



## **SMOKELESS TOBACCO AND VAPING**

Smokeless tobacco products, including electronic cigarettes (vaping), contain nicotine but are not smoked like cigarettes or cigars. There are no healthy tobacco or vaping products, despite these products being marketed as non-cigarette alternatives to smoking or as a way to quit smoking. Quitting is the only way to decrease your risk of these and other tobacco-related health problems.<sup>1</sup>

### **Types of smokeless tobacco**

Smokeless tobacco goes by many names: chewing tobacco, oral tobacco, spitting tobacco, dip, chew, snuff, snus, and dissolvable tobacco. The two basic types are chewing tobacco (long strands of loose leaves, plugs, or twists of tobacco) and snuff (finely ground tobacco packaged in cans or pouches). These products are sold dry or moist.

### **Health effects of using smokeless tobacco**

According to the Centers for Disease Control and Prevention, smokeless tobacco can lead to nicotine addiction and causes cancer of the mouth, esophagus, and pancreas. When smokeless tobacco is used during pregnancy, it can affect the baby's brain development and increases the risk of early delivery and stillbirth. It can cause nicotine poisoning in children and may increase the risk of death from heart disease and stroke.<sup>2</sup>

Additional dangers within smokeless tobacco products are cancer-causing chemicals, including nitrosamines, arsenic, beryllium, cadmium, chromium, cobalt, lead, nickel, and mercury. Other cancer-causing chemicals found in tobacco are the radioactive element polonium-210 (found in tobacco fertilizer) and polynuclear aromatic hydrocarbons (also called polycyclic aromatic hydrocarbons, which form when tobacco is cured with heat).<sup>2</sup>

Dangerous oral and dental side effects can result from using smokeless tobacco:

- White or gray patches inside the mouth (leukoplakia) can lead to cancer.
- Gum disease can lead to tooth loss.
- Tissue and bone loss can occur around the roots of the teeth.
- Scratching and wearing down of teeth
- Stained and discolored teeth
- Bad breath

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## Electronic Cigarettes (Vaping)

Vaping devices are small, battery-operated products that use refillable cartridges to vaporize nicotine solutions so they can be inhaled. E-cigarettes (or vaping devices) come in many shapes and sizes. Some look like regular tobacco cigarettes, cigars, or pipes; and some are shaped or referred to as tanks, mods, and hookahs. Others are reusable with cartridges and are designed to resemble flash drives, like Juul, Blu, NJoy, and SMOK. These are popular with Delaware youth, as they are easily hidden or misidentified by parents and school authorities. Vaping cartridges are available in more than 7,000 flavors and largely appeal to youth and young adults.

The Juul e-cigarette debuted in 2015. The juice pods contain 5% nicotine – the equivalent of 20 regular cigarettes. Prior to Juul, the most popular e-cigarette products contained nicotine strengths of roughly 1% to 2.4%. The manufacturer claims Juul delivers nicotine up to 2.7 times faster than other e-cigarettes.<sup>3</sup>

### Health effects of using electronic cigarettes

Numerous health effects are associated with vaping. In young people, nicotine exposure can affect brain development and lead to addiction. The U.S. Surgeon General concluded that “The use of products containing nicotine poses dangers to youth, pregnant women, and fetuses. The use of products containing nicotine in any form among youth, including e-cigarettes, is unsafe.”<sup>3</sup>

In addition to flavorings, e-liquids contain numerous cancer-causing chemicals as well as heavy metals, arsenic, formaldehyde, acetoin, cadmium, diacetyl, benzaldehyde, propylene glycol, and toxic solvents. E-liquids are also very poisonous to users, non-users, toddlers, and pets. Since 2011, more than 4,000 incidents involving the ingestion of liquid nicotine (vape juice) have been reported in the U.S. As little as a teaspoon of highly diluted nicotine can kill a small child. Even skin contact is a safety concern. Vape juices should never be left within reach of infants or children.<sup>4</sup>

E-cigarette aerosol or vapor is dangerous to the lungs and frequently contains toxic metals such as aluminum, chromium, copper, iron, lead, nickel, silicon, tin, zinc, and titanium. Secondhand exposure to vape aerosol is also dangerous for non-smokers and children.<sup>4</sup>

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The U.S. Surgeon General's December 2016 report declared use of e-cigarettes by young people a "major public health concern." According to that report, the use of e-cigarettes by young people rose dramatically since 2011, and more high school students use e-cigarettes than regular cigarettes. A Behavior Risk Factor Survey conducted by the Delaware Department of Health and Social Services, Division of Public Health (DPH) in 2017 reported that 12.7% of adults in Delaware who use e-cigarettes are 18 to 24 years old. According to the 2017 Delaware Youth Risk Behavior Survey, 37.9% of high school students reported having tried an e-cigarette.<sup>5</sup>

While e-cigarettes and vaping devices have been marketed as less harmful than cigarettes, they are not harmless.

