Vaping - What is it?

“Vaping is the act of inhaling and exhaling the aerosol, often referred to as vapor, produced by an e-cigarette or similar device. It’s become more popular among teens than regular cigarettes, especially given that vaping devices can be used for anything from flavors like mango, mint or tutti frutti, to flavorings containing nicotine or THC, the chemical compound in marijuana that produces the high” (Online: https://drugfree.org/parent-blog/the-teen-vaping-trend-what-parents-need-to-know/).

E-Cigarette or ENDS

An E-Cigarette is a device that uses battery power to heat up nicotine and other chemicals. Heating up the product turns the product into a vapor which is inhaled. These devices are referred to as; e-cigs, e-hookahs, hookah pens, vapes, vape pens, mods (customizable, more powerful vaporizers), pod systems, and the popular Juul. The acronym for these delivery systems is referred to as ENDS (Electronic Nicotine Delivery Systems).

Vaping can expose a person to less chemicals than a regular tobacco cigarette which can contain over 7000 chemicals, however taking nicotine is still highly addictive no matter how it is taken into the body.

(John Hopkins Medicine, Online: https://www.hopkinsmedicine.org/health/healthy_heart/know_your_risks/5-truths-you-need-to-know-about-vaping)

The use of ENDS or Vaping has become an “epidemic that now effects some 3.6 million underage users of Juul and other e-cigarettes” according to an article, “As teen vaping soars, treatment for nicotine addiction lags” written by Matthew Perrone of the Associated Press, nicotine can affect “learning, memory and attention” in the developing brain which does not fully develop until early to mid-twenties. There has not been “enough research on how e-cigarettes vapor affects the lungs, which do not fully mature until the 20’s” (Online: https://www.pressherald.com/2019/01/16/as-teen-vaping-soars-treatment-for-nicotine-addiction-lags/).

Further research has demonstrated, Young people who use nicotine products in any form, including e-cigarettes, are uniquely at risk for long-lasting effects. Not only is learning, memory and attention impacted, “nicotine affects the development of the brain’s reward system, and continued e-cigarette
use can not only lead to nicotine addiction, but it also can make other drugs such as cocaine and methamphetamine more pleasurable to a teen's developing brain. Other risks include mood disorders and permanent problems with impulse control—failure to fight an urge or impulse that may harm oneself or others."


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**Watch YouTube video:**

**NIDA TV Spotlight on Electronic Cigarettes (2:37)**

https://youtu.be/Iz67IqkLwYs

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**Risks for Youth**

Partnership for Drug-Free Kids reports three significant risks when it comes to youth:

*“Vaping is often marketed to youth, downplaying the dangers.*

With lots of flavors available for vaping liquids, as well as the variety of colors and devices available that charge just like cell phones, it’s clear that vaping products are often marketed to teens. One of the slang terms for vaping, known as JUULing (“jeweling”), comes from the JUUL brand device that looks more like a flash drive as opposed to an e-cigarette. Vaping is also often sold as a “safer” alternative to cigarettes, and some teens are under the false assumption that because e-cigarettes don’t contain tobacco they’re safe.

**Vaping chemicals used in the liquids can be more concentrated and dangerous.**

Inhaling from a vape pen or e-cigarette, especially in the case of one containing nicotine or THC, can enhance a drug user’s high and can amplify a drug’s side effects. Vaping is also very new and there are literally hundreds of brands, so there’s not a lot of firm information about what chemicals might be in what vape liquids. But even beyond nicotine and THC, synthetic chemicals that make up these liquids – including “herbal incense” like spice and synthetic marijuana which expose the lungs to a variety of chemicals, which could include carcinogens and toxic metal nanoparticles from the device itself. Not only could these chemicals make their way into young lungs, causing irritation and potentially “smoker’s cough,” but they could also damage the inside of the mouth and create sores.
Vaping may make the transition to cigarette smoking easier in adolescence. In a meta-analysis of six studies, the findings concluded that the risk of smoking increases four times if a teen vapes versus a teen that does not. In another study of more than 2,000 10th graders, researchers found that one in five teens who reported a regular vaping habit at the start of the study smoked traditional cigarettes at least three times a month by the end of the study period. Another 12% of routine vapers smoked at least one day a month. By comparison, less than 1% of students who didn’t try vaping reported smoking even one day a month at the end of the study” (Online: https://drugfree.org/parent-blog/the-teen-vaping-trend-what-parents-need-to-know/).

In addition to vaping and JUULing, there is dripping. Dripping is a procedure in which people produce and inhale vapors by placing e-liquid drops directly onto heated atomizer coils. Teens reported the following reasons for dripping: to create thicker vapor (63.5 percent), to improve flavors (38.7 percent), and to produce a stronger throat hit—a pleasurable feeling that the vapor creates when it causes the throat to contract (Online: https://www.drugabuse.gov/publications/drugfacts/electronic-cigarettes-e-cigarettes).

Why Teens are attracted to Vaping with Dr. Nora Volkow

Research continues to provide new insight into the reinforcing effects of nicotine, and its ability to promote smoking (or vaping). The 2018 Monitoring the Future survey results reports a dramatic increase in teens using vaping devices. In this video NIDA’s Director, Dr. Nora Volkow explores why teens may be attracted to vaping – and what they are vaping.

https://youtu.be/ELKUjEaIHI

The National Institutes of Health reported among College Students, “the use of e-cigarettes is most likely to be constrained to those who already use some manner of tobacco product, at least initially. The overall ethic of non-smoking has become dominant on campuses. But there is a wider context within which e-cigarettes fall, which is the expanding use of alternate tobacco products. In this context e-cigarettes provide current tobacco users an added option for continuing use.” Other concerns surrounding the use of e-cigarettes include “the integration of e-cigarettes into the portfolio of substances accepted by college students. Hookah bars are now fairly common and are likely accepted by college students because users don't affect non-users. Exclusion of cigarette smoking from social situations is also common. But, as the results of this study show, there is capacity for a higher level of acceptance of the use of e-cigarettes in social situations given the minimal impact on non-users” (Use and Perception of Electronic Cigarettes among College Students, Online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4147677/).
Important Points to Remember

