

Consider the Consequences of Vaping:

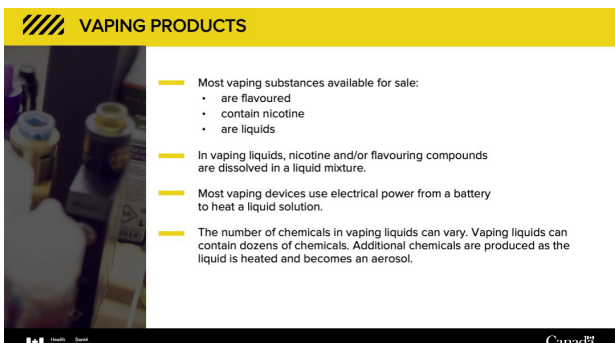
Online Self-Led Module



- Welcome to the Consider the Consequences of Vaping Experience Part One, brought to you by Health Canada.
- During this part, we will provide an introduction to vaping products, their risks as well as laws and regulations.



- Vaping is not harmless, there are risks.
- Vaping can expose you to nicotine, which is addictive.
- Vaping nicotine can interfere with healthy teen brain development.
- The long-term health impacts of vaping are unknown.
- Vaping can increase your exposure to potentially harmful chemicals and metals.
- Vaping can expose you to harmful chemicals like formaldehyde and acrolein.
- Metal particles like nickel, tin and aluminum can be found in vapes. You don't want any of these in your lungs.



- Most vaping substances available for sale:
 - › are flavoured
 - › contain nicotine
 - › are liquids
- In vaping liquids, nicotine and/or flavouring compounds are dissolved in a liquid mixture. Flavouring compounds consist of chemicals and blends of chemicals used to make different flavours.
- Most vaping devices use electrical power from a battery to heat a liquid solution. There is no burning during vaping, but the vaping process needs the liquid to be heated which causes the solution to become an aerosol.
- The number of chemicals in vaping liquids can vary. Vaping liquids can contain dozens of chemicals. Additional chemicals are produced as the liquid is heated and becomes an aerosol.

LEGISLATION AND REGULATIONS IN CANADA

Did you know?

The *Tobacco and Vaping Products Act* (TVPA) regulates, in addition to tobacco, the manufacture, sale, labelling and promotion of vaping products across Canada. Provincial and Territorial Governments have also enacted rules on vaping products.

Why regulate vaping?

To protect young persons and people who do not smoke from nicotine addiction and tobacco use, while allowing adults access to vaping products as a less harmful alternative than continuing to smoke.

- Did you know that the Tobacco and Vaping Products Act (TVPA) regulates, in addition to tobacco, the manufacture, sale, labelling and promotion of vaping products across Canada. Provincial and Territorial Governments have also enacted rules on vaping products.
- The legal framework for regulating vaping products was changed in 2018 to protect young persons and people who do not smoke from nicotine addiction and tobacco use, while allowing adults access to vaping products as a less harmful option than continuing to smoke.
- Vaping has risks – particularly for youth and people who do not smoke. Vaping is a less harmful alternative than continuing to smoke only for adults who are unable to quit smoking using approved methods. Completely replacing cigarette smoking with vaping will reduce their exposure to many of the harmful chemicals from tobacco smoke.

LEGISLATION AND REGULATIONS IN CANADA

What are some of the regulatory measures around vaping products?

- Not allowing vaping products to be sold or given to anyone under 18 years of age. Some provincial laws have increased this age to 19 or 21.
- Not allowing the display of vaping products at point-of-sale where youth have access.
- Not allowing the use of certain ingredients and flavours that are appealing to youth, like candy and dessert flavours.
- Restricting the nicotine concentration in vaping products to a maximum of 20 mg/mL.
- Potential future regulations.

LET'S LOOK AT SOME OF THE REGULATORY MEASURES AROUND VAPING PRODUCTS.

