

KRATOM

- Tropical tree found in Southeast Asia – people chew on the leaves, which gives a stimulant effect.
- Mitragynine and 7-Hydroxymitragynine(7-OH) affects the dopamine and opioid receptors in the brain.
- 7-Hydroxymitragynine (7-OH) makes up 2% of alkaloids in Kratom leaves.
- Drinks, pills, powder with semi-synthetic or synthetic concentrates of 7-OH levels up to 98%.
- At high doses, it can reportedly cause seizures, psychosis, liver damage, and difficulty breathing, or death.



Exclusive

Her Son Took Kratom for 6 Weeks. It Killed Him: 'We Had No Way of Knowing It Was Addictive' (Exclusive)

Patti Wheeler investigates the supplement kratom, the industry surrounding it and the people who have died from it in the film 'Kratom: Side Effects May Include'

By [Cara Lynn Shultz](#) | Published on September 17, 2025 11:00AM EDT

FDA, doctors say kratom can be deadly

Why you should care: The FDA warns against using kratom because of its potentially deadly side effects. Doctors said the herbal supplement can also cause other serious health issues.

"[It can cause] depressed breathing, seizures, kidney and muscle injury," said Dr. Ryan Fuchs, an emergency medicine physician at Hennepin Healthcare. "It can also cause abnormal heart rhythms."

Woman says kratom supplement killed sister: 'It should be against the law'

By Mike Manzoni | Updated January 28, 2025 9:10am CST | Health | FOX 9 | [↗](#)

Federal lawsuit claims MIT 45 has 'same addictive potential as morphine'

What the lawsuit claims: A class action filed in a federal court in California in March 2024 claims that MIT 45 products have the "same addictive potential as morphine."

In the lawsuit, the plaintiffs claim that MIT 45 "relies on its products' innocuous packaging and the public's limited knowledge about kratom and its pharmacology to get users addicted, while reaping profits along the way."



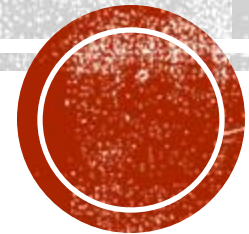
PART 1: Hundreds died using kratom in Florida. It was touted as safe.

By Helen Freund, Sam Ogozalek, Langston Taylor and Hannah Critchfield | Dec. 7, 2023



**WHY DO SMOKE SHOPS
ONLY SELL KRATOM?**

UPDATES WITH NICOTINE AND CANNABIS





GENERATIONS OF E-CIGARETTES & VAPE PENS



CIG-A-LIKE (2007)

E-Cigarettes came onto the market around 2007. Most looked very similar to a traditional cigarette.

0mg/mL - 6mg/mL



MODS/TANKS (2012)

Large size, modifiable e-cigarettes allow for more aerosol, nicotine, and other chemicals to be breathed into the lungs at a faster rate. E-juice and e-liquid often put in externally.

0mg/mL - 36mg/mL



SINGLE-USE/DISPOSABLE* (2018-NOW)

These e-cigarettes are currently the most popular and range in sizes and color. They typically contain high nicotine content and are highly addictive.

0mg/mL - 50mg/mL



VAPE PENS (2009)

These have batteries that can reach higher temperatures, have refillable e-liquid cartridges, and allow users to regulate the frequency of inhalations.

0mg/mL - 18mg/mL



POD-BASED (2015-2017)

These e-cigarettes are shaped like USBs or different shapes, and contains pods with higher amounts of nicotine than previous generations.

0mg/mL - 50mg/mL

**Disposable vapes contain harmful chemicals and cannot be thrown away normally and should be disposed in proper manner.*



HEALTH

TOBACCO COMPANIES MAY HAVE FOUND A WAY TO MAKE VAPES MORE ADDICTIVE

Kids might get hooked on new vapes that display animations with each puff.

