

VAPING PRODUCTS: WHAT ARE WE TALKING ABOUT?

TOOLS FOR EDUCATORS WORKING
WITH YOUNG PEOPLE AGED 11 TO 17 YEARS



**QUEBEC COUNCIL
ON TOBACCO AND HEALTH**

VAPING PRODUCTS: WHAT ARE WE TALKING ABOUT?



Over the past few years, vaping has become increasingly trendy and popular among young people. Vaping devices have many names: **electronic cigarettes, vapes, vaporizers, JUUL, Mods, vape pens, e-cigarettes, sub-ohms, etc.**

No matter their names, all these devices are electronic cigarettes, also called “vaping products”. These products differ from tobacco products in that they don’t contain tobacco, but they heat a liquid substance and then burn it.

Vaping products use a battery and heating element **to heat a liquid that produces an aerosol**, often called vapour; this is where the term **vape** comes from. They also have a mouth-piece and chamber or reservoir for the liquid solution. Some models have

refillable reservoirs; others use replaceable cartridges.

The main ingredients in heated liquids, often called **e-liquids**, are **propylene glycol, vegetable glycerin, flavours and nicotine** (some liquids on the market don’t contain nicotine). Some mixtures have very low levels of nicotine, while others have **more nicotine than do typical tobacco cigarettes**.¹ The first e-cigarette models were not very effective at delivering nicotine; more recent ones better simulate the feeling of smoking.

There are many types of vaping products on the market. Because they are constantly changing and some young people modify their own,² it is impossible to know exactly what the inhaled aerosol (vapour) contains. ■

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LEGISLATION

In Québec, vaping products (with or without nicotine) are subject to almost the same restrictions as tobacco products. These measures specify :

- that the sale of these products to minors is prohibited³ and is strictly regulated;
- that it is forbidden to use electronic cigarettes in all places where smoking is prohibited.

The ban on aromas or flavours other than those of tobacco does not apply to electronic cigarettes or associated accessories, such as liquids. However, the federal *Tobacco and Vaping Products Act* states that the promotion of confectionery, dessert, cannabis, soft drink or energy drink flavours is prohibited⁴.

At this time, although some rules have been implemented, several aspects

still need to be addressed in the regulations regarding the impacts of flavourings, their composition and their consistency. Levels of ingredient (including nicotine) in a brand may differ from one use to another¹. In other words, consumers cannot be certain of the composition of their e-liquids.

In addition, even though marketing that targets minors is prohibited, subtle tactics are used to promote e-cigarettes to young people and connect directly with this population by also promoting a lifestyle (a strategy that is also prohibited). “Professional” vapers often use social networks – where the regulatory framework is more difficult to enforce than for traditional media (television, radio, print media) – to advertise e-cigarettes⁵.



On YouTube, some influencers modify their e-cigarettes and demonstrate what the vapour allows them to do (vaping and cloud chasing). This new mass influence strategy⁶ attracts young people by associating vaping with playing games. These marketing tactics, which promote a young and trendy lifestyle, are a way of getting

around the law. Young people are most affected by these strategies even though e-cigarette products are not intended for them.

Experts have voiced concerns to governments² about the design of the devices, product packaging, colours, flavours and formats, all of which are appealing to young people⁷. ■

YOUNG PEOPLE'S PRACTICES

Field observations have shown that many young people concoct their own e-liquids and make their own aromas using products bought in supermarkets or online.

It has also been observed that some adolescents modify their e-cigarettes to produce more vapour. To do so, they

use knowledge learnt in science classes or search for information on various Web platforms. Once they have modified their e-cigarettes, young people can then take part in vaping contests to imitate their favourite YouTube influencers or challenge each other to do combinations of tricks with the vapour. ■



