



[www.countertools.org](http://www.countertools.org)

# Healthy POS Webinar Series: Derived Psychoactive Cannabis Products

**April 3, 2024**



# About Counter Tools

**Counter Tools is a non-profit organization. Our vision is a nation where healthy living is equitable across communities and every person has access to healthful choices.**



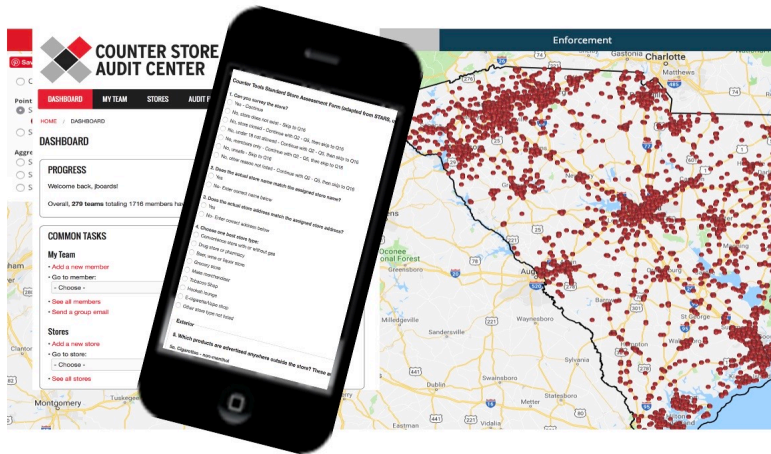


# What We Do

We work with our partners to advance place-based public health and health equity through policy, systems and environmental changes.

- Consulting
- Training
- Storytelling

- Providing Tech Tools
- Supporting Advocacy Efforts
- Disseminating Science and Best Practices

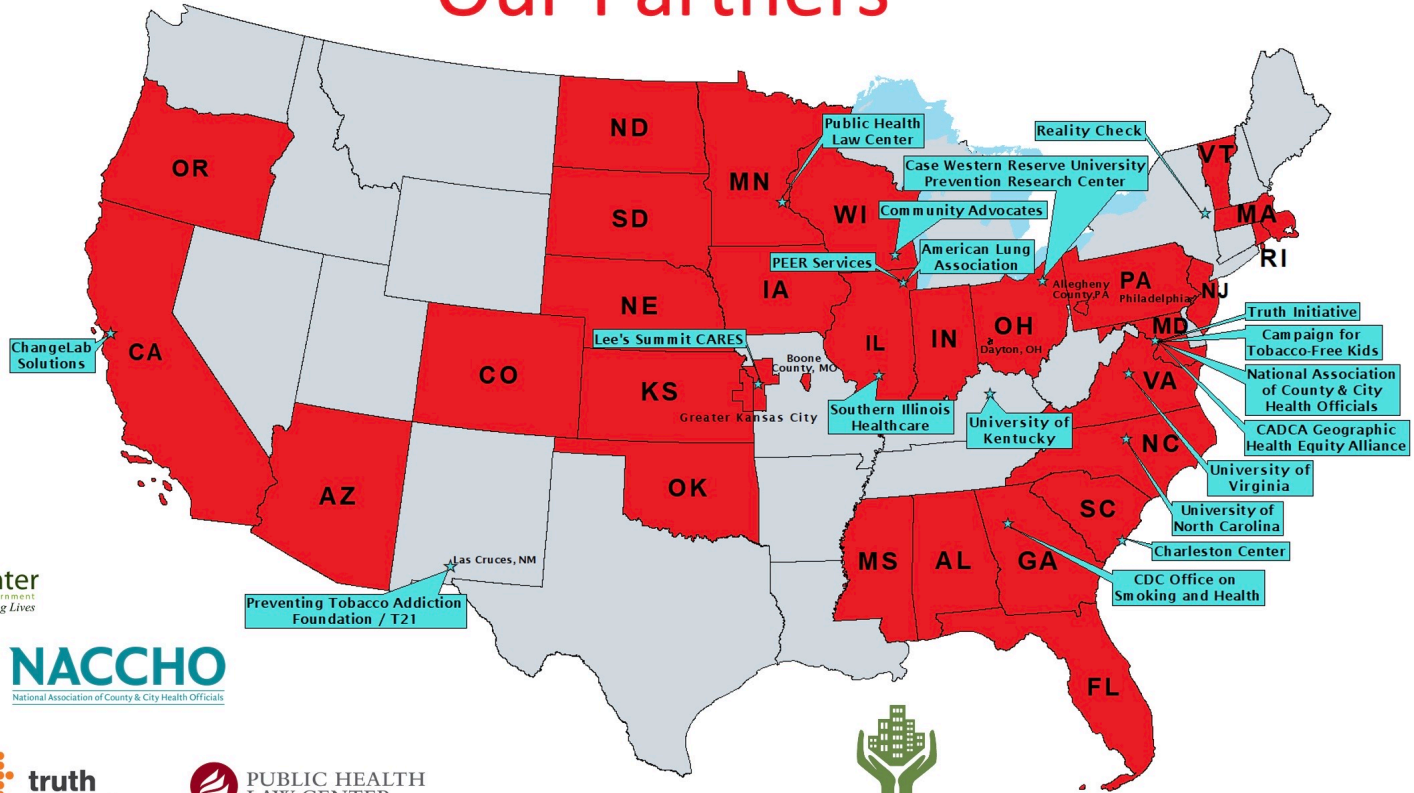


[www.countertools.org](http://www.countertools.org)

[www.countertobacco.org](http://www.countertobacco.org)



# Our Partners



# Healthy Point of Sale Webinar: Derived Psychoactive Cannabis Products

Matthew Rossheim, PhD, MPH, CPH  
University of North Texas Health Science Center  
School of Public Health

