

*Educational Activity:*

*“Frankendrugs II”: A Second-Annual  
Rogue’s Gallery of Designer Drugs*

**INTRO**

**There’s a wise adage in psychopharmacology: “Any drug that has the power to do good has the power to do harm.”** Some current designer dugs were originally synthesized for study purposes, but they’ve found their way onto the street where they’re often doing incalculable harm to those seeking to get high. There was a glaring oversight in last year’s roundup. I neglected to include a drug—and drug delivery system—that has killed far more people than all the designer drugs covered last year combined: [1]

Hello, everyone, and welcome to our podcast! We’re coming to you from our studio at the Council on Alcoholism and Drug Abuse of Northwest Louisiana! I’m your host, CADA’s Director of Clinical Development, Dr. Kent Dean. Today, we’ll examine a new “rouge’s gallery” of designer dugs that have fallen into the wrong hands across the country. This information will be updated, so we’re dubbing this one the “second” report. You’ll be able to earn one contact hour of continuing education by completing the post-test after you listen to the program. We’ll give you instructions on how to do that at the end of the show.

**Nicotine (*nicotiana tabacum*) cigarettes.** Humans have been ingesting nicotine since earliest times. “How is nicotine a designer drug,” you ask? Well, for decades, tobacco companies have been altering their products to increase their addictiveness. From the Surgeon General’s report, “The Health Consequences of Smoking – 50 Years of Progress”: **“The evidence is sufficient to conclude that the increased risk of death and disease—specifically lung cancer—results from changes in the design and composition of cigarettes since the 1950s.”** [2]



From Truth Initiative.org: **“One way the tobacco industry has manipulated cigarettes to increase addictiveness is by loading cigarettes with chemical compounds.** Bronchodilators were added so that tobacco smoke can more easily enter the lungs. Sugars, flavors and menthol were increased to dull the harshness of smoke and make it easier to inhale. Ammonia was added so that nicotine travels to the brain faster.

**“Specifically, increasing the amount of nicotine was of paramount importance to tobacco company executives. Experts found that Big Tobacco companies genetically engineered their tobacco crops to contain two times the amount of nicotine and adjusted their cigarette design so that the nicotine delivered to smokers increased by 14.5 percent.** As Phillip Morris Principal Scientist W.L. Dunn said in 1972, ‘No one has ever become a cigarette smoker by smoking cigarettes without nicotine.’” [3]

**Cannabidiol (CBD)** From the Harvard Medical School Health Blog, “CBD: What We Know and What We Don’t”: **“While CBD is a component of marijuana (one of hundreds), by itself it does not cause a ‘high.’** According to a report from the World Health Organization, ‘In humans, CBD exhibits no effects indicative of any abuse or dependence potential. To date, there is no evidence of public health related problems associated with the use of pure CBD.’” [4]



**Although not a synthetic as such, CBD is being put to novel uses, such as treating anxiety, sleep problems, and chronic pain; however, its most telling effectiveness seems to come in its effect on seizure disorder.** The FDA allowed researchers to begin conducting trials of CBD in 2015. It seems to help most in treating childhood epilepsy, reducing—and in some cases—stopping seizures. A new CBD-based drug, Epidiolex, has marked positive effects on these children.

**E-Cigarettes (Electronic cigarettes)** The Centers for Disease Control and Prevention (CDC) reports: “E-cigarettes, devices that typically deliver nicotine, flavorings, and other additives to users through an inhaled aerosol, are a rapidly emerging trend, and are especially popular among youth and young adults. **Scientists are still learning more about how e-cigarettes affect health.**”



**However, there is already enough evidence to justify efforts to prevent e-cigarette use by young people.** We know that the vapor from e-cigarettes is harmful because it contains harmful ingredients, including nicotine and other substances. **Nicotine exposure during adolescence can cause addiction and can harm the developing brain ... development which continues into the early to mid-20s ...** Because most tobacco use starts during adolescence, actions to protect our nation's young people from a lifetime of nicotine addiction are critical.

"E-cigarettes are a 2.5 billion dollar business in the U.S. As of 2014, the e-cigarette industry spent \$125 million a year to advertise their products." **Even so, CDC says that "youth are more likely than adults to use e-cigarettes"** and that "In 2016, more than 2 million U.S. middle and high school students used e-cigarettes in the past 30 days, including 4.3% of middle school students and 11.3% of high school students." E-cigarette use is now outpacing conventional cigarette use among U.S. high school students. [5]

#### **"Juuling" (from Juul Laboratories)**

**The Juul is a nicotine vape that looks like a flash drive, and it can be charged in a USB port. It's available legally only to people 18 and older.** Each cartridge contains about 200 puffs, the equivalent nicotine content to a pack of cigarettes.



Here's an excerpt from Time Magazine: **"Ashley Gould, chief administrative officer at Juul Labs, says that the product was created by two former smokers specifically and solely to help adult smokers quit,** and that the company has numerous anti-youth-use initiatives in place because 'we really don't want kids using our product.'

"Gould also notes that Juul uses age authentication systems to sell only to adults 21 and older online, though most of its sales take place in retail stores, where state laws may allow anyone 18 and older to purchase the devices.

**"The design, she adds, was not meant to make the device easier to hide. 'It was absolutely not made to look like a USB port. It was absolutely not made to look discreet, for kids to hide them in school,' Gould says. 'It was made to not look like a cigarette, because when smokers stop they don't want to be reminded of cigarettes.'"** [6]

That protestation aside, "juuling" is a growing concern among educators and parents.

## OUTRO

That's our podcast for today. If you'd like one hour of CE credit for \$10.00, you can go to the School's website, [cadaschool.com](http://cadaschool.com), click on "online courses," and just follow the instructions. Once you pass the post-test, which includes evaluation questions, you'll be able to download and print your certificate of completion. Be sure and stay in touch on Facebook! See you next time!

## Non-Broadcast Note and References

[1] CDC Fact Sheet: **"Cigarette smoking is responsible for more than 480,000 deaths per year in the United States, including more than 41,000 deaths resulting from secondhand smoke exposure. This is about one in five deaths annually, or 1,300 deaths every day. On average, smokers die 10 years earlier than nonsmokers."** Atlanta: Centers for Disease Control and Prevention, 2018.  
[https://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/fast\\_facts/index.htm](https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/index.htm) Updated February 20, 2018.

[2] The Health Consequences of Smoking—50 Years of Progress. Washington, DC: Surgeon General.gov  
<https://www.surgeongeneral.gov/library/reports/50-years-of-progress/index.html>, 2014.

[3] How Big Tobacco Made Cigarettes More Addictive. Washington, DC, Truthinitiative.org. January 23, 2018.  
<https://truthinitiative.org/news/how-big-tobacco-made-cigarettes-more-addictive>

[4] Grinspoon P: CBD: What We Know and What We Don't. Cambridge, MA: Harvard Medical School Blog, August 24, 2018.  
<https://www.health.harvard.edu/blog/cannabidiol-cbd-what-we-know-and-what-we-dont-2018082414476>

[5] E-Cigarettes: What's the Bottom Line? Atlanta: Centers for Disease Control and Prevention, November 29, 2018.  
[https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/about-e-cigarettes.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html)

[6] Ducharme J: Teens Are "Juuling" at School. Here's What That Means. Time Magazine, March 27, 2018.  
<http://time.com/5211536/what-is-juuling/>