



# YOUTH AND VAPING

**DRUG  
FREE  
KIDS**  
CANADA.ORG



**Drug Free Kids Canada** Where families come for help

Vaping's popularity among youth has grown significantly over the past five years – and there is a lot of concern that this increase may have a negative impact on the overall health of our young people.

Understanding the issues surrounding vaping, and its potential health effects is important for us as parents, as the vaping market is evolving rapidly, with new products regularly becoming available, and new research studies coming to light nearly every week.

Learn more about vaping and take the time to have balanced, thoughtful conversations with your kids about vaping and smoking can help them understand more about how these practices can impact their health. **We are here to help.**



**E-cigarettes are also called “e-cigs,” “vapes,” “e-hookahs,” “vape pens,” and “electronic nicotine delivery systems (ENDS).”**

Vaping is the act of inhaling the aerosol, or ‘vape’ from an e-cigarette or similar vaping device. While the output of the device may look like smoke, it is actually the vapor created by the combustion of an oil or liquid. E-liquids in vaping products are composed most often of propylene glycol or vegetable glycerin-based liquid with chemical flavorings. E-liquids may also contain nicotine and cannabis concentrates like cannabis oils.

## A growing trend

Vaping has become a rising trend, especially among youth.

A recent study, led by Professor David Hammond of the University of Waterloo, found that among youth 16-19 years old, vaping increased substantially by 74% from 2017 to 2018, **from 8.4% to 14.6%**<sup>1</sup>

The study also indicated that cigarette smoking among 16-19 year-olds increased by 45% in the same time period.<sup>2</sup>

This new data comes as a bit of a surprise for many, as until the vaping trend emerged, we had already made great strides in the reduction of youth and smoking.

# Smoking vs Vaping

Over the past decades, smoking in Canada has been on the decline; fewer people report being heavy smokers, and the smoking rate fell more rapidly among teens (15 – 19) than any other age group.<sup>3</sup>

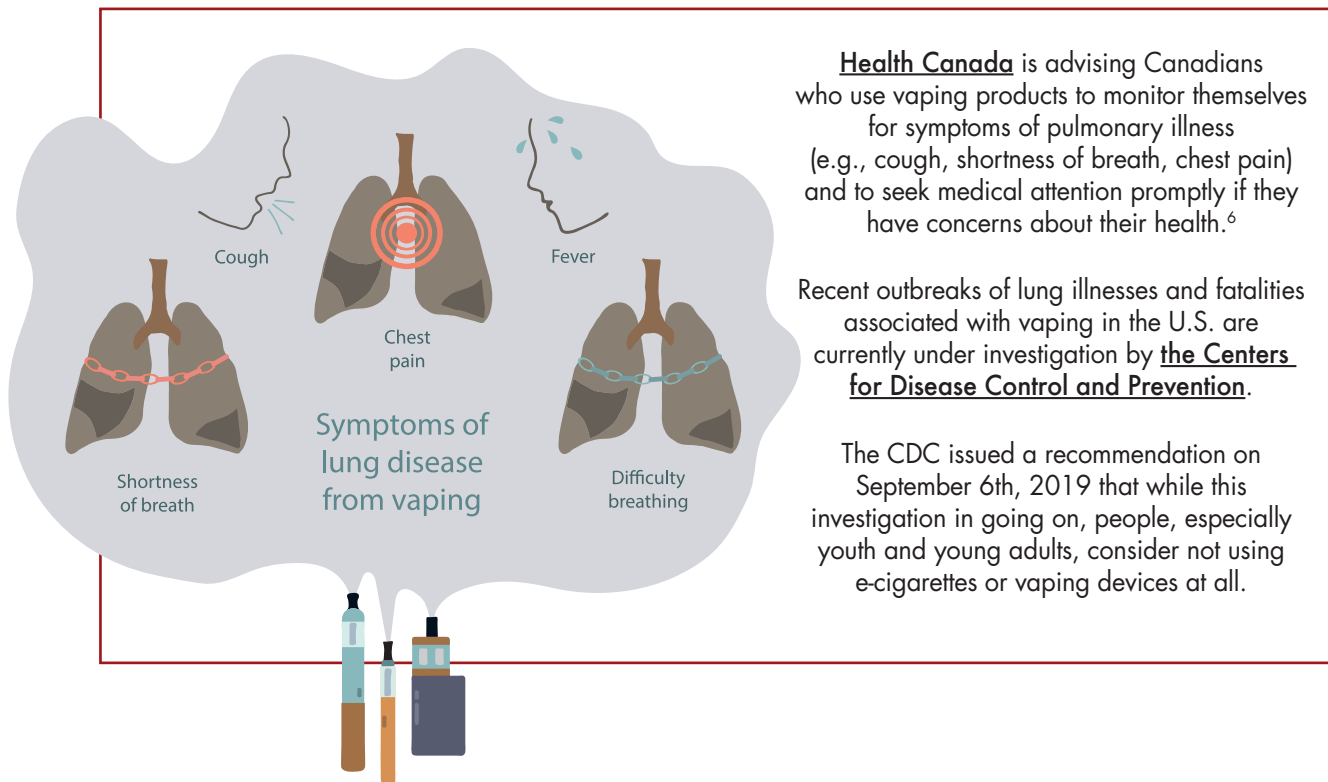
In 2016-17, 18% of students in grades 7 to 12 (approximately 383,000) had ever tried smoking a cigarette, even just a puff. As students get older, the number rises. In grades 7 to 9, 9% of students had ever tried smoking a cigarette and in grades 10 to 12, 28% of students reported the same.<sup>4</sup>