Counter Tools  
April 3, 2024



# Conflicts of Interest

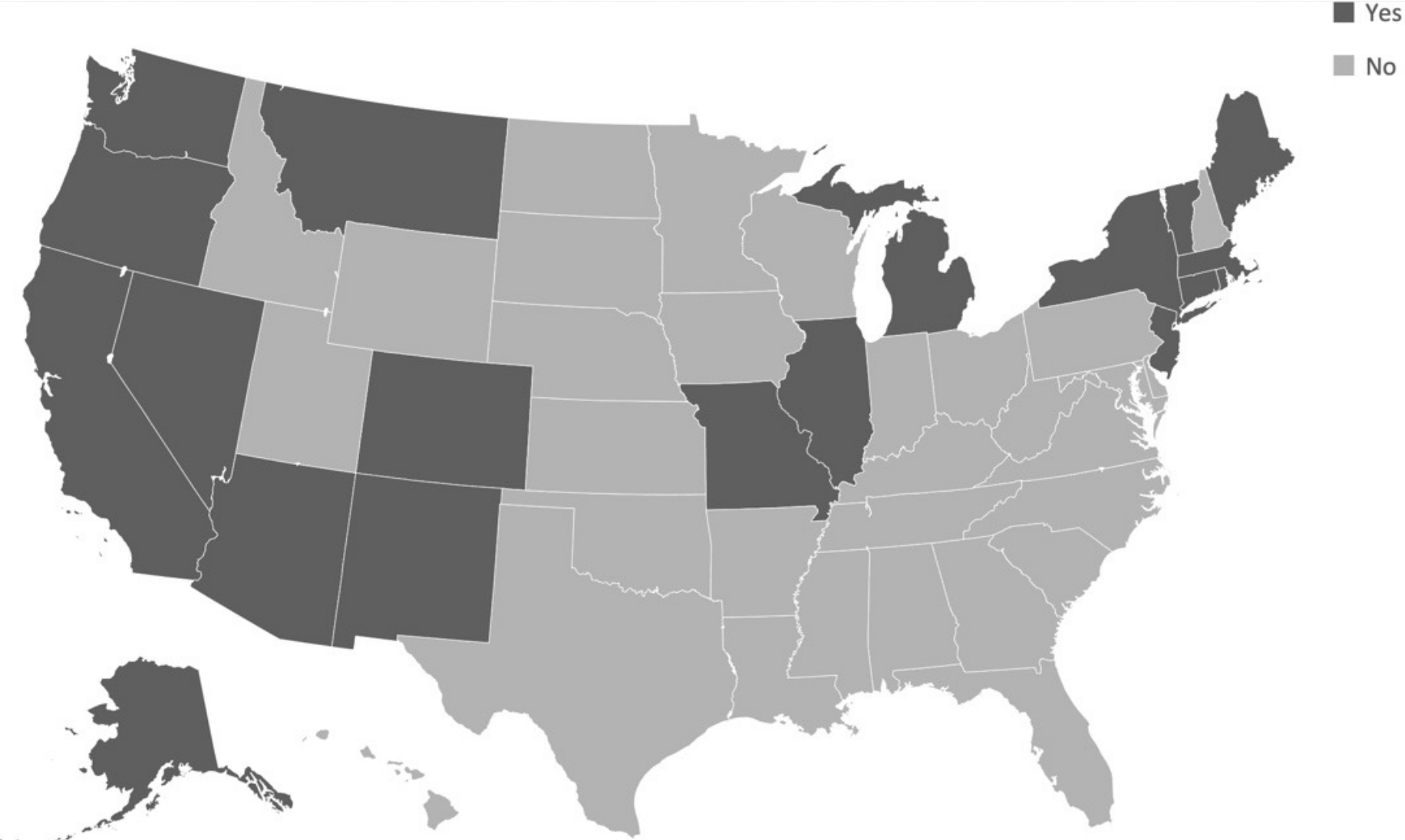
- None



# Can you buy intoxicating cannabis products in stores in your state?

- Without a medical cannabis card
- Can you walk into a store in your state and purchase
- A cannabis product that can get you “high”

