often present at high concentrations in e-liquids and e-cig aerosols, are chemically similar to known airway irritants and sensitizers, and have been reported to cause occupational asthma. Moreover, e-cig exposures of some of these chemicals may exceed workplace exposure standards. & There is no data on the potential long-term effects of e-cig use and incidence or exacerbation of asthma.	Clapp, PW & Jaspers, I 2017, 'Electronic Cigarettes: Their Constituents and Potential Links to Asthma', Curr Allergy Asthma Rep, vol. 17, no. 11, p. 79.	
Acrolein (found in herbicide)	Acrolein is a carbonyl reaction product found in e-cigarette emissions identified in the scientific literature as being of concern to human health.	Australian Government, NICNAS, 2019.	p.49
Acrolein (found in herbicide)	Acrolein a chemical contaminant in e-liquids.	Fagan et al. 2017; Sleiman et al. 2016 cited by Australian Government, NICNAS, 2019	p.74

KEY MESSAGE	FACTS	REFERENCE	NOTES
Acrolein (found in found in herbicide)	Acrolein listed as a chemical ingredient in e-cigarette emissions.	Beauval et al. 2017; Farsalinos et al. 2018; Farsalinos and Voudris 2018; Farsalinos, Voudris, and Poulas 2015; Flora et al. 2017; Geiss et al. 2015; Hutzler et al. 2014; Jensen, Strongin, and Peyton 2017; Khlystov and Samburova 2016; Laugesen 2015; Margham et al. 2016; Ogunwale et al. 2017; Sala et al. 2017; Sleiman et al. 2016; Uchiyama et al. 2013; Uchiyama et al. 2016; Wang et al. 2017 cited by <u>Australian Government, NICNAS, 2019.</u>	Appendix Table A5 p. 86
Acrolein (found in found in herbicide)	There is concern regarding the production of toxic aldehydes including acrolein, formaldehyde, and acetaldehyde during the heating of the e-liquid, but the clinical importance of this is not yet known.	Daniel Overbeek, Alexandra Kass, Laura Chiel, Edward Boyer, Alicia Casey 'A review of toxic effect of electronic cigarettes vaping in adolescents and young adults' Critical Reviews in Toxicology 50:6 531-538.	p.533
2-chlorophenol (found in disinfectant/ cleaning products/ insecticide)	Identified 2-chlorophenol as a contaminant in testing of 10 e-liquids (maximum concentration 0.47%).	<u>Australian Government, NICNAS, 2019.</u>	Table 12 p. 38
2-chlorophenol (found in disinfectant/ cleaning products/ insecticide)	2-chlorophenol was identified in all 10 e-liquids tested.	Chivers E, Janka M, Franklin P, Mullins B, Larcombe A. Nicotine and other potentially harmful compounds in "nicotine-free" e-cigarette liquids in Australia. Medical journal of Australia. 2019;210(3):127-8.	Table p. 127
2-chlorophenol (found in disinfectant/ cleaning products/ insecticide)	Found 2-chlorophenol in 27 fresh and 30 aged samples, at concentrations of up to 206 mg/L. Similar chemicals have been identified as pesticide or herbicide residues or decomposition by-products in canola oil, from which glycerol is derived. While not as ubiquitous as in our earlier study, this acutely toxic chemical, used in disinfectants and insecticides, remains a problem for the e-liquid manufacturing process.	Alexander Larcombe, Sebastien Allard,*, Paul Pringle, Ryan Mead-Hunter, Natalie Anderson, Benjamin Mullins/ Chemical analysis of fresh and aged Australian e-cigarette liquids. Med J Aust 2022; 216 (1): 27-32	Box 2 and p. 31
2-chlorophenol (found in disinfectant/ cleaning products/ insecticide)	Of the other chemicals detected, 2-chlorophenol, classified as acutely toxic by the Globally Harmonized System of Classification and Labelling of Chemicals, was identified in all e-liquids. Probably an excipient contaminant, 2-chlorophenol is commonly used in insecticides, herbicides, and disinfectants. There is no Safework Australia exposure standard for 2-chlorophenol, but it is known to be a respiratory and dermal irritant.	Chivers E, Janka M, Franklin P, Mullins B, Larcombe A. Nicotine and other potentially harmful compounds in "nicotine-free" e-cigarette liquids in Australia. Medical journal of Australia. 2019;210(3):127-8.	p.127, 128
