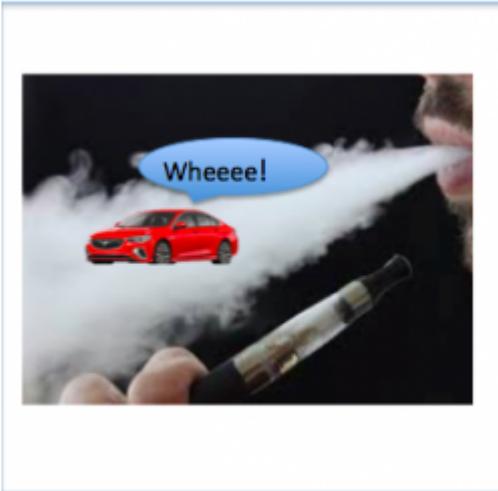


# Put That In Your Pipe And (Don't) Smoke It! Fentanyl Now In Vaping Cartridges



By Josh Bloom — November 6, 2019



No - the Buick makes no sense. Unless you read the article. Then it may or may not. Photo: Wikipedia Commons [1]

US drug policy is just plain nuts. Nowhere is this more obvious than when one compares how opioids and marijuana products are "regulated." Marijuana now gets a free pass while the DEA is kicking in the doors of physicians who prescribe one extra Vicodin pill.

And, given the popularity of vaping it is not surprising that marijuana chemicals **(1)** are being vaped like crazy, despite the fact that these chemicals and/or additives have done serious, sometimes fatal, lung damage. To make matters (much) worse, fentanyl is now showing up in vaping solutions.

What a mess.



*Seriously? Yep. A Walgreens Head Shop in Albuquerque, NM.*

Without commenting on the fact that just about anything related to cannabis gets an undeserved free ride...

... Hold on. Changed my mind, I think I'll comment after all...

**UH OH - IT'S SNOTTY COMMENT TIME!**



*ABCD... CBD - good for what ails you. And your car. Photo: [Huffington Post](#) [2]*

We are now squarely in the middle of the "Wild West" era of vaping where just about anything that can be stuffed into a vaping device is fair game. Substances that can be abbreviated with **three letters** are especially popular: CBD, THC, [LSD](#) [3], DMT (**2**), PEZ.



*Pez mouth. Not only did this moron allegedly vape Pez and ruin his teeth, but he also Crazy Glued his hands to his face. (3)*

Let's add another triplet: R.I.P.

### **JUST WHAT WE DON'T NEED - MORE FENTANYL**

Now, people are vaping, intentionally or otherwise, fentanyl. Pure crazy. It would be almost impossible to come up with a more efficient way to kill yourself. If fentanyl in vaping devices becomes commonplace it will make the [37 vaping deaths](#) <sup>[4]</sup> (5) recently reported by the CDC seem like a mild case of hay fever. And it's already started.

*"We are starting to see fentanyl make its way into the vaping industry, and we see that we are definitely going to see the death counts go up... [t]his is extremely concerning."*

*Brian Besser, district agent for the DEA in Utah.*

It sure is.

### **FENTANYL + VAPING = BAD STUFF HAPPENS**

There are some chemical properties of fentanyl that make it an especially unwelcome component in a vaping device.

- Its [melting point](#) <sup>[5]</sup> (83°C) is low enough that any solid fentanyl in the cartridge will become a viscous oil, which may or may not dissolve in the cartridge fluids.
- Its [boiling point](#) <sup>[5]</sup> (460°C) is quite high, but as I discussed in [Can Chemistry Explain 'Vaping Lung?'](#) <sup>[6]</sup>, the water that is vaporized from the cartridge will help "carry over" the fentanyl. And it won't take much to be deadly: A lethal dose of fentanyl is 1-2 mg.

***Chemist's prediction: Fentanyl in a heated vaping cartridge will go flying out of there and into your lungs at the speed of light.***

This conclusion is based upon what happened with THC, CBD oil, and vitamin E acetate. Note the similarities – liquids with high boiling points will co-distill with water at a substantially lower temperature and end up pooling in lung tissue.

- THC boiling point: 200° [7]C
- CBD oil: 464° [8]C
- Vitamin E acetate: >300°C [9]

Furthermore, a paper in PLoS One [10] reported that the temperature of heating coils in vaping devices ranged from 110°C to 1,008 (?!)°C depending upon the conditions under which they were studied. At a temperature of 1,008°C, a ##^%#@# Buick would distill out of there, let alone fentanyl. (For a frame of reference, JUUL, hardly the epitome of corporate ethics at this time, at least keeps control of the temperature of its coils – 215°C [11].)