Over the past decades, there has been a lot of well documented research on the negative health effects of smoking; increased risk of respiratory and lung diseases, cardiovascular problems, some forms of cancer, as well as the extremely addictive nature of nicotine.

But when it comes to vaping, researchers are in the very early days of examining the long term health effects. Most research that exists now is focused on the relative risk of vaping when compared to smoking.

There is strong consensus in the scientific community that for adults, vaping is considered to be less harmful than smoking and smokers who switch to vaping can potentially lower their health risks.

**However, E-cigarettes and other vaping devices are not considered safe for youth, young adults, pregnant women or any adult who does not already use tobacco products.<sup>5</sup>**



**Health Canada** is advising Canadians who use vaping products to monitor themselves for symptoms of pulmonary illness (e.g., cough, shortness of breath, chest pain) and to seek medical attention promptly if they have concerns about their health.<sup>6</sup>

Recent outbreaks of lung illnesses and fatalities associated with vaping in the U.S. are currently under investigation by **the Centers for Disease Control and Prevention**.

The CDC issued a recommendation on September 6th, 2019 that while this investigation is going on, people, especially youth and young adults, consider not using e-cigarettes or vaping devices at all.



## What is the appeal?



Although vaping devices were originally designed as a way to stop smoking and kick the nicotine habit, the promotion of vaping as a “modern” and “healthier” way to smoke may play an important role in its appeal with youth and young adults. Some of the larger vape companies have created intensive marketing campaigns and innovative packaging that, although not specifically targeted towards youth, certainly do grab their attention.

Many vaping devices have been designed to emanate a ‘coolness factor’. For example, they may look like pens, or USB drives that can be re-charged in a computer’s USB port.

Research shows that exposure to alcohol and tobacco marketing increases the probability that a young person will use these substances.<sup>7,8</sup>

Marketing can shape social norms by portraying substances in a positive light and targeting concepts such as social approval, autonomy, self-image and adventure seeking.<sup>9</sup>

Some vaping products may not contain nicotine, but they do offer a full spectrum of “tasty” e-liquids, containing chemicals with kid-oriented flavors such as Strawberry Watermelon Pop, German Chocolate cake, Cotton candy, Melon Bubblegum and Banana Split.

Social media platforms play a large part in vaping’s appeal to young people. The ‘cool’ social posts and videos of “cloud chasing” can fascinate some youth. Cloud chasing is the activity of blowing large clouds of vapor using an electronic cigarette.

Cloud competitions, usually promoted by vaping companies, and posted on social media, are a part of the vaping culture’s appeal. People perform vaping tricks as they exhale the vapour from the vaping device. Kids can find lots of “how to” videos on YouTube to demonstrate step-by-step how they can do their own vaping tricks.

Once the marketing attraction has caught their attention, some young people choose to vape simply because they are curious and just want to try it out. Other kids might try vaping to test boundaries, impress their friends, or because they are under the misguided notion that vaping is harmless.

## What's the concern?

Vaping began as a way for adult smokers to quit smoking tobacco and inhaling the harmful chemicals in cigarettes. Some kids may try vaping to help them stop smoking, as they are marketed to adults as a smoking cessation, but it is not considered safe for teens and young adults.<sup>10</sup>

**The long-term effects of vaping are still unknown, however, several short-term effects include cough, wheezing and a worsening of asthma symptoms.**