Pulegone (found in insecticide)	Pulegone was identified as a Chemical from the scientific literature as present in e-cigarette liquids and also listed in the Poisons Standard. Pulegone identified as a chemical ingredient in e-cigarette liquids.	<u>Australian Government, NICNAS, 2019.</u>	Table 9 p.32, Appendix Table A2 p.71
Pulegone (found in insecticide)	Mint flavour was one of the most abundant volatile compounds identified in the selected refill liquids – pulegone was one of main compounds in mint flavoured e-cigarettes.	Geiss O, Bianchi I, Barahone F, Barrero-Moreno J, 'Characterisation of mainstream and passive vapours emitted by selected electronic cigarettes' International Journal of Hygiene and Environment Health Vol 218, issue 1, January 2015:169-180.	p.172 Table 2
Pulegone (found in insecticide)	One "menthol" e-liquid contained no menthol and may have instead contained potentially carcinogenic analogues such as pulegone, or synthetic 'coolants' such as N-ethyl-p-menthane-3-carboxamide.	Larcombe A, Allard S, Pringle P, Mead-Hunter R, Anderson N, Benjamin Mullins/ Chemical analysis of fresh and aged Australian e-cigarette liquids. Med J Aust 2022; 216 (1): 27-32	p.30

KEY MESSAGE	FACTS	REFERENCE	NOTES
Pulegone (found in insecticide)	This research found e-cigarettes expose users to pulegone, which is a concern because of its known carcinogenicity.	Omaiye EE, Luo W, McWhirter KJ, Pankow JF, Talbot P. Flavour chemicals, synthetic coolants and pulegone in popular mint-flavoured and menthol-flavoured e-cigarettes. Tobacco control. 2021;tobaccocontrol-2021-056582.	
Chemicals/ flavourings in vapes - rare earth elements (REE)	Use of e-cigarettes is a potential source of -rare earth elements REE. However, these elements were detected at low concentrations.	Badea M, Luzardo OP, González-Antuña A, Zumbado M, Rogozea L, Floroian L, Alexandrescu D, Moga M, Gaman L, Radoi M, Boada LD, Henríquez-Hernández LA. Body burden of toxic metals and rare earth elements in non-smokers, cigarette smokers and electronic cigarette users. Environ Res. 2018 Oct;166:269-275. doi:10.1016/j.envres.2018.06.007. Epub 2018 Jun 13. PMID: 29908458.	
Formaldehyde, heavy metals, particulate matter and flavouring chemicals	“E-cigarettes may expose users to chemicals and toxins such as formaldehyde, heavy metals, particulate matter and flavouring chemicals, at levels that have the potential to cause adverse health effects.”	<u>NHMRC. CEO Statement: Electronic cigarettes</u> ; National Health and Medical Research Council; 2017	Australia
Various chemical substances and ultrafine particles	Various chemical substances and ultrafine particles known to be toxic, carcinogenic and/or to cause respiratory and heart distress have been identified in e-cigarette aerosols, cartridges, refill liquids and environmental emissions. Wide ranges in the levels of chemical substances such as tobacco-specific nitrosamines, aldehydes, metals, volatile organic compounds, phenolic compounds, polycyclic aromatic hydrocarbons, flavours, solvent carriers, tobacco alkaloids and drugs have been reported in e-cigarette refill solutions, cartridges, aerosols and environmental emissions.	Cheng T. Chemical evaluation of electronic cigarettes. Tobacco Control. 2014; 23:ii11–ii17. Bein K, Leikauf GD. Acrolein—a pulmonary hazard. Molecular Nutrition & Food Research. 2011;55(9):1342-1360.	