- First, vaping products cannot be sold or given to anyone under 18 years of age. But check out the provincial and territorial laws in your jurisdictions as several have increased the age to 19 or 21, as well as undertaken or announced additional restrictions on vaping products or their promotion based on the needs in their respective jurisdictions.
- The display of vaping products at point-of-sale where youth have access is not permitted as well as the use of certain ingredients and flavours that are appealing to youth, like candy and dessert flavours.
- There is also a regulation, which set a maximum nicotine concentration of 20 mg/mL for vaping products marketed in Canada.
- And, as we learn more of the risks, new regulations could be proposed to further restrict vaping products.

Did you know vaping can expose you to potentially harmful chemicals like formaldehyde and acrolein or metal particles like nickel, tin, chromium and aluminum? You don't want any of these in your lungs.

The majority of vaping liquids available in Canada contain nicotine, which is highly addictive.

The long-term safety of inhaling substances like propylene glycol and glycerol is unknown and continues to be researched.

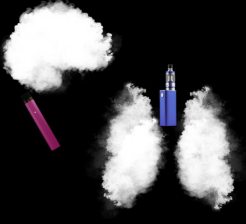


- Great so now that you have found all ten words, what does it mean?
- Propylene glycol and glycerol are substances found in vaping liquids. Although these are considered safe for use in many products, such as cosmetics and sweeteners, the long-term safety of inhaling them is unknown and continues to be researched.
- There is no burning during vaping but the vaping process needs the liquid to be heated. When ingredients like propylene glycol and glycerol are heated, they break apart which creates new and potentially harmful chemicals like formaldehyde.
- Some contaminants (e.g. nickel, tin, chromium, aluminum) might also get into the vaping products and then into the vapour.

HEALTH RISKS OF OTHER CHEMICALS IN VAPING PRODUCTS

- Vaping can expose you to potentially harmful chemicals like formaldehyde and acrolein which are also found in even higher levels in tobacco and cannabis smoke.
- Vaping liquids, excluding cannabis, typically contain glycerol (vegetable glycerin) and propylene glycol (PG), and chemicals used for flavouring.
- While these ingredients are considered safe for use in cosmetics and foods, the long-term risks of inhaling these substances are unknown and continue to be researched.
- The aerosol from vaping cannabis can also include harmful substances such as benzenes, xylenes and styrene.

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- The aerosol from vaping cannabis can also include harmful substances such as benzenes, xylenes and styrene.



Consider the Consequences of Vaping

PART ONE COMPLETE. CONTINUE THE EXPERIENCE IN PARTS TWO & THREE.

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CONGRATS! YOU HAVE NOW COMPLETED PART ONE OF THE SELF-LED MODULE. CONTINUE ONTO PARTS TWO AND THREE TO COMPLETE THE EXPERIENCE!



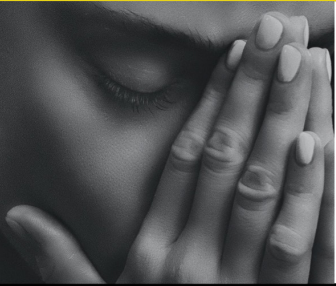
Consider the Consequences of Vaping

PART TWO

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- Welcome to the Consider the Consequences of Vaping Experience Part Two, brought to you by Health Canada.
- During this part we will provide information on the health effects of vaping nicotine and cannabis on teens.

EXPOSURE TO NICOTINE DURING ADOLESCENCE



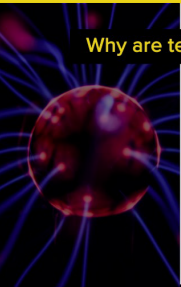
- Can interfere with healthy teen brain development
- Can affect memory and concentration
- Could lead to physical dependence and/or addiction

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- Youth are especially susceptible to nicotine’s negative effects, as it can interfere with healthy teen brain development, which can affect things like memory and concentration.
- The developing brain is more sensitive to the effects of nicotine compared to adults. This means kids and teens can become physically dependent and/or addicted to nicotine with lower levels of exposure than adults. Once a teen shows symptoms of dependence and addiction to nicotine, it can be hard to quit vaping.