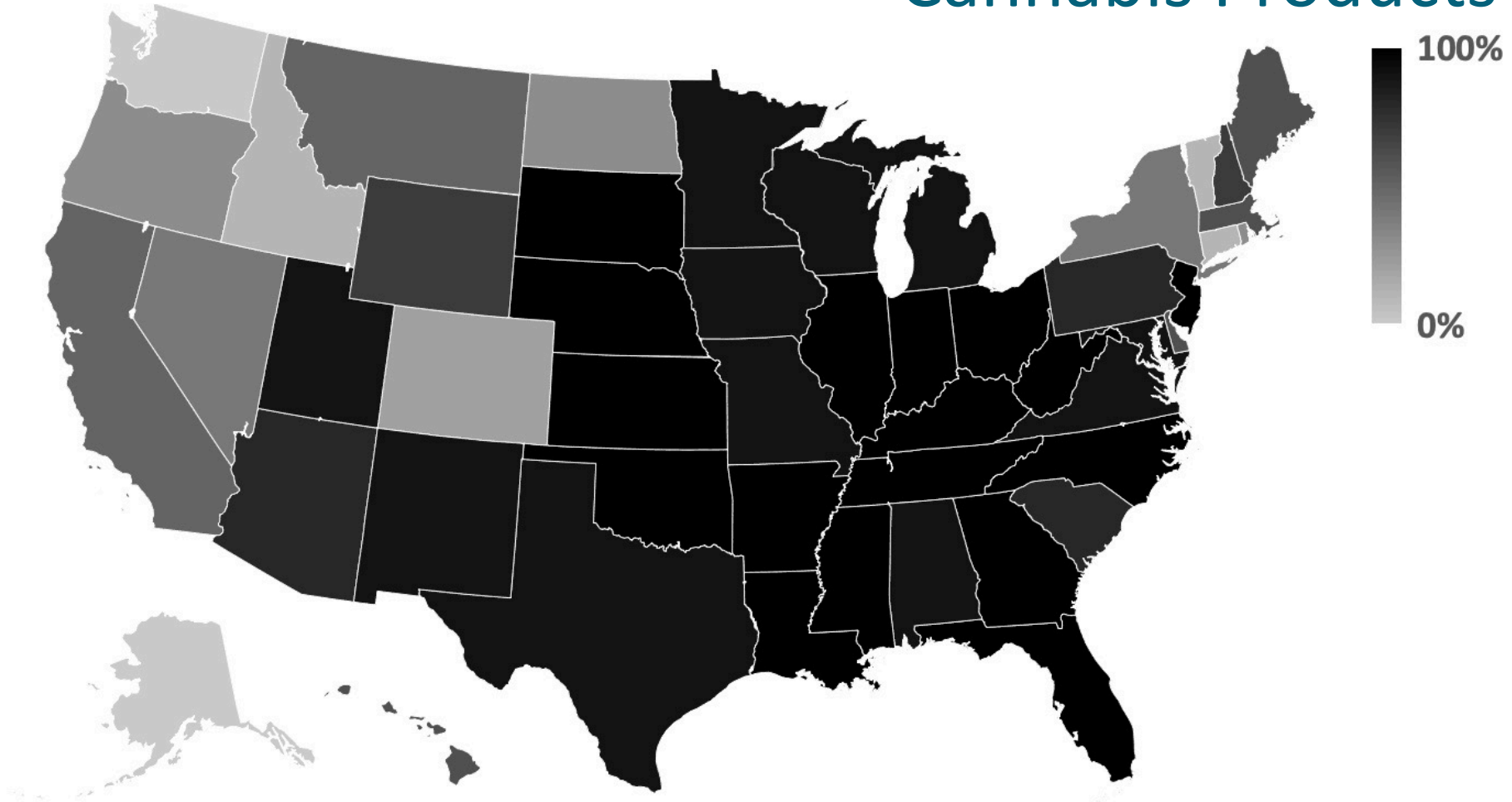
# Retail Cannabis Legal + Dispensaries



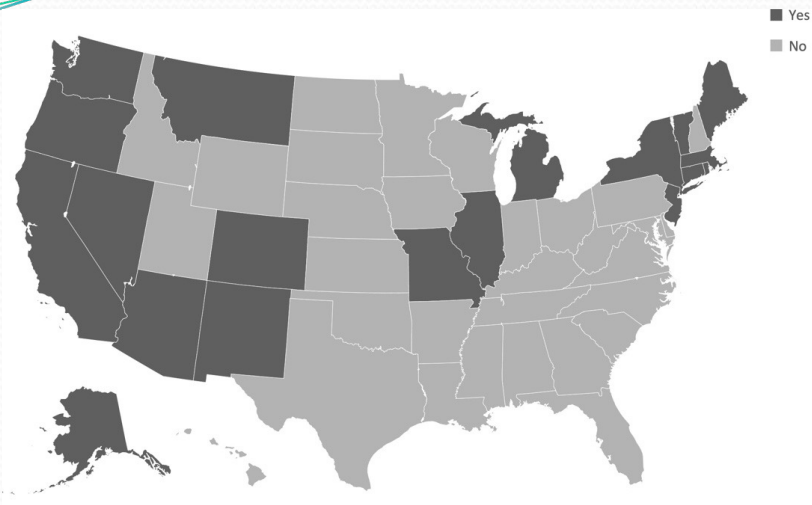


# Vape Shops, November – December 2023:

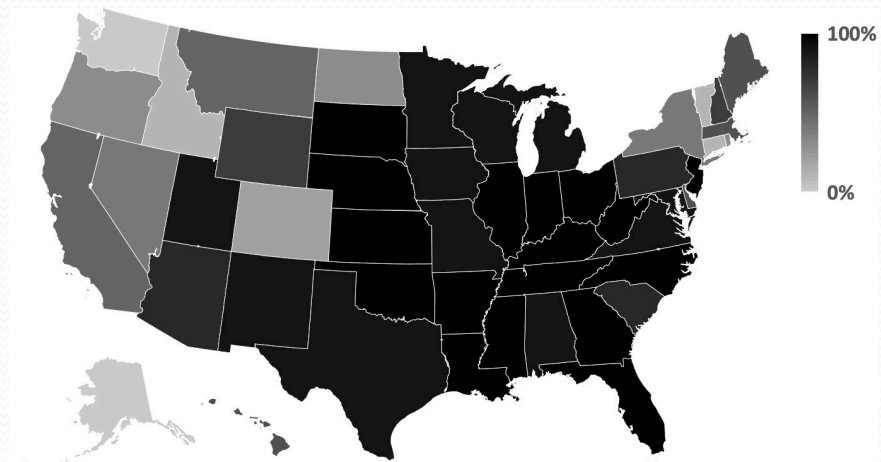
## Sell Intoxicating Cannabis Products





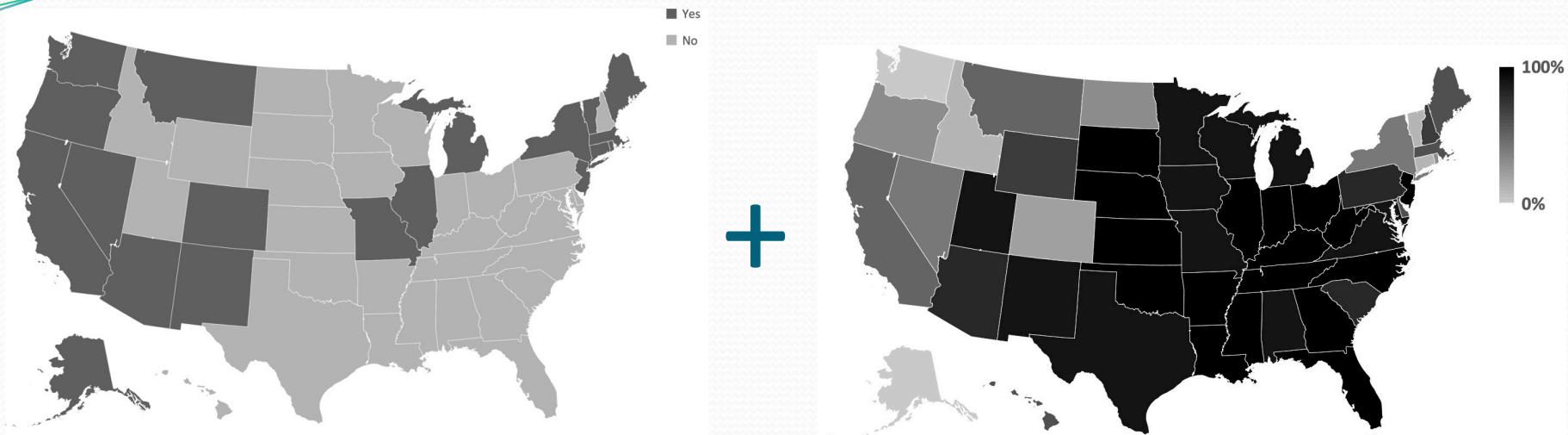


+



Retail  
Cannabis  
Legal +  
Dispensaries

Vape Shops that  
Sell Intoxicating  
Cannabis  
Products



= intoxicating cannabis products sold

In all **50 States**

Washington D.C.

& Puerto Rico



# Research Expertise

- Substances frequently used by young people
  - Supersized alcopops (alcohol)
  - E-cigarettes (tobacco)
  - Delta-8 THC (cannabis)
- Especially their **marketing** to help inform related laws curbing use
  
- What do I mean by marketing?
- Why does marketing matter?

# The 4 P's of Marketing

- Product
  - Specific types or attributes
    - modality, brand
- Price
  - Retail price including tax
- Promotion
  - Advertising
- Place
  - Where product is sold