RISKS FOR YOUNG PEOPLE

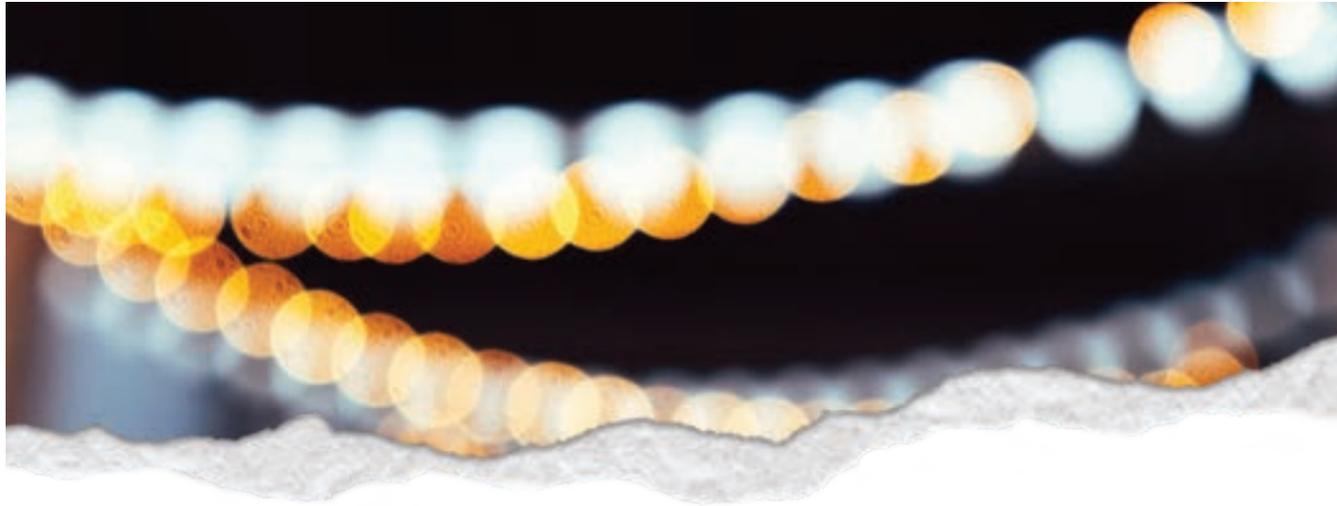
The two biggest risks for young people who vape are nicotine addiction and product inhalation,⁹ for which little is known about the long-term health effects⁷.

Nicotine causes the brain to become addicted. Young people's brains are very sensitive to this substance because their brains build synapses (contact points between neurons that transmit information) faster than adult brains, and nicotine changes the way synapses are formed¹⁰ when learning something new. When behavioural learning (such as stress, anger or boredom management) is constructed in the presence of nicotine, the brain will always need nicotine when faced with stress, since the connection made during the learning process was supported by this "crutch". This effect explains young people's high risk of developing addiction. Consequently, it could be just as difficult for young people addicted to nicotine to stop vaping as it could be

for youth addicted to heroin to stop using the drug.

Similarly, scientific studies have shown that nicotine can affect memory and concentration, reduce impulse control, and cause cognitive and behavioural problems¹¹. Some devices can deliver high concentrations of nicotine, which can cause nausea and headaches¹².

Another risk is exposure to chemical products. Although young people are well aware of the dangers of traditional cigarettes, they perceive vaping products as presenting few or no risks¹³. However, we can confirm that repeated use of vaping products can cause more problems linked to throat and trachea irritation¹² and increase frequency of flu, pneumonia¹⁴ and bronchitis. In addition, the risk of transmission of cold sores and oral fungal infections (thrush/yeast infections) has been rising since the use of vaping products among youth has increased. ■



CONTEXTS OF USE

Aside from the fact young people think vaping products present little or no risk, a number of factors compel youth to try new products. Certain personality traits (rebellious spirit, curiosity), low self-esteem and the need to belong are some of the most common. However, having good friends who vape is the strongest predictive factor for initiation to vaping¹⁴.

Having parents who smoke significantly increases the risk of experimenting¹³; but parental disapproval and supervision of youth's free time can play important roles in preventing the use of vaping products, because social contexts such as parties or wat-

ching video are ideal opportunities to experiment.

It is also important to know that young people think that vaping products are more socially acceptable than traditional cigarettes⁷. Some types of e-cigarettes are also easier to use, their smell is more subtle and their taste appealing; they are also easy to hide and buy over the Internet or through social networks. These attributes serve as pretexts for adolescents who are seeking new sensations. It is not uncommon to hear young people say that “they don't smoke, they vape.” They then feel a false sense of security. ■

GENERAL MESSAGES

This section provides a summary of the main key messages so that educators can be prepared to respond to the claims made by young users of vaping products.

→ IT'S NOT DANGEROUS.

To date, the long-term health effects of vaping are unknown. However, we know that young people aged 11 to 17 years are prohibited from using vaping products due to the risks of developing addiction and of being exposed to inhaled chemicals.