NICOTINE AND TEEN BRAIN DEVELOPMENT

Why are teens at a higher risk?



- Adolescence is a critical period for brain development, and brain development continues into their early 20s.
- Nicotine can disrupt the development of brain circuits that control attention and learning, and young people who vape with nicotine or use tobacco products are at increased risk for deficits in these areas.
- Young people who vape with nicotine or use tobacco products are uniquely at risk for long-term, long-lasting effects of exposing their developing brains to nicotine.

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NICOTINE ADDICTION

Did you know?

- Children and youth may become dependent on nicotine more rapidly than adults.
- Like smoking, the amount of vaping with nicotine needed to become 'hooked' will vary from person to person.
- Quitting vaping can be challenging once someone has developed a physical dependence and/or an addiction to nicotine.

DID YOU KNOW?

- Children and youth may become dependent on nicotine more rapidly than adults.
- Like smoking, the amount of vaping with nicotine needed to become 'hooked' will vary from person to person. There are several risk factors which will impact the potential for someone to develop a dependency or addiction to nicotine.
- These can include:
 - a person's genetics (how their brain responds to nicotine)
 - their environment (do their family and/or friends smoke cigarettes or vape)
 - existing mental health issues
 - whether people use other addictive substances
 - their age
 - the amount of nicotine a person is exposed to depends on the amount of nicotine in the vaping liquid, the vaping device, and their vaping behaviour (e.g., how many times they vape, how deeply they inhale)
- All of these factors combined can influence how much vaping will result in a dependency or addiction on nicotine.
- Quitting vaping can be challenging if you have developed a physical dependence and/or an addiction to nicotine.

VAPING CANNABIS

- Vaping cannabis involves breathing in the aerosol or vaping emission produced from heating cannabis by a vaping device.
- Cannabis can be vaped using dried cannabis or cannabis extracts that are liquid or solid.
- Cannabis extracts that are vaped can be very strong and contain up to approximately 95% THC. The stronger the extract and the higher the THC content consumed, the greater the risks to mental health including the development or worsening of cannabis dependence, and feelings of anxiety and depression.
- While vaping either nicotine or cannabis can be harmful to your health, vaping both substances can further increase the risk of potentially experiencing lung injury and makes it even harder to quit vaping.

- There are also vaping products that contain cannabis.
- Cannabis can be vaped using either dried cannabis or liquid or solid cannabis extracts, by using a vaping device.
- THC is one of the substances in cannabis that affects the brain and body. Cannabis extracts that are vaped can be very strong and contain up to 95% THC. The higher the THC content consumed, the greater the risks to mental health including the development of cannabis dependence, anxiety and depression.
- The higher the THC content consumed, the greater the risks to your mental health particularly if used frequently on a daily or near-daily basis.
- Those who vape both substances may experience negative impacts such as increased risk of lung injury, interference with brain development and long-term mental health problems including the development of dependence, anxiety and depression.

VAPING CANNABIS EFFECTS ON MENTAL HEALTH

- Similar to nicotine, using cannabis, regardless of the way you choose to consume it, can interfere with healthy brain development and can impact mental health, including cannabis dependence, anxiety, and depression.
- The likelihood of experiencing these mental health problems is greatest in those:
 - who start using cannabis earlier in age
 - who use cannabis frequently over time (e.g., daily or near daily)
 - who use cannabis products containing higher levels of THC (e.g., 30-90% THC)
- Though many people use cannabis to relieve symptoms of anxiety and depression, the scientific evidence suggests that using cannabis frequently, on a daily or near daily basis, **does not** improve these symptoms over time and rather can make it harder to recover.