By Nicholas Florko

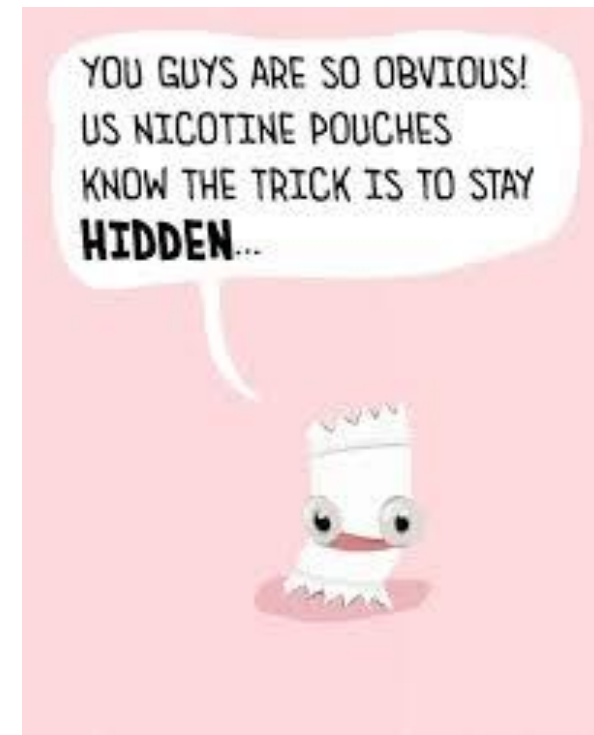
5th Generation of E-cigarettes “Smart Vapes” – disposable e-cigarette that has a screen that can display a simple animation or play games. Has “Boost, Pulse, or Beast” mode which delivers a stronger hit of flavor and nicotine.

3 distinct addictive properties – nicotine, flavors, and screens.



NICOTINE POUCHES

- Contains nicotine, flavoring, and fillers.
- Popular products: Zyn, on!, Velo, Rogue, Juice Heads, etc.
- Comes in wide range of flavors from apple to cheesecake.
- Comes in wide range of nicotine strengths. Most deliver more nicotine than a smoker gets from a cigarette.
- Most people use nicotine pouches when they can't smoke or vape, which builds on their nicotine addiction.
- Nicotine pouches do not fall under the same marketing regulations as cigarettes.



Scoring Tickets to Noah Kahan's Denver Show Involved Spending Thousands of Dollars on Zyn

BY LAUREN BOISVERT | MARCH 5, 2025 2:23 PM

On April 19, [Noah Kahan](#) will play an intimate show at Denver's Summit Music Hall, but unless you have a financially draining nicotine habit, you might not have known. That's because the show is sponsored by the nicotine pouch brand Zyn. To score tickets, fans had to rack up 3,000 points as part of Zyn's rewards member program. According to a report from [Westword](#), the tickets sold out within a week.

Furthermore, the monetary equivalent of 3,000 Zyn points is around \$2,000, seeing as the tins of pouches cost around \$10 each. On each tin, there's a QR code to attain points, with each scan earning users 15 points. To earn the necessary 3,000 points, that's around 200 tins. A lot of Zyn to buy in one week if you didn't have points already squirreled away.



Cannabis

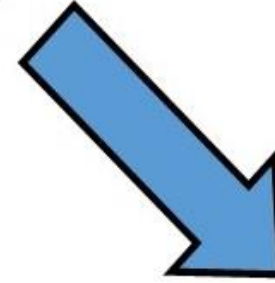
plant with 500 chemical compounds
and 100's of cannabinoids.



Hemp

Majority of cannabinoids is
Cannabidiol (CBD), which is psychoactive
and with .03% or less
Delta-9 tetrahydrocannabinol (THC),
which is psychoactive.

High CBD, Low THC.



Marijuana

Majority of psychoactive cannabinoids is
Delta-9 tetrahydrocannabinol (THC).

High THC, Low CBD.

WHAT ARE CANNABINOIDS?