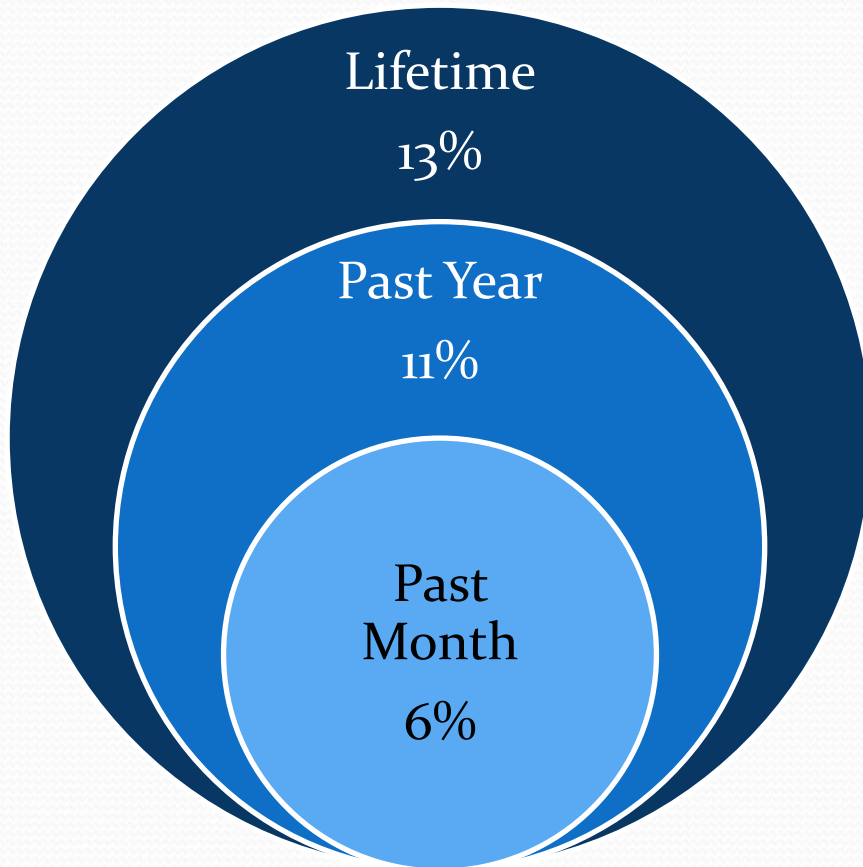


# Why Does Marketing Matter?

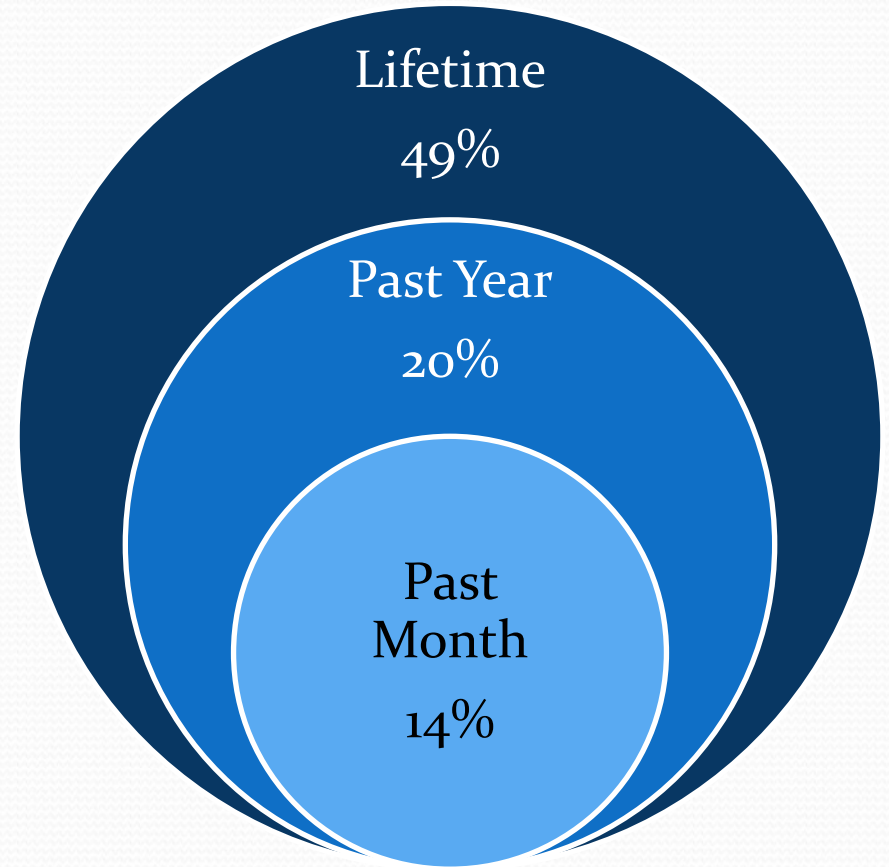
- Can shape social norms and perceptions
  - Make substances more desirable, acceptable, accessible
- Price and availability are major determinants of use
  - Marketing plays a crucial role in prevention
    - Particularly among young people
- Important policy levers
  - Retail availability
  - Pricing strategies
  - Restricting advertising to youth
    - Best Practices and Best Buys

# Cannabis Use Prevalence: 2021 NSDUH data

12-17 years



18+ years



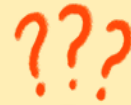
# Potential Risks of Self-Medication With Marijuana



psychological dependence



increased need



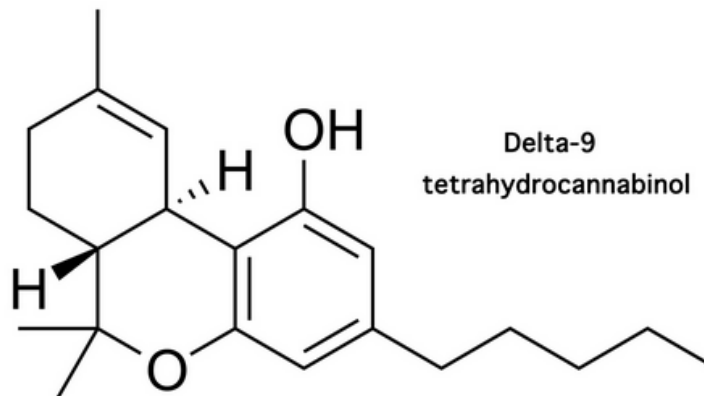
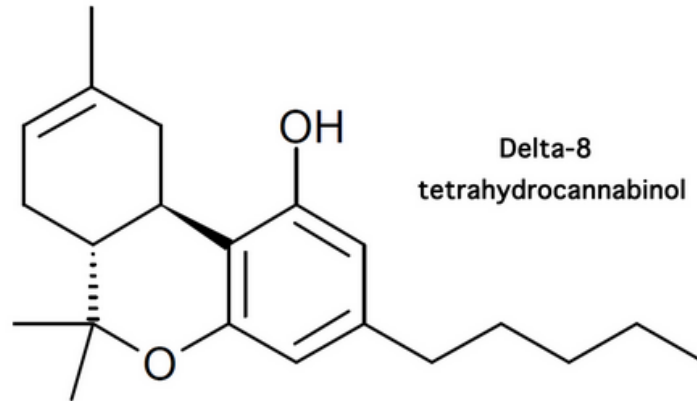
long-term memory loss



higher levels of  
psychiatric disorders



# Delta-8 THC vs. Delta-9 THC





# Delta-8 THC: Public Health Concerns

- Scoping review (103 documents)
  - Most “research” was
    - Largely anecdotal
    - Not peer-reviewed
    - Did not involve human subjects
  - Anecdotally,  $\Delta$ -8 THC less potent than  $\Delta$ -9 THC
  - No federal regulations on synthesis
    - Resulting in products being contaminated and/or yielding inconsistent effects
  - No federal age restriction for purchase/possession
  - Raises concerns: safety standards/quality control, dose, marketing, minimum age

# Delta-8 THC: Public Health Concerns

Jan 1, 2021-Feb 28, 2022

- 2,362 calls to U.S. Poison Control Centers
  - 41% involved pediatric patients younger than 18

In addition to injuries and poisonings...

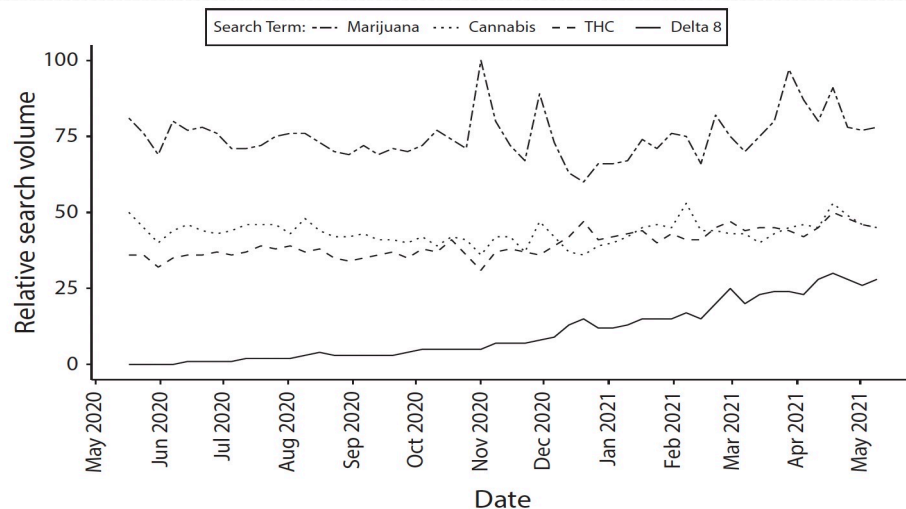
- Delta-8 THC use associated with acute psychiatric, respiratory, thoracic, mediastinal, and gastrointestinal (lung, heart, and chest) disorders