*Manufacturing standards, or the lack thereof, of vaping cartridges. Photo: Wikipedia Commons [12]*

## TAKE HOME MESSAGE

1. Vaping, when used correctly, is a valuable harm reduction tool to help smokers stop smoking.
2. It should not be used by young teens, even though it's "cool," and JUUL admitted to targeting just this group. Sleazeballs.
3. Far worse, if you buy a liquid off the street or from a store with 5-foot bongos in the window and fetid incense spewing out the door and vape this stuff you are putting your lungs and life at risk.
4. If you happened to get a fatal puff of fentanyl you probably won't be able to read this, that is, unless ACSH, always at the forefront of innovation in communication, succeeds in a new project. It's being beta-tested as we speak.



**Today's Dispatch For Dead People**

## NOTES:

(1) Although CBD and THC have very different chemical and psychotropic properties, structurally they are closely related – so much so that it takes one simple biochemical transformation by the plant to convert CBD to THC. This can also be done in a lab. (See [CBD And THC - The Only Difference Is One Chemical Bond](#) <sup>[13]</sup>)

(2) DMT, short for N,N-Dimethyltryptamine, is a hallucinogenic indole alkaloid. When taken orally it is metabolized, which is why people typically inhale it rather than swallowing it. Now some are vaping it. The drug passes rapidly from the lungs into the blood and then you start seeing Shirley Temple driving an M4A3E8 76 mm armed Sherman tank across Lake Erie with a parakeet on her head.

(3) Just like medical advice from the Dr. Oz Show, this is a joke.

(4) See [Can Chemistry Explain 'Vaping Lung?'](#) <sup>[6]</sup>

---

COPYRIGHT © 1978-2016 BY THE AMERICAN COUNCIL ON SCIENCE AND HEALTH

---

**Source URL:** <https://www.acsh.org/news/2019/11/06/put-your-pipe-and-dont-smoke-it-fentanyl-now-vaping-cartridges-14376>

### Links

[1] <http://commons.wikimedia.org/wiki/File:Vaping.jpg>

[2] [https://www.huffingtonpost.ca/2012/09/14/drunk-baby-photo-vancouver\\_n\\_1885670.html](https://www.huffingtonpost.ca/2012/09/14/drunk-baby-photo-vancouver_n_1885670.html)

[3] <https://www.ejuicedirect.com/products/product-page-sample>

[4] [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/severe-lung-disease.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html)

[5] [http://www.epa.gov/sites/production/files/2018-07/documents/fentanyl\\_fact\\_sheet\\_ver\\_7-26-18.pdf](http://www.epa.gov/sites/production/files/2018-07/documents/fentanyl_fact_sheet_ver_7-26-18.pdf)

[6] <https://www.acsh.org/news/2019/09/10/can-chemistry-explain-vaping-lung-14277>

[7] [http://www.chemspider.com/Chemical-Structure.118751.html?rid=23e31f23-6659-4a82-9187-1647dbc2d351&page\\_num=0](http://www.chemspider.com/Chemical-Structure.118751.html?rid=23e31f23-6659-4a82-9187-1647dbc2d351&page_num=0)

[8] <http://www.chemspider.com/Chemical-Structure.24547.html>

[9] [https://www.thomassci.com/Chemicals-E-through-P-NEW-Organic-Synthesis/\\_/Vitamin-E-acetate-971?q=Vitamin%20E%20Acetate](https://www.thomassci.com/Chemicals-E-through-P-NEW-Organic-Synthesis/_/Vitamin-E-acetate-971?q=Vitamin%20E%20Acetate)

[10] <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC5908153/>

[11]

[https://www.researchgate.net/publication/331041011\\_Characteristics\\_and\\_toxicant\\_emissions\\_of\\_JUUL\\_electronic\\_cig](https://www.researchgate.net/publication/331041011_Characteristics_and_toxicant_emissions_of_JUUL_electronic_cig)

[12] <https://commons.wikimedia.org/wiki/File:Vaping.jpg>

[13] <https://www.acsh.org/news/2019/04/08/cbd-and-thc-only-difference-one-chemical-bond-13937>