- E-cigarettes contain dangerous and numerous compounds and cancer-causing chemicals.
- E-cigarettes like Juul and Puff Bar are unregulated, meaning there are no safety standards.
- Even when vapes are labeled nicotine-free, they can still contain nicotine.
- People who vape can also end up smoking tobacco products.
- Vaping is not a proven method for helping people quit smoking.
- Secondhand vapor/aerosol from e-cigarette devices is harmful.
- Defective e-cigarette batteries have caused fires and explosions, some of which resulted in serious bodily injury during vaping.
- Children and adults have been poisoned by swallowing, breathing, or absorbing e-liquid through exposure on the skin.
- Illicit THC is the leading cause of vaping-related lung injuries, hospitalizations, and death.

The American Dental Association adopted an interim policy in December 2019 that supports the ban of vaping products and calls for additional research. In February 2020, the Journal of the American Dental Association published a commentary on the current state of research related to the impact of vaping on oral health, indicating that more research is underway. In January 2020, the Food and Drug Administration announced its enforcement policy against flavored e-cigarettes.

### **For more information**

For more information about oral and dental health, contact DPH's Bureau of Oral Health and Dental Services, at 302-622-4540 and [www.dhss.delaware.gov/dhss/dph/hsm/ohphome.html](http://www.dhss.delaware.gov/dhss/dph/hsm/ohphome.html).

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For more information about the types and dangers of tobacco and smokeless tobacco, visit DPH's Tobacco Prevention and Control Program at <https://dhss.delaware.gov/dhss/dph/dpc/tobacco.html>.

For more information about the types and dangers of e-cigarettes and vaping, visit [https://www.healthylouisiana.org/documents/individuals/tobacco/vape-toolkit/factsheets/VapeFreeDE\\_FactSheet1-Overview.pdf](https://www.healthylouisiana.org/documents/individuals/tobacco/vape-toolkit/factsheets/VapeFreeDE_FactSheet1-Overview.pdf).

Delaware adults age 18 and older who want to quit smoking should call or visit the Delaware Quitline at 1-866-409-1858. Visit: <https://www.dhss.delaware.gov/dph/dpc/quitline.html>.

For information on how to quit smokeless tobacco, visit: <https://www.cancer.org/healthy/stay-away-from-tobacco/guide-quitting-smoking.html>.

## Resources

1. American Dental Association. 2020. *Smokeless Tobacco*. In Mouth Healthy. Retrieved July 16, 2020 from <https://www.mouthhealthy.org/en/az-topics/s/smokeless-tobacco>
2. Centers for Disease Control and Prevention, 2018. *Smokeless Tobacco: Health Effects*. Retrieved August 10, 2020 from [https://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/smokeless/health\\_effects/#cancer](https://www.cdc.gov/tobacco/data_statistics/fact_sheets/smokeless/health_effects/#cancer)
3. *Campaign for Tobacco Free Kids - Juul and Youth: Rising E-cigarette Popularity* ([www.tobaccofreekids.org/assets/factsheets/0394.pdf](http://www.tobaccofreekids.org/assets/factsheets/0394.pdf))
4. Delaware Public Health. Tobacco Prevention and Control Program. Overview: Vaping and E-Cigarette Use Among Delaware Students. [https://www.healthylouisiana.org/documents/individuals/tobacco/vape-toolkit/factsheets/VapeFreeDE\\_FactSheet1-Overview.pdf](https://www.healthylouisiana.org/documents/individuals/tobacco/vape-toolkit/factsheets/VapeFreeDE_FactSheet1-Overview.pdf)
5. Delaware Public Health. What are e-cigarettes? Retrieved April 20, 2021 from <https://dhss.delaware.gov/dhss/dph/dpc/ecigarettes.html>

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