**The bottom line is that the inhalation of harmful chemicals can cause irreversible lung damage and lung disease.**

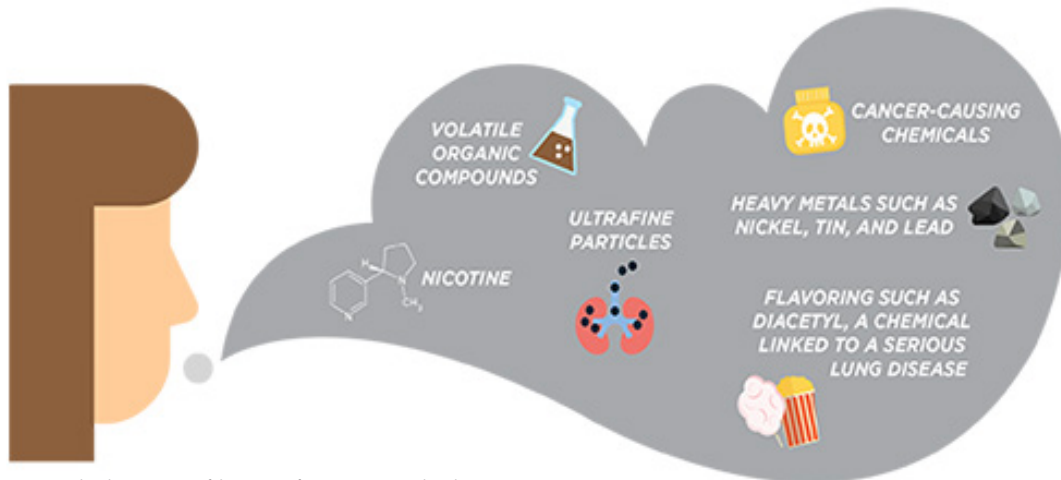


Image used with permission of the Centres for Disease Control and Prevention

Since May 2018, some vaping products are permitted to contain nicotine, and the level of nicotine can vary widely. Some e-liquids have low levels, while others can contain more nicotine than in a typical cigarette. Nicotine exposure in teens and young adults is concerning, because it is an extremely addictive substance. Exposure to nicotine during adolescence can affect memory, concentration, impulse control as well as cognitive and behavioural problems. Vaping may predispose youth to addiction to nicotine and possibly other drugs.<sup>11</sup>

Even if a vaping product does not contain nicotine, there is still an increased risk of being exposed to other harmful chemicals.<sup>12</sup>

In January 2018, the National Academies of Science, Engineering and Medicine released a consensus study report that reviewed over 800 different studies.<sup>13</sup>

The report made clear that there is conclusive evidence that using e-cigarettes causes health risks. It also concluded that e-cigarettes both contain and emit a number of potentially toxic substances.<sup>14</sup>

A study from the University of North Carolina found that the two primary ingredients found in e-cigarettes—propylene glycol and vegetable glycerin—are toxic to cells and that the more ingredients in an e-liquid, the greater the toxicity.

Most e-cigarette liquids or concentrates contain and release a number of potentially toxic substances, and heating the liquids can create new chemicals, such as formaldehyde, acetaldehyde, and acrolein, these aldehydes can cause lung disease, as well as cardiovascular (heart) disease.<sup>15</sup>

Some contaminants (e.g. nickel, tin, aluminum) might also get into the vaping products and then into the vapour.<sup>16</sup>

There are also risks of inhaling second hand e-cigarette emissions, created when an e-cigarette user exhales the chemical cocktail created by e-cigarettes.<sup>17</sup>

<sup>10</sup> Health Canada, Risks of Vaping, Date modified: 2019-06-14

<sup>11</sup> Health Canada, Risks of Vaping, Date modified: 2019-06-14

<sup>12</sup> Health Canada, Fact Sheet, Talking with your Teen About Vaping, 2018

<sup>13</sup> Public Health consequences of e-cigarettes – National Academies of Science, Engineering and Medicine 2018

<sup>14</sup> Sassano MF, Davis ES, Keating JE, Zorn BT, Kochar TK, Wolfgang MC, et al. (2018) Evaluation of e-liquid

<sup>15</sup> Ogunwale, Mumiye A et al. (2017) Aldehyde Detection in Electronic Cigarette Aerosols.

<sup>16</sup> Health Canada, Risks of Vaping, updated June 2019

<sup>17</sup> Public Health consequences of e-cigarettes – National Academies of Science, Engineering and Medicine 2018

## Vaping and Cannabis

Cannabis products that contain concentrated levels of THC (the psychoactive compound in cannabis that creates the 'high') such as hash oil can be vaped with an e-cigarette.

Dried cannabis can also be vaped in the cartridge of the e-cigarettes. It is more discrete and less noticeable when young people consume cannabis oils and concentrates using a vaporizer rather than smoking dried cannabis in a joint or a pipe, as it does not leave a telltale smell.