- Youth and young adults who consume cannabis at a young age, who use frequently on a daily or near-daily basis, and who use products with a lot of THC are more likely to experience mental health problems.
- This happens because cannabis can interfere with healthy brain development until your mid 20s.
- Young adults who use cannabis on a regular basis are more likely to experience long-term mental health problems including cannabis dependence or cannabis use disorder, anxiety, depression, and even psychosis or schizophrenia in those who have a family history of such disorders.
- The likelihood of experiencing these mental health problems is greatest in those:
 - who start using cannabis earlier in age
 - who use cannabis frequently on a daily or near-daily basis over time
 - who use cannabis products containing higher levels of THC, for example 30-90% THC which is often found in vape pens and other cannabis extract products for 'dabbing'
 - who have a family history of mental health disorders

RISKS OF ILLEGAL CANNABIS

- In the US in 2019, an unregulated cutting agent was used in illegal THC-containing vaping products and was associated with an outbreak of Vaping-Associated Lung Illness that sickened thousands and led to dozens of deaths.
- Cannabis products from the illegal market, including cannabis vaping accessories, are not quality-controlled or tested. Illegal cannabis products may be contaminated with heavy metals, pesticides and other substances which can cause serious harm when inhaled.
- The use of vaping products outside the legal market can pose additional risks to health and safety.



- You may remember, back in 2019, there was an outbreak of vaping associated lung injury which caused thousands of hospitalizations and dozens of deaths in the U.S. This was primarily linked to individuals using illegal THC-containing vaping products that contained harmful substances such as vitamin E acetate.
- Cannabis products from the illegal market, including cannabis vaping accessories, are not quality-controlled or tested. Illegal cannabis vaping products may be contaminated with heavy metals, pesticides and other adulterants such as Vitamin E acetate, MCT oil or other substances which can cause serious harm when inhaled. The use of vaping products outside the legal market can pose additional risks to health and safety.
- As an example, a pesticide found in illegal cannabis, when consumed in high amounts, can be poisonous when vaped or smoked. Heavy metals, like lead, mercury, cadmium and arsenic have been found in illegal cannabis products and are highly toxic.

HEALTH IMPACTS OF VAPING

- For optimal athletic performance, it is important to have optimal lung function among other things.
- Some studies have shown increased coughing, wheezing and asthma exacerbations in youth who use vaping products.

- Those wishing to optimize their athletic performance should not breathe in any foreign substance, which includes substances inhaled via vaping.
- Some studies have shown increased coughing, wheezing and asthma exacerbations in youth who use vaping products.
- For optimal athletic performance, it is important to have optimal lung function among other things.

SECOND-HAND AEROSOL

- Second-hand aerosol is not harmless.
- Bystanders can be exposed to aerosol that is exhaled by users.
- The health effects from exposure to second-hand aerosol are still being studied.
- There is some evidence that e-cigarette use increases the level of nicotine and other chemicals on indoor surfaces.

- Second-hand aerosol is not harmless, but it does contain far fewer chemicals than second-hand smoke.
- Bystanders can be exposed to aerosol that is exhaled by users.
- The health effects from exposure to second-hand aerosol are still being studied.
- There is some evidence that e-cigarette use increases the level of nicotine and other chemicals on indoor surfaces. Nicotine has also been detected in the blood and urine of non-users exposed to second-hand aerosol.

VAPING AND COVID-19

- The emergence of COVID-19 has raised concern about the potential of increased risks posed by vaping.
- Teens and adults should avoid exposure to any substance that might impair the normal function of the lungs and immune system, including the use of cigarettes and vaping products.
- Sharing substance use equipment, such as vaping devices increases the risk of virus transmission.
- For the latest information on COVID-19, how it spreads, and how to protect yourself, we encourage Canadians to visit www.canada.ca/coronavirus.

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PART TWO COMPLETE, CONTINUE THE EXPERIENCE IN PART THREE.

CONGRATS! YOU HAVE NOW COMPLETED PART TWO OF THE SELF-LED MODULE. CONTINUE ONTO PART THREE TO COMPLETE THE EXPERIENCE. DON'T WORRY IF YOU MISSED PART ONE, YOU CAN ALWAYS GO BACK TO COMPLETE IT AS WELL!

Consider the Consequences of Vaping

PART THREE

- Welcome to the Consider the Consequences of Vaping Experience Part Three, brought to you by Health Canada.
- During this part we will provide insights into the cost of vaping, and tips and tricks to overcome peer pressure.