→ I AM NOT AT RISK OF DEVELOPING ADDICTION.

The nicotine you inhale causes physical addiction. It can also be as hard to stop consuming nicotine as stopping heroin. Symptoms of nicotine addiction can occur more quickly than you think, that is, even before you start using every week or every day.

→ THE ONLY THING I'M INHALING IS VAPOUR.

That's false. E-cigarette liquid contains very little water. Every time you inhale vapour, you expose your lungs to potentially dangerous particles from chemical substances.

→ IT'S MY CHOICE.

Keep in mind that each time you use a vaping product, you increase your risks of developing nicotine addiction. Being addicted means you can no longer control your use, no matter how limited it is.

→THE INGREDIENTS I PUT IN MY E-CIGARETTE COME FROM THE GROCERY STORE AND ARE KNOWN TO BE SAFE, JUST LIKE FOOD INGREDIENTS. SO THEY'RE NOT HARMFUL TO MY HEALTH.

Items the stomach can decompose are not all safe when they are heated and inhaled.

→IT'S NOT DANGEROUS. MY MOTHER GAVE IT TO ME.

Most adults are unaware of the risks of e-cigarette use by young people (see the first part of this document). Remember that the simple act of vaping creates a reflex reaction in your body and your brain.

→THE INDUSTRY FOLLOWS THE RULES AND DOESN'T TARGET YOUNG PEOPLE.

Be aware that vaping product manufacturers have huge budgets to spend on developing very persuasive strategies that take advantage of vagueness in the law.

→E-CIGARETTES WITHOUT NICOTINE ARE HARMLESS.

There can be ingredients harmful to health in e-cigarettes. Inhaling chemical products also presents unknown health risks.

→IF IT WERE DANGEROUS, THEY WOULDN'T SELL IT TO MINORS.

Remember: the sale of e-cigarettes to minors is prohibited in Québec and Canada.



POSSIBLE INTERVENTIONS: BEST PRACTICES

→HOW TO BRING UP THE TOPIC?

When you see young people using vaping products, you can ask them what they think of their consumption. Try to be transparent and pragmatic: use the facts listed above rather than being judgemental or putting forward catastrophic, possibly unrealistic, scenarios and using fear to dissuade them. Try to educate them by presenting objective facts that will get them thinking and help them develop their critical thinking skills or question themselves.

→HOW TO RECOGNIZE PROBLEMATIC CONSUMPTION?

A person suffers from nicotine dependence if three of the following six statements¹⁵ describe his or her relationship with vaping products:

- A strong sense of compulsion to use e-cigarettes.
- Difficulty controlling his or her use.
- Withdrawal symptoms (dizziness, fatigue, insomnia, cough, constipation, hunger, sweet tooth, obsessive desire to vape, irritability, pressure behind the eyes, headaches).
- tolerance (need to vape more to achieve the same effect).
- Increasingly more time spent vaping.
- Use of vaping products despite warnings.

* IF YOUNG PEOPLE EXHIBIT SIGNS OF DEPENDENCE, REFER THEM TO THE RESOURCES LISTED BELOW.

→WHERE TO REFER YOUNG PEOPLE?

- School nurse
- School social worker
- J'ARRÊTE quit-smoking services:
 - › Web site: jarrete.qc.ca
 - › Help line: 1-866-JARRETE (527-7383)
 - › Quit-smoking centres (QSC)
- <https://tobaccofreequebec.ca/iquitnow/>

→AS AN EDUCATOR, HOW DO I TALK ABOUT MY OWN CONSUMPTION?

Be honest. Talk about the reasons why you started consuming and how you became dependent, if this is the case. Explain how difficult it is to quit. Young people are money-conscious, and sensitive to the environment and to real emotions. Don't hesitate to make connections between these topics and your own use..

→WHAT GUIDANCE CAN I OFFER THEM?

- Inform young people about how to process emotions, resist peer influence, and discuss these issues..
- Give them tools that can help them change how they react to stress by learning to look at situations from different angles, using problem solving strategies (e.g. avoiding or modifying sources of stress) and different relaxation techniques, etc.

→HOW CAN I HELP YOUNG PEOPLE STOP USING VAPING PRODUCTS?

Suggest

- they team up and ask a friend to quit vaping together;
- they make a list of reasons why they want to quit;
- you teach them to recognize and avoid situations that would cause them to be tempted;
- rewarding their successes and persuade them to not get discouraged.

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