

Student Reading:

Juul and a Vaping Crisis for Teens

In the summer of 2019, the U.S. Centers for Disease Control (CDC) announced a pattern of vaping-related illnesses caused by e-cigarettes. By the end of October, the agency reported almost 1,900 vaping illnesses and 37 deaths.

The victims were mostly young: two-thirds were aged 18 to 34 and 14 percent were under 18. The vape products involved mostly, though not always, THC as an ingredient. THC, or tetrahydrocannabinol, is a chemical in marijuana that is responsible for most of its psychological effects.

In response to the crisis, both the CDC and the Food and Drug Administration (FDA) have recommended that people not use vape liquids that have THC and not buy any vaping products off the street. Some states have initiated their own bans on vaping products.

The sudden health crisis reignited the controversy over e-cigarette marketing practices and what overall regulation is necessary.

The Debut of E-Cigarettes

The modern e-cigarette made its debut in 2003 as a supposedly safer alternative to cancer-causing tobacco products. Instead of burning tobacco leaves, e-cigarettes heat a nicotine-laced liquid until it becomes an aerosol (or vapor), which the user then inhales. The main components of the device itself are a battery, heating unit and a liquid container. The e-liquid (aka vape juice) may contain nicotine, THC, and flavorings, in addition to the chemicals that enable the vaporization. Some vapes are refillable; others contain sealed pods.

Juul began making e-cigarettes in 2010 with a pen-like device and introduced its current flash drive-like model in 2015. With its sleek design and quick nicotine effect, it caught on exceptionally quickly. The elegant design has been praised as “the iPhone of smoking.” The pods are easily changed, and the battery easily charged. Juuls are small and resemble a USB flash drive. The size and innocent appearance are part of what makes Juuls attractive for students—they are easily hid from parents and teachers. And there is no cloud of smelly, toxic smoke.

While e-cigarette sales had been flat for the years prior to the introduction of Juul, overall sales doubled in the two-and-a-half years following the introduction of Juul. Their sales went from 2.2 million devices in 2016 to 16.2 million in 2017. By the end of 2018, Juul accounted for almost 75% of all e-cigarette sales.

Health Impact of Vaping

Vaping has been touted as a safer alternative to smoking, a way for addicted cigarette smokers to reduce the harm caused by smoking. Unfortunately, e-cigarettes were soon adopted by young people and others who had never previously smoked.

Regular tobacco cigarettes contain some 7,000 chemicals, including many that are cancer-causing or toxic in other ways. Cigarettes are a leading killer of Americans; they result in about 500,000 deaths every year.

We don't know exactly what chemicals are in e-cigarettes, though they appear to contain fewer toxic chemicals than traditional cigarettes. However, a [study by the Johns Hopkins Bloomberg School of Public Health](#) studied the vapors from 56 e-cigarette users and found hazardous levels of metals in them - including lead. These metals have been shown to cause cancers, lung and liver disease (among others) when inhaled.

Like regular cigarettes, e-cigarettes contain the highly addictive substance nicotine. Nicotine releases a chemical called dopamine in the brain that teaches the brain to repeat the process. Nicotine can act as a neurotoxin and alter brain chemistry, so the brain doesn't function normally without it. A Juul pod contains about as much nicotine as a pack of regular cigarettes – delivering it up to 2.7 times faster than other e-cigarettes, increasing the potential for addiction.

A study published in *Nicotine & Tobacco Research* found that over half of e-cigarette users would like to quit – but haven't been able to.

Juul Marketing

Juul executives have always maintained that their product is intended for people who already smoke.

"We don't want anyone who doesn't smoke, or already use nicotine, to use JUUL products. We certainly don't want youth using the product." --Kevin Burns, CEO Juul Labs

"Juul was developed as a satisfying alternative to cigarettes. Learn about our mission to improve the lives of the world's one billion adult smokers by eliminating cigarettes." -- Juul homepage

But the company has been charged with deliberately marketing Juul to young people. Juul offered flavors that were kid-friendly: cool cucumber, mango, crème brulee, and fruit medley. One CDC survey notes that 31 percent of survey respondents (all students in grades 6 to 12) chose e-cigarettes because of the sweet flavoring.