- <https://www.fda.gov/consumers/consumer-updates/5-things-know-about-delta-8-tetrahydrocannabinol-delta-8-thc>
- Leas, E.C., Harati, R.M., Satybaldiyeva, N., Morales, N.E., Huffaker, S.L., Mejorado, T., & Grant, I. (2023). Self-reported adverse events associated with  $\Delta$ 8-Tetrahydrocannabinol (Delta-8-THC) Use. *Journal of Cannabis Research*, 5(15). doi: 10.1186/s42238-023-00191-y



# Delta-8 THC: Online Indicators

- Before data on use prevalence...
- Google searches as a proxy of interest/potential use
- Interest in Delta-8 THC increased starting June 2020
- By May 2021, for every 3 searches for “marijuana” there was 1 search for Delta-8 THC (35% search volume)
- Greater search volume for  $\Delta$ -8 THC in states where recreational cannabis was illegal



**FIGURE 1—** The Relative Search Volume of Delta-8 THC Compared With Common Cannabis-Related Search Terms: United States, May 17, 2020–May 9, 2021

Note. Before May 2020, the relative search volumes for delta-8 THC were consistently < 1.



# Delta-8 THC: Online Indicators

- Global rate of Delta-8 THC searches increased by 257% from 2019 to 2020 and 705% from 2020 to 2021
  - In 2021, the rate of Delta-8 THC searches in the U.S. was >10 times higher rates in other countries
- There were 22.3 million Delta-8 THC searches in the U.S. in the first 8 months of 2021 alone
  - Interest in Delta-8-THC greater in US states with stricter cannabis use policies

# Delta-8 THC: Online Indicators

Natural language processing on Twitter data (41,828 tweets)

Examine discussions using #Delta8 (Jan 1, 2020 to Sept 26, 2021)

## 1- Discussions exhibited a sustained increase in prevalence

- Original tweets rose from 9 to 149/day
  - This largely followed a high-engagement retailer promotion in June 2021

## 2- Communication about Delta-8 THC was mostly positive

- Sentiment classification support mostly positive communication: more “positive” (31%) and “trust” (14%) categorization, than “negative” classification (8%)

## 3- Online retailers playing a dominant role

- Appears to be a growing presence of retailer marketing and sales on social media



# Delta-8 THC: Online Indicators

Qualitative analysis 47 YouTube videos

- 3 had age restrictions; 23 promoted use, 20 discouraged use
- Reasons given for using Delta-8 THC included **legality**, to help with **anxiety or pain**, and provide a **milder high**:
  - “[Delta-8] brought in a whole new wave of stoners who couldn't smoke because Delta-9 just did too much for them”
  - Effects described as psychoactive or euphoric, but without producing anxiety (“*work weed*”)
- Some mentioned products may be mislabeled
- Some recommended not buying from gas stations and not driving after using



# Online Survey

- Driving under the influence of alcohol, cannabis, and Delta-8 THC
  - Among those with past year use of each, the proportion of those driving under the influence of Delta-8 THC was highest
    - Consistent with marketing as ‘diet weed’

# Delta-8 THC: Use

- 2021 convenience sample of past 30-day cannabis users (not generalizable to U.S. population)
  - $\approx 17\%$  of past 30-day cannabis users in their sample reported past 30-day use of Delta-8 THC
  - Most common method was vaping concentrated formulations of Delta-8 THC (41%)
  - Primary motivations for use: legal status and perceived therapeutic benefits
  - Males more likely than females to use (aOR = 1.4)
  - State restrictions on Delta-8 sales associated with lower odds of use (aOR = 0.7)



# Delta-8 THC: Retail Assessment

2021 Retail assessment: contacted 1,223 stores with alcohol, cannabidiol, and/or tobacco licenses in Fort Worth

- 131 stores selling  $\Delta$ -8 THC: low retail prices
  - 96% sold vapes and/or “flower” (i.e., hemp leaves coated with Delta-8 THC distillate); 76% sold edibles
- Edibles were available less expensive than flower/vapes
  - least expensive product was \$8.58 less on average
- Outlets that sold Delta-8 THC were located in areas with greater socioeconomic deprivation
- Most reported a minimum purchase age of 21; however, 4% reported 18 years or no minimum age



# Where can kids buy THC?

THE WALL STREET JOURNAL

SIGN IN

SUBSCRIBE

## Hemp Gummies Are Sending Hundreds of Kids to Hospitals

Surge of THC products, vapes has states struggling to regulate the booming market



Products advertised as containing Delta-8 THC are sold at a smoke shop. GENE JOHNSON/ASSOCIATED PRESS

By [Liz Essley Whyte](#) [Follow](#)

Dec. 19, 2023 5:30 am ET

[SHARE](#) [TEXT](#)

688 RESPONSES [🗨️](#)

Jessica Harris's 15-year-old daughter was walking to her school bus in London, Ky., last

# Delta-8 THC: Online/Youth Access

- 8 Online Purchases of Delta-8 THC
  - Easily accessible online
  - Age verification methods are self-reported and easily circumvented
  - Contact with the customer was never requested at the point of home delivery
  - Policies and their enforcement are needed to prevent youth access from online sources
- 65 students in one Texas ISD caught with THC vapes 2022-2023 school year:
  - Some used Snapchat & cash apps

• Egan KL, Villani S, Soule EK. Absence of Age Verification for Online Purchases of Cannabidiol and Delta-8: Implications for Youth Access. *J Adolesc Health*. 2023 Mar 2:S1054-139X(23)00067-8. doi: 10.1016/j.jadohealth.2023.01.020.

• <https://www.cbs19.tv/article/news/local/65-students-charged-with-felony-for-bringing-thc-vape-tyler-isd-campuses/501-9bfbc945-6150-4f49-ad62-41114cef6db6>