- Cannabinoids – biological compounds that bind to cannabinoid receptors (CB1 and CB2 in humans).
- Phytocannabinoids derived naturally from plants.
 - 100s of cannabinoids.
 - Most common Delta 9 tetrahydrocannabinol (THC) and Cannabidiol (CBD).
- Endocannabinoids – produced by the body.
 - The human endocannabinoid system is responsible for partial regulation of cognitive and emotional processes in the human central nervous system such as behavior, mood disorders, and neurologic disorders such as epilepsy.
- Synthetic Cannabinoids – produced synthetically, by chemically changing CBD or THC.
 - More cost effective to make many cannabinoids found in cannabis naturally at low percentages, by changing CBD and THC into other cannabinoids.
 - Delta-8, Delta-10, HHC, THCA, THCV, etc.
 - THC-O is not naturally found in cannabis, completely synthetic. Thought to be 3x or more stronger than THC.



RISE IN THC CONTENT

- 1960s to 1980s – Cannabis had a THC level of 2%.
- 1990s – THC level of 4%.
- 2017 – THC level of 17-28%
- 2020s – THC level up to mid 30%.
- THC Concentrates: oil, shatter, dabs, wax, etc. can have upwards of 95%.



“There is absolutely no research that indicates this level of THC is beneficial for any medical condition. But delivering it at a super high, concentrated amount, it’s kind of like the difference between having one Bud Light and then, like, five shots of tequila. The increased potency makes them potentially more dangerous and more likely to result in addiction.”



CAN MARIJUANA BE ADDICTIVE?

Definition of Addiction –
compulsive use of a drug, despite
its harmful consequences.

Table DSM 5 criteria for cannabis use disorder severity
• Used for longer periods in larger amounts
• Unable to cut down use
• Excessive time spent acquiring, using and recovering from cannabis use
• Strong urge to use cannabis
• Problems fulfilling work, school, and family obligations due to cannabis use
• Continued use despite persistent interpersonal problems caused by cannabis use
• Decrease in important social and recreational activities because of cannabis use
• Repeated use in physically dangerous situations
• Ongoing use despite worsening physical and psychological problems that are likely to have been caused by cannabis
• Have to use increased amount for the same desired effect
•Withdrawal reaction upon cessation

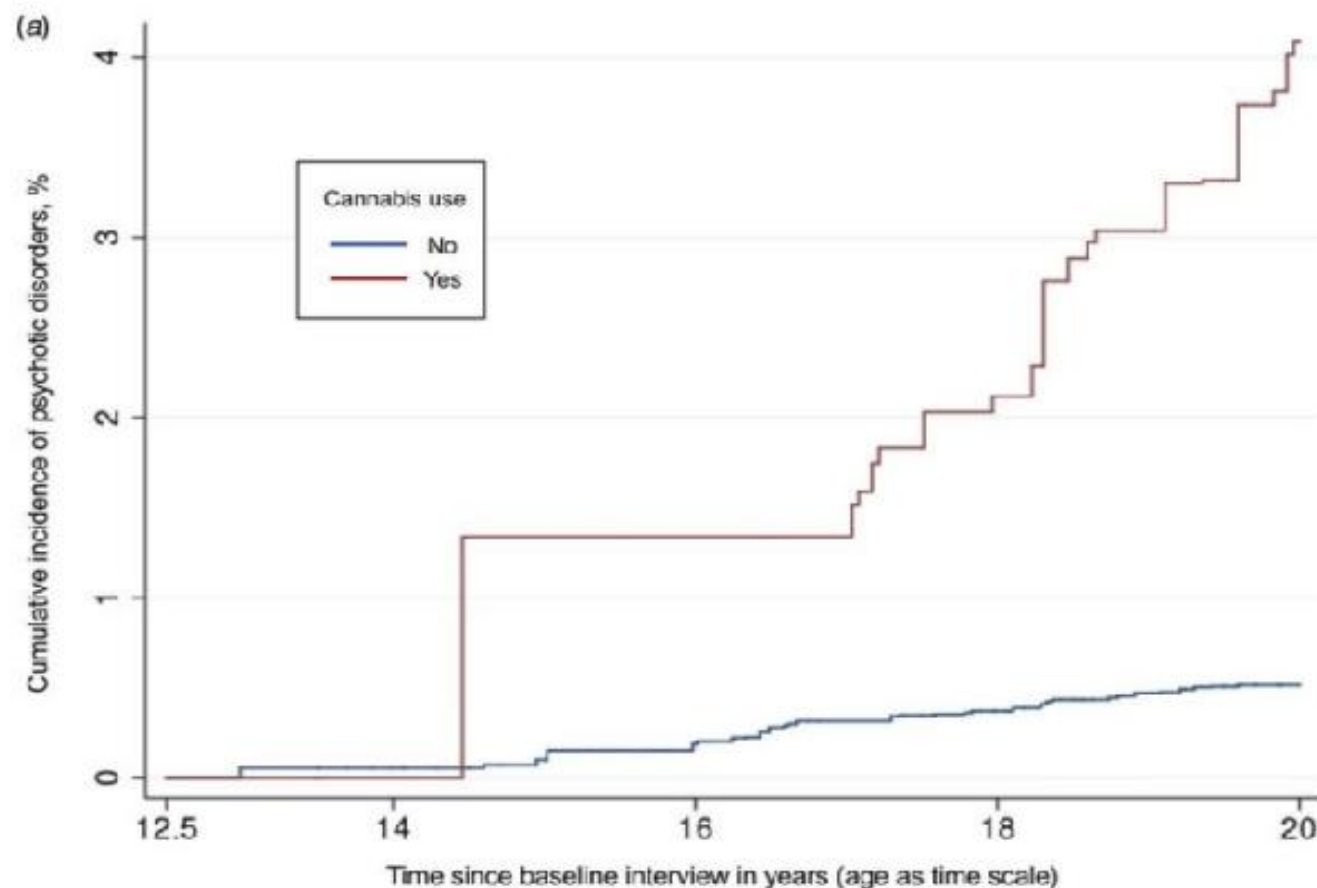
Mild: 2–3 symptoms; moderate: 4-5 symptoms; severe: ≥6 symptoms.