E-cigarette aerosol is not harmless ‘water vapor’.	The e-cigarette aerosol that users breathe from the device and exhale can contain harmful and potentially harmful substances, including: <ul style="list-style-type: none"> • Nicotine • Ultrafine particles that can be inhaled deep into the lungs • Flavourings such as diacetyl, a chemical linked to a serious lung disease • Volatile organic compounds • Cancer-causing chemicals • Heavy metals such as nickel, tin, and lead The aerosol that users inhale and exhale from e-cigarettes can expose both themselves and bystanders to harmful substances.	Centre for Disease Control and Prevention <u>CDC</u> Daniel Overbeek, Alexandra Kass, Laura Chiel, Edward Boyer, Alicia Casey ‘A review of toxic effect of electronic cigarettes vaping in adolescents and young adults’ Critical Reviews in Toxicology, 50:6 531-538.	USA
Nicotine			
Nicotine	Six out of 10 ‘non-nicotine’ liquids tested contained nicotine. Of particular concern is the frequency with which nicotine is detected in e-liquids labelled “nicotine-free”.	Chivers E, Janka M, Franklin P, Mullins B, Larcombe A. Nicotine and other potentially harmful compounds in “nicotine-free” e-cigarette liquids in Australia. Medical journal of Australia. 2019;210(3):127-8.	p.127
Nicotine	TGA Laboratories are conducting compliance testing of available and imported products to assess if they meet the requirements specified in the TGO 110.	<u>TGA testing</u>	Australia
Nicotine (addiction)	The risks to the paediatric population are especially important as many adolescents who vape are nicotine-naïve and are not using e-cigarettes as smoking cessation devices, as they were originally marketed.	Daniel Overbeek, Alexandra Kass, Laura Chiel, Edward Boyer, Alicia Casey ‘A review of toxic effect of electronic cigarettes vaping in adolescents and young adults’ Critical Reviews in Toxicology 50:6 531-538.	p.531/532

KEY MESSAGE	FACTS	REFERENCE	NOTES
Nicotine (addiction)	Adolescents exposed to nicotine display increased effects of drugs of abuse, decreased attention and other learning/memory deficits, and emotional dysregulation.	Michelle Ren, Shahrdad Lotfipour, Frances Leslie 'Unique effects of nicotine across the lifespan', Pharmacology, Biochemistry and Behaviour' 214 (2022) 173343.	
Nicotine (impact on developing adolescent brain)	Nicotine can harm the developing adolescent brain. The brain keeps developing until about age 25. Using nicotine in adolescence can harm the parts of the brain that control attention, learning, mood, and impulse control. Each time a new memory is created, or a new skill is learned, stronger connections – or synapses – are built between brain cells. Young people's brains build synapses faster than adult brains. Nicotine changes the way these synapses are formed. Using nicotine in adolescence may also increase risk for future addiction to other drugs.	Centre for Disease Control and Prevention (CDC)	USA
Nicotine (impact on developing adolescent brain)	Nicotine – the addictive substance in cigarettes and in most vapes – alters your brain and can lead to changes in mood. Because addiction is a form of learning, adolescents can get addicted more easily than adults. Brain changes caused by nicotine include long lasting effects on attention, learning and memory. Nicotine changes the way synapses are formed, which can harm parts of the brain that control attention and learning. During teenage years, the part of the brain that's responsible to decision making	U.S Surgeon General 2016 report 'E-cigarette Use Among Youth and Young Adults'	USA
Nicotine (impact on developing adolescent brain)	For children and young people, vaping nicotine can have long-lasting, damaging effects on brain development and there is risk of nicotine addiction which could result in becoming a life-long smoker	World Health Organisation	Global
The nicotine in 1 vape can equal 50 cigarettes	Many vapes have 50mg nicotine which is equivalent to roughly 50 cigarettes. Nicotine concentration can vary widely and depend on how many puffs you get. Newer devices on the market in NSW have up to 4,000 puffs on the device and high nicotine concentrations which can equate to up to 20 packs of cigarettes nicotine equivalent.	Prochaska JJ, Vogel EA, Benowitz Nicotine delivery and cigarette equivalents from vaping a JUULpod Tobacco Control Published Online First: 24 March 2021. doi: 10.1136/tobaccocontrol-2020-056367, Stanford University infographic	USA
Health effects			
Vaping is not safe	Even though scientists are still learning about vapes, they do not consider them safe.	Australian Government Department of Health	Australia
We don't know the long-term health effects of vaping	It took decades to understand the damage smoking was causing to health.	Australian Government Department of Health	Australia
The aerosol from e-cigarettes is not harmless.	It can contain harmful and potentially harmful chemicals, including nicotine; ultrafine particles that can be inhaled deep into the lungs; flavouring such as diacetyl, a chemical linked to a serious lung disease; volatile organic compounds such as benzene, which is found in car exhaust; and heavy metals, such as nickel, tin, and lead.	U.S Surgeon General 2016 report 'E-cigarette Use Among Youth and Young Adults' cited by CDC	USA