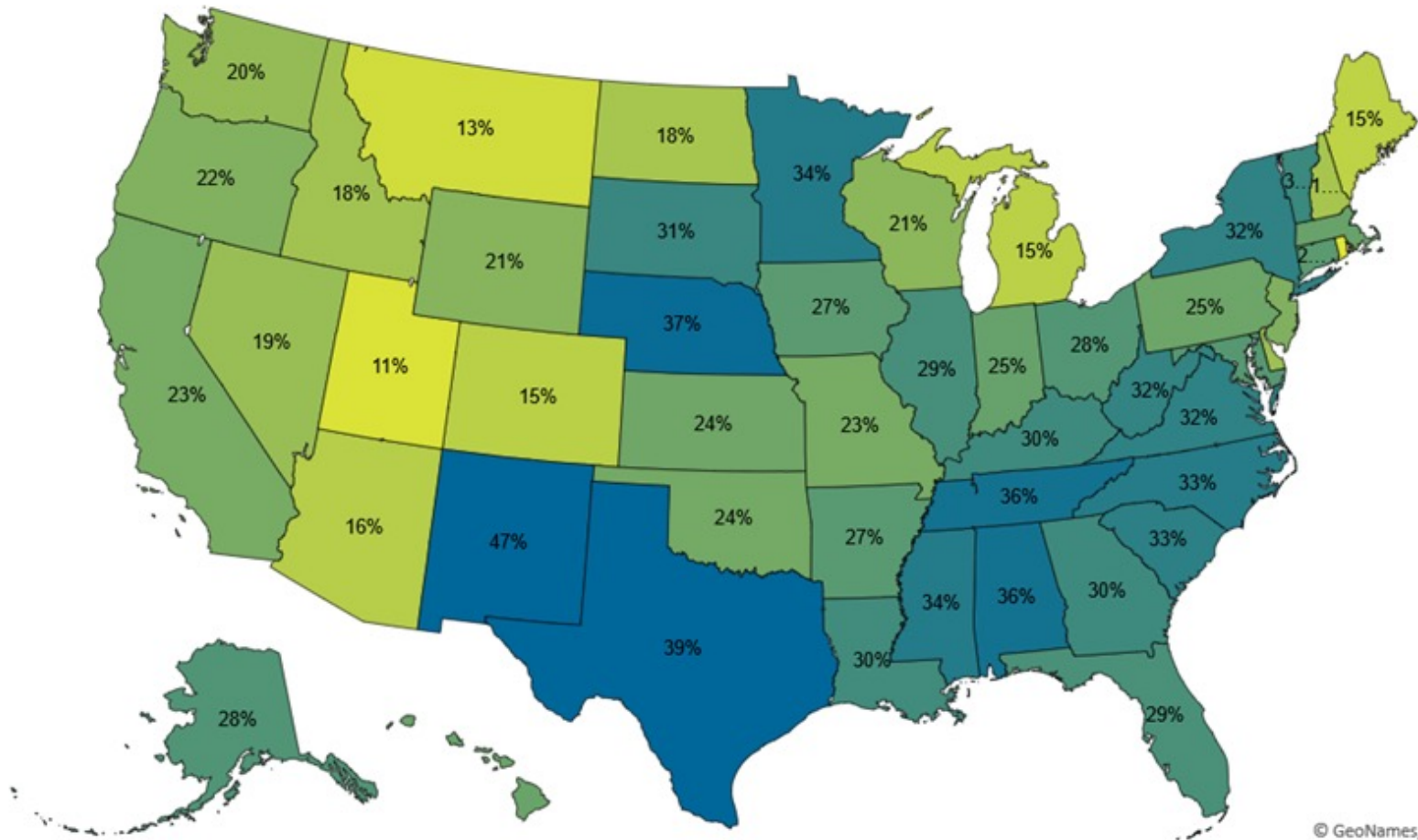
# Monitoring the Future Data, 2023

- 12th graders
  - 29% reported past year cannabis use
  - 11.4% reported Delta-8-THC use in the past year
- 2024
  - 8<sup>th</sup> and 10<sup>th</sup> graders will also be asked about Delta-8 THC use



# March 2023 Regulatory Determinants of Cannabis Outcomes Survey (RDCOS)

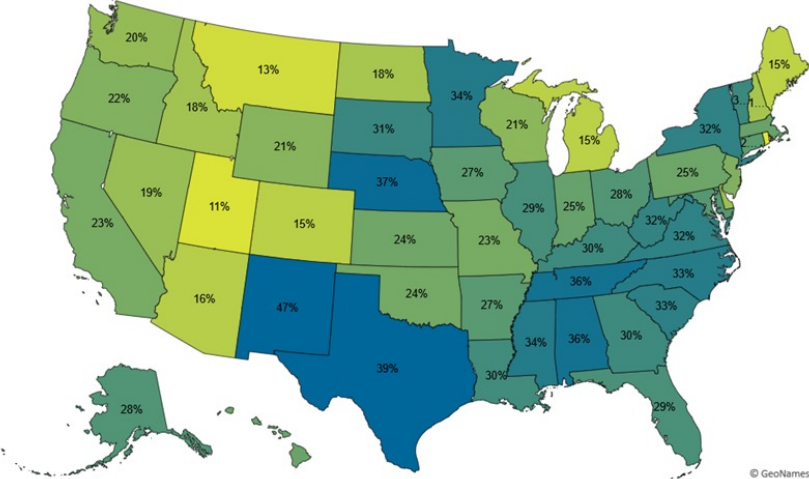
% Past-Month Delta-8 Prevalence   
11% 38%



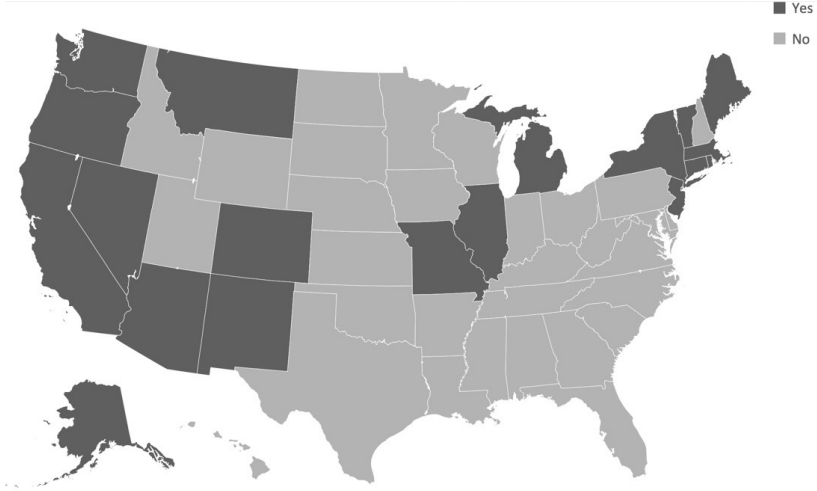
# Retail Cannabis Legal + Dispensaries

March 2023 Regulatory Determinants of Cannabis Outcomes Survey (RDCOS)