PEER PRESSURE

Did you know that peer pressure is one of the most common reasons why so many youth said they started to vape, and the majority of teenagers who tried vaping did it with others?

Here are some helpful tips to consider before you are in a situation where there could be peer pressure to vape:

- It's ok to say "no thanks, I'm not interested"
- Ask them questions
- Use an excuse
- Blame your parents!
- Create a code word with your parents or friends
- Hang out with friends who share your values
- Talk to a trusted adult

DID YOU KNOW THAT PEER PRESSURE IS ONE OF THE MOST COMMON REASONS WHY SO MANY YOUTH SAID THEY STARTED TO VAPE, AND THE MAJORITY OF TEENAGERS WHO TRIED VAPING DID IT WITH OTHERS?

Here are some helpful tips to consider before you are in a situation where there could be peer pressure to vape:

- It's ok to say "no thanks, I'm not interested" – turn down the offer to vape and if you are uncomfortable afterwards then you always have the option to walk away. With you taking a stand and leading the way, other people might follow you as well. Be proud of your decision. The ability to stand up for yourself and your choices can help you when you are in uncomfortable or pressure situations with friends or peers.
- **Ask them questions** – asking questions to the person who may be pressuring you, can make it easier to say no. Questions like: "Why do you vape? How long have you vaped? Are you aware of the risks? Why did you start? Do you plan on quitting?"; can help to steer the conversation and provide more reasons to turn it down.
- **Use an excuse** – Teenagers live busy lives, which means you've always got a credible excuse to avoid situations in which you may be pressured by your peers. Using an excuse like "sorry, I can't, I have hockey or volleyball practice, or dance, etc." or "I have to go home to walk my dog", can get you out of a situation that you may be uncomfortable in.
- **Blame your parents!** They want you to make the best choices, and if that means blaming them to avoid peer pressure, go for it. Saying things like "I can't" or "it's not worth it, I'd be in so much trouble if my parents found out I vaped" or "sorry, I can't, I'm grounded and have to go home" may allow you to avoid the situation.
- **Create a code word with your parents** – when you are faced with a situation in which you are uncomfortable (**e.g. being invited to a party or get together of friends** where you know you may be pressured to try things you don't want), having a code word with your parents can help you avoid these situations without your friends knowing. Call or text your parents with this code word to let them know that you need an excuse and/or want to come home or leave.
- **Hang out with friends who share your values** – finding friends who will back you up when you say "no"; spending time with friends who you trust not to pressure you and that do not vape, will help avoid peer pressure. Having a trusted circle of friends can help you be true to your values and choices.
- **Talk to a trusted adult** – talking to an adult you trust like your parents, a teacher or coach, a faith leader can allow you to ask questions about vaping and understand the facts in a safe, non-judgemental environment. A supportive adult can help you make an informed choice about vaping and how to handle peer pressure.

VAPING, SMOKING, AND QUITTING



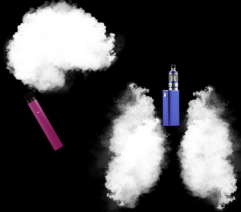
Nicotine is highly addictive. It is not safe for teens to use any nicotine products, including cigarettes and vaping. If you smoke, quitting smoking is the best thing you can do for your health. While vaping is less harmful than continuing to smoke, it would be best to quit vaping as soon as possible.

Support is available to help you quit. Speak to your health care provider for advice on how to stop.

- Nicotine is highly addictive
- It is not safe for teens to use any nicotine products, including cigarettes and vaping. If you do vape or smoke, quitting is the best thing you can do for your health. If you smoke, quitting smoking is the best thing you can do for your health. While vaping is less harmful than continuing to smoke, it would be best to quit vaping as soon as possible.
- Support is available to help you quit, speak to your health care provider for advice on how to stop.

Consider the Consequences of Vaping

PART THREE COMPLETE



- You have now completed part three. Thank you for completing the Consider the Consequences of Vaping Experience.
- Don't forget to complete parts one or two if you have not yet!