- While many claim to use e-cigarettes as a tool to help them quit smoking. The long-term health effects of these products is unknown and ENDS are not approved as a quit aid by the U.S. Food & Drug association (FDA).
- Since e-cigarettes are not regulated, there is no way to now the amount of nicotine that the user is getting
- The liquid in e-cigarettes and in the vapor have chemicals that are known to be harmful to humans.
- Because the product is relatively new, the long term health effects from the use of e cigarettes have not been studied
- E-cigarettes may emit nicotine, propylene glycol, carcinogens, and other harmful substances
- Nicotine is addictive in any form and lethal in high doses

(Online: BreatheEasyMaine.org).

Marijuana and Nicotine

“Smoking tobacco and marijuana together is not new. A blunt is marijuana wrapped in a tobacco leaf and a spliff is a joint rolled with tobacco.

Electronic cigarettes provide an alternative to consume marijuana.

Vaping marijuana does not produce the smell generally associated with smoking marijuana

Vaping rather than smoking marijuana, delivers higher concentrations of THC, increasing exposure to the drug's mind altering and addictive properties”

Studies are being conducted to understand how the combined use changes the brain. The CDC reported, “Using marijuana and tobacco at the same time may also lead to increased exposure to harmful chemicals, causing greater risks to the lungs, and the cardiovascular system”

(Online: https://www.cdc.gov/marijuana/faqs/mixing-marijuana-with-alcohol-tobacco-drugs.html).

Synthetic Cannabinoids

“Synthetic cannabinoids can be mixed into e-liquids and inhaled through a pen-sized vaporizer as liquid synthetic pot (liquid spice). Non-popular synthetic cannabinoids sprayed on aromatic herbs can be vaped directly and more efficiently with e-cigs equipped with dry herb coil heads than in e-cigs fitted with e-liquids” (E-Cigarettes: A Review of New Trends in Cannabis Use, Int. J. Environ. Res. Public Health 2015, 12).

“Cannabinoids are similar to chemicals found in the marijuana plant. Because of this similarity, synthetic cannabinoids are sometimes misleadingly called "synthetic marijuana" (or "fake weed"), and they are often marketed as safe, legal alternatives to that drug. In fact, they are not safe and may affect the brain
much more powerfully than marijuana; their actual effects can be unpredictable and, in some cases, more dangerous or even life-threatening”

To learn more about Synthetic Cannabinoids (K2/Spice) check out NIH Drug Facts:
https://www.drugabuse.gov/publications/drugfacts/synthetic-cannabinoids-k2spice

Vaping Recreational Drugs with E-Cigarettes

Any type of psychoactive drug such as methamphetamine, cocaine, heroin, or bath salts can be vaped. “E devices are able to vaporize wax, or other hash-style concentrate, flower buds and oil concentrates” E-cigarettes “have been adapted to vaporize hallucinogens known as dimethyltryptamine or DMT. Many personal experiences about vaping crystal methamphetamines are reported on the internet as well as the use of e-cigs as a means of administering numerous controlled substances”

The emergence of this “new youth culture of vaping” and “stealth vaping” could continue to impact anti-smoking campaigns and hinder cannabis youth prevention. The use of solutions containing nicotine to prepare e-liquids enriched with THC could favor a dual addiction to these psychotropic drugs.


With this “new youth culture of vaping”, it is important to understand that vaping is a different means of delivering a drug. The drug or chemical can damage the brain and physical body. Vaping does not diminish addictive potential and in some instances will increase this risk. There can be immediate, short term and long term negative consequences associated with vaping psychoactive drugs, cannabis and nicotine.

Vaping Alcohol

There are many ways to vape alcohol and many reasons people use to justify doing this, which include less calories to an immediate high and no hangover. This is dangerous.

- Blood Alcohol Content- one shot/drink can affect a person as much as 5 or 6 drinks
  (An individual can hit legal limit .08 within 20 minutes)
- Alcohol goes immediately to the brain (bypass stomach and liver)
- The natural process to protect from alcohol poisoning is to purge or vomit- when alcohol bypasses the stomach- this is no longer possible.
- Alcohol Poisoning
- Individuals still take in calories through vaporizing
- Once it is in your lungs-, you can’t get rid of it.
- Not able to monitor how much alcohol is being consumed inhaling the vapor
- Addictive process-less alcohol to experience an immediate high-potential for abuse
E-Cigarettes and ENDS are considered a tobacco product and in Maine and many other states are banned where smoking is prohibited.

Maine law banning electronic cigarettes in public places takes effect. The law bans e-cigarettes from places such as restaurants, playgrounds and beach.


Articles of Interest

Did Juul Lure Teenagers and Get ‘Customers for Life’?

The e-cigarette company says it never sought teenage users, but the F.D.A. is investigating whether Juul intentionally marketed its devices to youth.


Vaping pot is more powerful than smoking it, study found...

More people are using cannabis as legalization spreads and they should know that vaping pot can cause hallucinations, vomiting and paranoia, researchers said...

https://www.nbcnews.com/storyline/legal-pot/vaping-pot-more-powerful-smoking-it-study-finds-n942271

For More Information on E-Cigarettes and Vaping visit the University Health and Counseling-webpage~ Substance Misuse Prevention~

https://usm.maine.edu/uhcs/substance-misuse-and-prevention

For Comments on this, newsletter or suggestions for future articles please contact:

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