% Past-Month Delta-8 Prevalence 11% 38%



Powered by Bing  
© GeoNames, Microsoft, TomTom





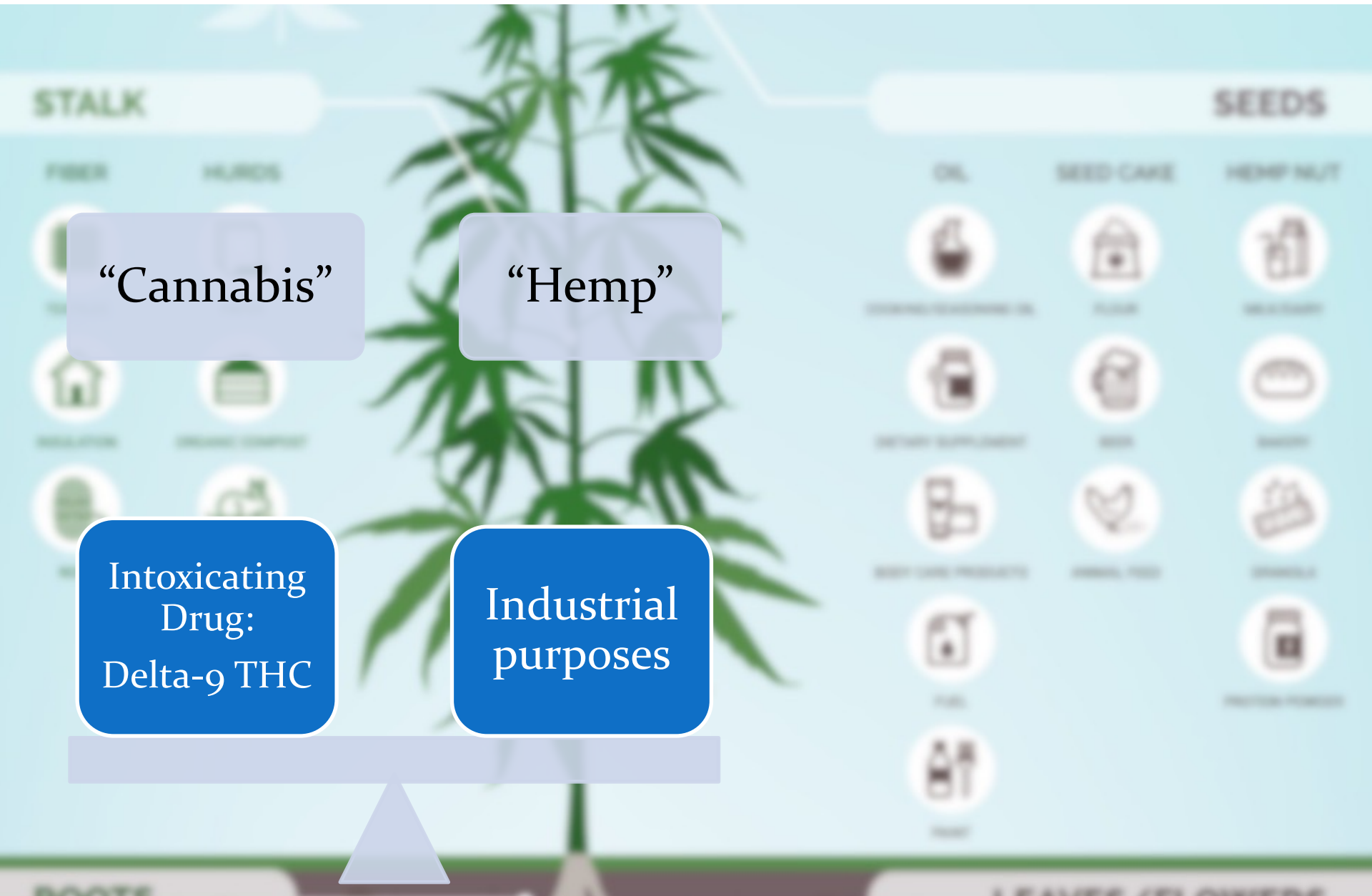
# 2018 Farm Bill

“Cannabis”

“Hemp”

Intoxicating  
Drug:  
Delta-9 THC

Industrial  
purposes



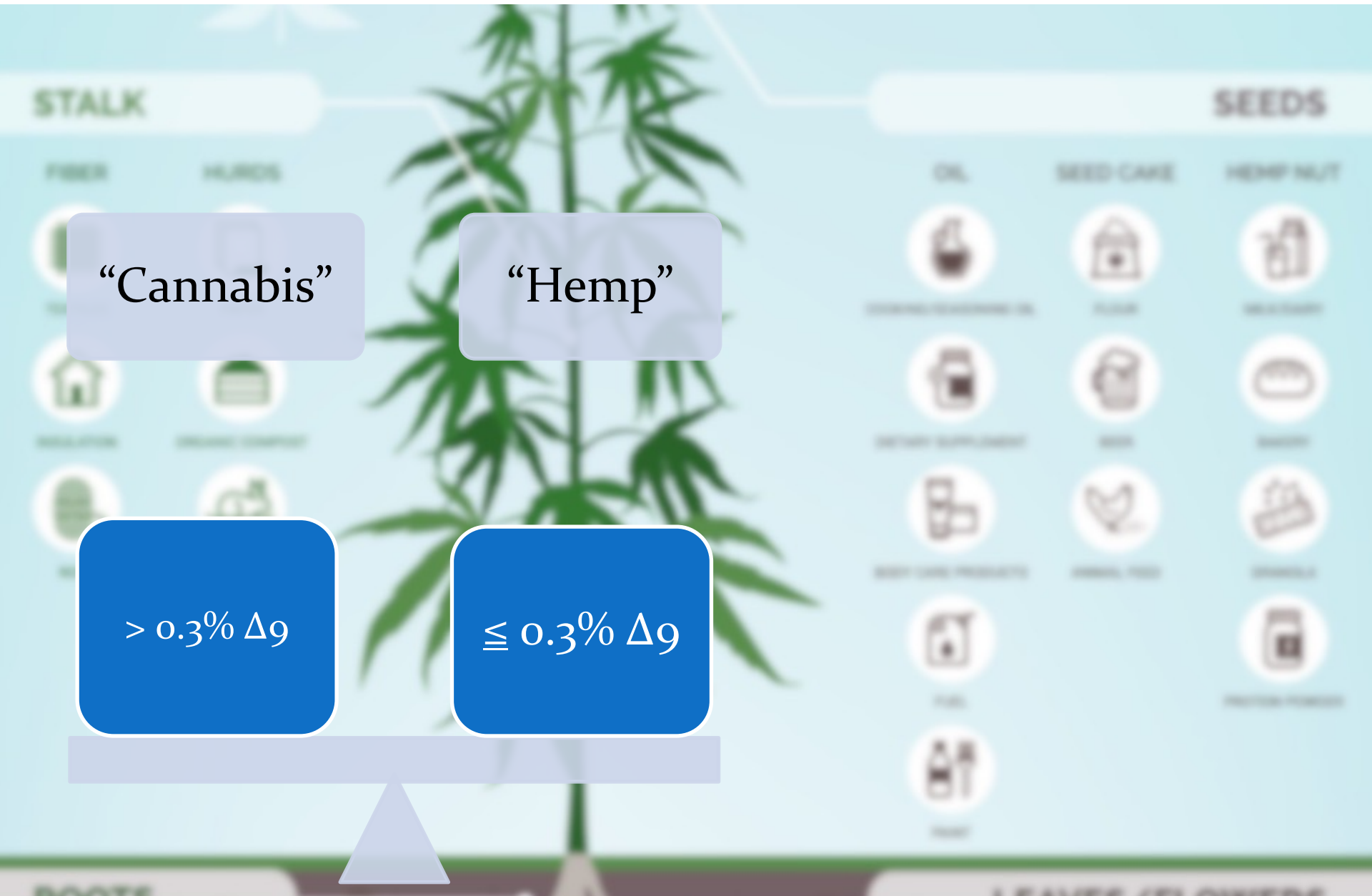
# 2018 Farm Bill

“Cannabis”

“Hemp”

$> 0.3\% \Delta_9$

$\leq 0.3\% \Delta_9$





# 2018 Farm Bill

“Cannabis”

“Hemp”