The harmful effects of flavourings	While some of the chemicals in e-liquid are also used in food production and are generally considered safe when eaten, this does not mean that these chemicals are safe when inhaled as a vapour directly into the lungs. Several studies have reported harmful effects when certain flavourings that are approved for use in food production, including cherry, cinnamon and popcorn flavours, are inhaled.	NHMRC. CEO Statement: Electronic cigarettes: National Health and Medical Research Council; 2017	Australia

KEY MESSAGE	FACTS	REFERENCE	NOTES
People who vape are more likely to smoke	Vaping among young people is strongly linked to the use of other tobacco products such as regular cigarettes, cigars, hookah and smokeless tobacco.	U.S Surgeon General 2016 report 'E-cigarette Use Among Youth and Young Adults'	USA
People who vape are more likely to smoke	People who vape are three times as likely to take up smoking than those who have not used e-cigarettes	Banks E, Beckwith K, Joshy G. Summary report on use of e-cigarettes and impact on tobacco summary report on use of e-cigarettes and relation to smoking uptake and cessation, relevant to the Australian context. Commissioned Report for the Australian Government Department of Health, September 2020.	Australia
Impact on mental health and anxiety	Regular nicotine use can worsen stress and anxiety and can make you more susceptible to depressive symptoms.	U.S Surgeon General 2016 report 'E-cigarette Use Among Youth and Young Adults'	USA
Impact on mental health and anxiety	Increased symptoms of depression are linked to vaping nicotine. Research shows a link between increased nicotine use and depression, meaning the more you use nicotine, the higher your risk of depression. Nicotine – which is in most vapes – can amplify depression symptoms and can make anxiety symptoms worse.	Lechner, W. V., Janssen, T., Kahler, C. W., Audrain-McGovern, J., & Leventhal, A. M. (2017). Bi-directional associations of electronic and combustible cigarette use onset patterns with depressive symptoms in adolescents. Preventive medicine, 96, 73–78, doi: 10.1016/j.ypmed.2016.12.034	USA
Impact on mental health and anxiety	Quitting nicotine can lead to reduced stress, anxiety, and depression.	Taylor G, McNeill A, Girling A, Farley A, Lindson-Hawley N, Aveyard P et al. Change in mental health after smoking cessation: systematic review and meta-analysis BMJ 2014; 348 :g1151 doi:10.1136/bmj.g1151	
Lung health and asthma	Vaping can increase the risk of lung infections and heart disease, including worsening obstructive lung diseases and increasing the odds of being diagnosed with asthma.	World Health Organisation European Public Health Association's summary of the science on e-cigs	Global
Lung disease and Diacetyl	Vaping can increase the risk of lung disease, including worsening obstructive lung diseases and increasing the odds of being diagnosed with asthma. Diacetyl is an organic compound used in the food industry and has been possibly linked to bronchiolitis obliterans.	Daniel Overbeek, Alexandra Kass, Laura Chiel, Edward Boyer, Alicia Casey 'A review of toxic effect of electronic cigarettes vaping in adolescents and young adults' Critical Reviews in Toxicology 50:6 531-538.	
Immune system	Nicotine in vapes can weaken the immune system.	U.S Surgeon General 2016 report 'E-cigarette Use Among Youth and Young Adults'	USA
Immediate health effects	Short term health effects of vaping include nausea, vomiting, mouth and airway irritation, chest pain and palpitations.	Cantrell FL. Adverse effects of e-cigarette exposures. Journal of Community Health, 2014; 39(3):614–6. https://www.ncbi.nlm.nih.gov/pubmed/24338077	
Second-hand vapour	Vaping can expose the people around you to toxic chemicals.	World Health Organisation	
Impact of physical and sporting ability	Vaping can negatively impact your respiratory function.	US FDA video	
Risk of poisoning and EVALI	Exposure of children or young people to vaping liquids pose a serious health risk. There is a risk of the devices leaking, or of children swallowing the liquid. Vapes have been known to cause serious injuries including burns through fires and explosions. There is growing evidence that vaping could be associated with lung injuries known as 'e-cigarette or vaping associated lung injury' (EVALI).	World Health Organisation Chan BS, Kiss A, McIntosh N, Sheppard V, Dawson AH. E-cigarette or vaping product use-associated lung injury in an adolescent. Med J Aust. 2021 Oct 4;215(7):313-314.e1. doi: 10.5694/mja2.51244. Epub 2021 Sep 6. PMID: 34490629.	Global; Australia

KEY MESSAGE	FACTS	REFERENCE	NOTES
Risk of burns	Vaping waste contains chemicals that can burn or explode.	Yogi Hale Hendlin, 2018, Alert: Public Health Implications of Electronic Cigarette Waste , American Journal of Public Health 108, 1489_1490, https://doi.org/10.2105/AJPH.2018.304699	