Juul’s advertising campaigns seemed to target young people. Their early ads invariably featured young people looking cool and having fun. The models wore crop tops and torn jeans. They held skateboards and sported purple hair, listened to club music, and shared their Juuls. The ads bore the language of youth culture, featuring memes, pop stars, cartoons, slang, and humor. Juul hired social media “influencers” with large followings as part of a massive campaign on Instagram, Twitter, and YouTube. In 2016, 80 percent of middle school and high school students said they had seen e-cigarette advertising.

The campaign proved enormously successful. Between 2017 and 2019, the percentage of high school and college students who vape more than doubled. 10th-graders who vape went from 8 percent to 20 percent. 2019 data shows nearly 12 percent of high school seniors vape daily (meaning 20 or more days per month). And more than 25 percent reported vaping in the past month.

A Minnesota survey found that 44 percent of e-cig users were non-smokers, and a 2018 analysis in the *Annals of Internal Medicine* estimates almost two million Americans vape without having smoked. Those 44% are not substituting a safer addiction for a known dangerous addiction; they are introducing a new addiction (possibly for a lifetime) to their bodies.

Reining In an Industry

Federal regulation of e-cigarettes has been lax and late. In 2015, the Food and Drug Administration planned regulations that would ban flavored e-liquids, but removed the ban under heavy pressure from industry lobbyists. In 2016, the agency asserted its jurisdiction over e-cigarettes, but announced rigorous review only of new vaping products, extending examination of existing products for five years.

In 2018, under pressure from Congress, schools, health groups, and parents, the FDA took steps to address vaping by teens. They required stricter enforcement of age limits on retail stores, demanded action plans of the e-cigarette companies to reduce sales to minors, banned vaping flavors and demanded documents relating to marketing practices.

Juul has also ceased its social media campaigns and in response to a lawsuit agreed to:

- stop using models under the age of 28
- stop promoting the product at public events which admit minors
- not permit employees to speak at schools
- not advertise near schools
- stop advertising in media whose audience is more than 15% under 21

On November 5, 2019, the Journal of the American Medical Association published [studies](#) showing that more than half of teens who vaped used Juul, and mint was the most popular flavor among high school kids. Two days later, Juul announced that it was halting sales of its mint flavor.

“If you were to design your ideal nicotine-delivery device to addict large numbers of United States kids, you’d invent Juul.” --Jonathan Winickoff, pediatrician and professor at Harvard Medical School

In December 2018, while Juul was facing mounting pressure to change its business practices, the company announced that Altria Group, the largest tobacco company in the U.S., was buying a 35 percent share in Juul.

For Juul, the move brings in the legal, lobbying, and public relations muscle of a giant corporation with decades experience fighting regulation. And since many retailers, including Walmart, have stopped selling e-cigarettes, Juul will benefit from Altria’s power in the retail world. For Altria, the acquisition was a recognition of the shrinking market of tobacco and a way to capture the main manufacturer of a competing product.

Even if cigarette sales continue to drop, they hope to count on those newly addicted to nicotine—through vaping—to make up the shortfall.

Glossary

- **THC** (tetrahydrocannabinol) is the main psychoactive compound in marijuana that gives the high sensation.
- **Nicotine** is the highly addictive drug found in tobacco products and in most e-cigarettes.
- **Dopamine** is a chemical that is responsible for transmitting messages between brain cells. It plays an important role in learning, movement, and emotions—as well as addiction.

Discussion

1. LA Times business columnist Michael Hiltzik was told by a Juul spokesperson: “We have never marketed to youth and we never will.” Could this be true? If so, what would explain the images and style of their advertising? If not true, why say it to a business columnist?
2. The stated mission of Juul is “improve the lives of the world’s one billion adult smokers by eliminating cigarettes.” How does that square with being controlled by the world’s largest tobacco company?
3. If you have friends that Juul, do you think they are aware of the addiction risk?
4. Should high schoolers be allowed to buy and use e-cigarettes? Why or why not?
5. What is the role of government with respect to addictive substances? Should they be banned? Criminalized? Legalized? Regulated?