Studies show that consuming cannabis affects the pre-frontal cortex of the adolescent brain that is responsible for executive functions such as decision making, risk taking, impulse control and concentration. This part of the brain does not fully develop until the mid twenties, so adolescents and teens are more vulnerable to dependence and problematic substance use.<sup>18</sup>

On October 17, 2019, Health Canada's amendments to the Cannabis Regulations established the rules governing the legal production and sale of cannabis products used in vaping. These amended regulations seek to reduce the health risks of these cannabis products.

**It's important to note that cannabis products like cannabis oils and concentrates for use in vaping devices are legal for retail sale only at licensed outlets.**

Be aware that the illegal drug market continues to produce and sell cannabis products of all kinds on the street, including illegal extracts for vaping. It's important for kids to understand that cannabis products of any kind that are purchased on the street may not be what they appear to be – this is another very good reason to have a conversation with your adolescent about vaping.

## Vaping in Canada

Canada has set a regulatory framework for vaping products, with a focus on preventing vaping by youth under 18 years old (19 in some provinces).

The Tobacco and Vaping Products Act or TVPA places significant restrictions on the promotion of vaping products, including bans on:

- Advertising that appeals to youth;
- Lifestyle advertising;
- Sponsorship promotion;
- Giveaways of vaping products or branded merchandise.<sup>19</sup>

It's worth noting that the majority of vaping products are also available online – and therefore can be relatively easy for underage youth to obtain. Although on-line vaping retailers are required to ask you on the opening page if you are 19 or older, sites are still relatively easy to access. By simply clicking the 'yes' button, or entering a false birthdate, anyone is able to access the site and proceed to make an online order with a credit card.

## Signs that your teen might be vaping:

Vaping is not always easy to detect. Unlike tobacco, it has no lingering odor and some vaping paraphernalia is so small, it can be easily hidden in a pocket or hoodie.

In fact, vaping has become such a problem in some Canadian schools that administrators have removed the exterior doors of the washrooms in an attempt to decrease the consumption of underage vaping in their schools.

There are some signs and paraphernalia that may help you to determine if your teen may have 'embraced the vape.'

### You may notice:

- Vaping equipment such as pipes, USB sticks, cigarettes with mouthpieces or 'chambers' attached, e-liquids, as well as anything that looks like it could be inhaled.
- Unusual credit card purchases on-line, or unexpected packages arriving at your home
- Un-explained scents such as bubble gum, chocolate, lemon pie etc.
- Increased thirst and appetite, red eyes and nosebleeds
- Your teen texting or using vaping jargon such as: 'juice' JUUL, 'APV' (Advanced Personal Vaporizer) or 'atty' (atomizer) or 'sauce.'
- Dried cannabis or cannabis oils



If you find vaping paraphernalia in your home or notice any changes in your child's behavior that make you wonder if they are vaping, it's important take some time to have an open and balanced discussion with your pre-teen or teen.





# Talk with your Teen about Vaping



Like smoking, conversations about vaping are very important to have with your pre-teen or teen, the earlier the better. You are in the best position to help your teen understand the health consequences of vaping and by actively listening to what your teen is saying, you can help to keep the dialogue going.

## Here are some suggestions to get a conversation about vaping started:

- **Pick the right time:** "I've heard some new information in the news about vaping. Is this a good time for us to talk?"
- **Ask permission:** "Can I talk to you about something that's important, like vaping?"
- **Be positive and sincere:** "I really want to learn more about what you know about vaping..."
- **Let your teen know you hear them:** "I never realized that..."
- **Summarize what you heard and ask questions:** " So you're saying that..."
- **Ask open-ended questions and encourage dialogue:** " What do you think about vaping? "
- **Show empathy and compassion:** "I know it's not always easy being a teen..."

Teens tell us that their parents are the most influential people in their lives. You are your child's first line of defense when it comes to helping them to make smart, balanced decisions about important issues that can affect their health, like smoking and vaping.

Talk with your teen openly and actively listen to what they are saying. Chances are you will both benefit from these shared and meaningful conversations.

## ADDITIONAL RESOURCES ON VAPING

- **[Health Canada](#)**
- **[Consider the consequences of vaping - Health Canada](#)**



DRUG  
FREE  
KIDS  
CANADA.ORG



Whenever you decide to talk about drugs with your pre-teen or teen, it's important to remind your child that their body and their future belong to them - and that you are always there to talk with them about any issues or concerns they might have.

Have questions about kids and drug use?  
**Get answers quickly.**

The **DFK FastFinder** makes it easy to find the information and resources you're looking for.

For more information on drugs, their effects on youth, how to intervene if your child is using, and how you, as the parent can protect your child from harm, please go to our website:

**[drugfreekidscanada.org](http://drugfreekidscanada.org)**