Vaping is not safer than smoking	Because vapes are relatively new and haven't been studied over a long period of time, it is impossible to say they are safer than cigarettes. The health risks associated with vaping remain uncertain, but they cannot be considered safe. Both vapes and cigarettes have health risks. The safest approach is to not use either.	World Health Organisation	
Signs of addiction	<ul style="list-style-type: none"> Cravings, or feeling like you really need to vape Going out of your way to get a vape Feeling anxious or irritable Continuing to vape because you find it hard to stop Having trouble sleeping 	NSW Health Quitline - iCanQuit	
Context			
Tobacco industry Vapes use flavours to make them appealing.	<p>"Tobacco and related industries' tactics to market to children and adolescents include:</p> <ul style="list-style-type: none"> Over 15,000 flavours, most of which attract children and adolescents Social media influencers and marketing Sponsored events and parties School scholarships Sleek, sexy designs Product placement in entertainment media Free product samples Single stick cigarettes make addiction more affordable Selling products at eye level for children Product placement and advertising near schools 	World Health Organisation	Global
Access to vapes is easy for young people	Nearly 80% of young people say it is easy to get a vape.	Cancer Council NSW's Generation Vape study (no formal reference yet) 2021.	NSW
Access to vapes is easy for young people	While it is currently illegal to buy or sell nicotine e-liquids in Australia, some are imported or sold online and these refills and disposable vaporisers may contain nicotine, sometimes at high levels.	NSW Education	NSW
Vapes are not a legal product	It is illegal to buy vaping products unless you have a prescription from a medical professional. In Australia, all e-cigarettes that contain nicotine require a prescription. Australians will need a prescription to legally access nicotine containing e-cigarette products for any purpose. This includes importing these products from overseas	Australian Department of Health Therapeutic Goods Administration Public Health (Tobacco) Act 2008	Australia
Most young people do not vape	Four out of five young people have never vaped. In 2019-2020, 21.4 per cent of 16 to 24 year olds reported having used an e-cigarette.	NSW Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health, 2020	NSW

KEY MESSAGE	FACTS	REFERENCE	NOTES
Labelling often incorrect	<p>Vaping products are often incorrectly labelled with many vapes which claim to be nicotine free actually containing high levels of nicotine.</p> <p>Testing conducted by the New South Wales Ministry of Health in the course of compliance activity since late 2015 found that of 929 samples of e-liquids tested, 567 (61%) contained nicotine. The samples tested were a mix of those labelled as containing nicotine and those labelled as containing no nicotine; 54% of the positive samples returned a nicotine concentration greater than or equal to 2,500 mg/L.</p> <p>Parents should be particularly mindful of children and young people accessing vapes and the liquids used in them which are often enticing because of the fruit or lolly flavourings.</p> <p>Vaping e-liquid packaged often do not accurately detail the ingredients of the liquids and do not have any child resistant enclosures.</p> <p>Each of the test samples tested were labelled incorrectly, did not list all ingredients, and contained at least one potentially harmful chemical.</p>	<p><u>Policy and regulatory settings of e-cigarettes in Australia</u> Australian Department of Health 28 November 2019</p> <p><u>NSW Health</u>, 2013</p> <p>Larcombe A, Allard S, Pringle P, Mead-Hunter R, Anderson N, Mullins B. Chemical analysis of fresh and aged Australian e-cigarette liquids. Medical journal of Australia. 2021.</p>	<p>Australia, NSW</p> <p>Australia</p>
Vapes hidden in plain sight	Vapes can look like common objects like highlighters, USB's and pens.	Stanford Medicine's <u>Tobacco Prevention Toolkit</u>	
Support a friend/your child/student to quit vaping	<ul style="list-style-type: none"> • Talk about why vaping is harmful. It's never too late to have the conversation. • Know the facts about vaping and the risks associated with vaping products • Set a good example by living tobacco and vape free • If you suspect someone is selling vapes or e-cigarettes you or your parents can report it to the Department of Health by emailing TobaccoPolicy@health.wa.gov.au. 	<u>NSW Health</u>	
How to have positive conversations with young people	<p>K – Know the facts and where to find them.</p> <p>E – Engage in the topic in a relaxed easy-going way, perhaps taking the cue from around you, a note from school, a news story on it, seeing people vaping on the street.</p> <p>Y – You know best how to speak to your child, and in ways that work for you, and provide them with the right information to make a healthy choice.</p>	<p><u>NSW Education</u></p> <p>Centre for Disease Control and Prevention (<u>CDC</u>)</p>	