Age-dependent association of cannabis use with risk of psychotic disorder

André J. McDonald^{1,2,3,4,5} , Paul Kurdyak^{2,6,7,8}, Jürgen Rehm^{1,2,6,8,9,10,11,12}, Michael Roerecke^{1,2} and Susan J. Bondy¹

Discussion

We found that cannabis use, compared to no cannabis use, was associated with over 11 times (95% CI 4.6–27.3) greater risk of psychotic disorder at any point during adolescence (ages 12–19 years). We found no evidence of association between cannabis use and risk of psychotic disorder during young adulthood



HEALTH EFFECTS OF EARLY USE OF MARIJUANA

- 1 in 6 teens who use will become addicted.
- Has negative effects on attention, motivation, memory, and learning, esp. in people who use regularly.
- High doses can bring on a panic attack or acute psychosis, which is thinking that is detached from reality, sometimes including hallucinations. Risk of psychosis is higher in youth than adults. Some studies have linked cannabis to depression or anxiety.
- Secondhand smoke from cannabis contains many of the same chemicals and carcinogens as tobacco smoke, which damage lungs and heart. – CDC



CANNABIS HYPEREMESIS SYNDROME



Drug and Alcohol Dependence

Volume 246, 1 May 2023, 109853



“I still partly think this is bullshit”: A qualitative analysis of cannabinoid hyperemesis syndrome perceptions among people with chronic cannabis use and cyclic vomiting

Alexandra B. Collins ^a  , Francesca

I mean people have brought it [CHS] up to me and I've done my own research, just as far as like what the symptoms are and what people who I guess have been diagnosed with that, how they identify with their symptoms. And I just honestly try to compare it to like how I've felt when I've gotten sick. And I do see some similarities, but I do also see differences as well. So, from my research, I do understand why one would think that that's what I'm going through, but I'm not sure if it's quite it. ['Tamara,' a 30-year-old Black woman].

I don't even know the full extent myself. So I'm still looking at YouTube videos and Google information...like, hell, I still partly think that this is bullshit, but I know it's not. So you know what I mean? I mean like, I can't believe I have this other part of me. Well, you know, the shoe fits and you've been in the hospital four times, so something's gotta give, you know?"



QUESTIONS / COMMENTS