$\Delta 9$  edibles

$\Delta 8$

$\Delta 10$

$>.3\% \Delta 9$

THC-A

HHC

THC-O

THC-P

THC-B

THC-A

PHC

THCV

THC-JD

THC-X

$\Delta 11$

HHC-O

THC-M

HHC-P

$\Delta 9^o$

HXC-P

HXC

STALK

FIBER HEMP

SEEDS

LEAF

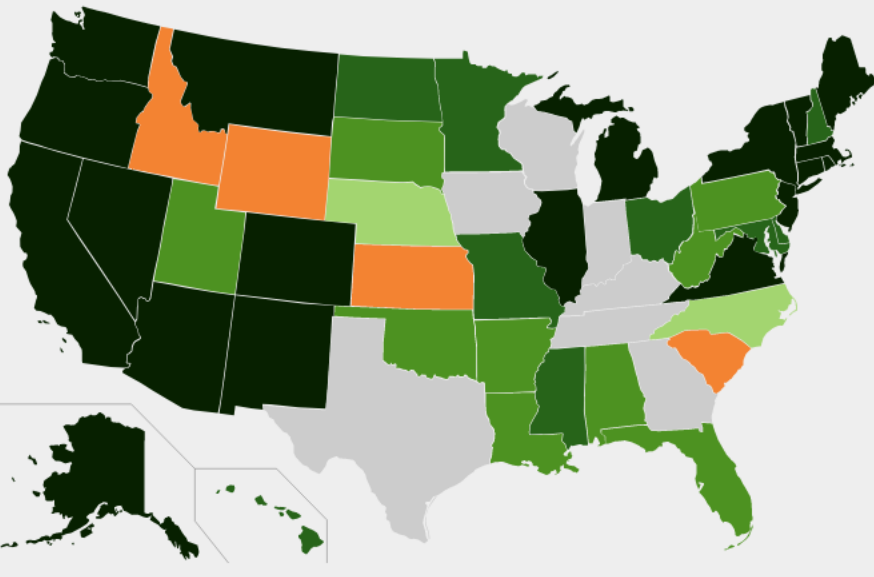
ROOTS

LEAVE

# State Laws

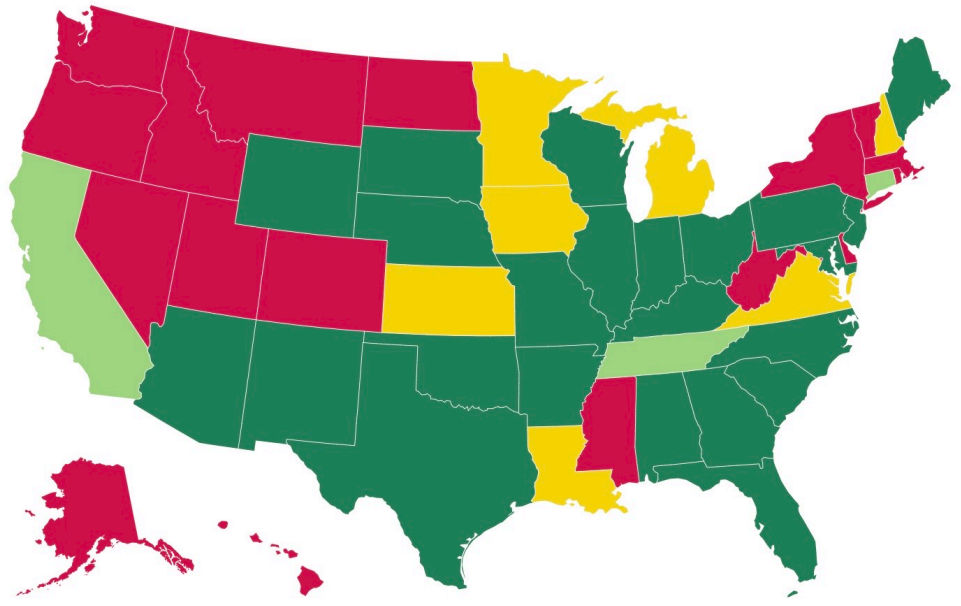
## Delta-9 THC

● Legalized ● Medical and Decriminalized ● Medical ● Decriminalized ● CBD with THC Only ● Fully illegal



## Delta-8 THC Legal Status by State

■ Banned ■ Legal ■ Restricted ■ Substantial Regulations



Last fact-checked on October 31, 2023, by Neil Willner, co-chair of the RCCB law firm's cannabis group.  
Source: [CBD Oracle](#) • [Get the data](#) • [Embed](#) • [Download image](#) • Created with [Datawrapper](#)

# Common Types Sold in Vape Shops Differs

- Michigan & Massachusetts: HHC
- Virginia: THCA
- New York: Delta-9 THC edibles
- Most states: All of them



# Purported Legality: New Hampshire

- Some said **all THC products illegal**
- Others reported **only Delta-9 THC illegal**
- One did not understand what they were selling, explaining they **did not sell any THC products**, while simultaneously reporting that **they sold  $\Delta$ -8**
  - verified by providing related brand names
- Others appeared to know they were potentially violating laws
  - one reported “yes” to carrying each (Delta-8 THC, Delta-9 THC, Delta-10 THC, HHC, THCA, and THCO) with the caveat that the person calling was not a law enforcement officer (“**If you're not a cop, yeah**”)

# Purported Legality: Delaware

- One retailer selling **only Delta-9** products said that it was the only **legal** THC product
- A different retailer stated the opposite: **Delta-9 THC** products were the **only illegal** to sell (they sold everything else: D8, D10, HHC, THCA, THCO)
- A third Delaware retailer reported selling **only Delta-9 THC vapes and HHC vapes**, because they were purportedly the only legal products to sell
  - Met the 0.3% THC by weight threshold, whereas claimed edibles were mislabeled in this regard



# Purported Legality: North Dakota

- One retailer said only **Delta-9 THC** and **THC-A** are legal
- Another said **THC-A** was the only legal (they had a vape with **THC-A mixed with Amanita mushrooms**)
- Others explained that **all THC, HHC, and related products were illegal**
  - One mentioning it is **being replaced by nootropic mushrooms**, which they sold
    - Stated they are **psychedelic**, especially in high doses
      - Recommend the brand **Treehouse Magic Mushroom Gummies**





CBD Store

Relieve

Medical  
Marijuana  
Treatment Center



## EDITORIAL

# Delta-8, Delta-10, HHC, THC-O, THCP, and THCV: What Should We Call These Products?

MATTHEW E. ROSSHEIM, PH.D., M.P.H., C.P.H.,<sup>a,\*</sup> CASSIDY R. LOPARCO, PH.D.,<sup>a</sup> DOUG HENRY, PH.D.,<sup>b</sup>  
PAMELA J. TRANGENSTEIN, PH.D.,<sup>c</sup> & SCOTT T. WALTERS, PH.D.<sup>a</sup>

<sup>a</sup>*Department of Health Behavior and Health Systems, University of North Texas Health Science Center, Fort Worth, Texas*

<sup>b</sup>*Department of Anthropology, College of Liberal Arts & Social Sciences, University of North Texas, Denton, Texas*

<sup>c</sup>*Alcohol Research Group, Public Health Institute, Emeryville, California*


**ABSTRACT.** The 2018 U.S. Federal Agriculture Improvement Act (“Farm Bill”) resulted in what some have called a “legal loophole” in cannabis regulation. As different types of cannabis products proliferate, so has the terminology used to attempt to categorize them. This article presents a variety of potential descriptors to encourage dialogue about the language used to classify the multitude of psychoactive cannabinoid products that have grown in popularity since the passage of the 2018 Farm Bill. Our recommended term for these products is *derived psychoactive cannabis products*. The term *derived* helps distinguish these products from naturally grown cannabis products. *Psychoactive* makes

clear that these products can produce psychoactive effects. Finally, *cannabis products* balances accuracy and understandability regarding the substance while discouraging perpetuation of the word *marijuana* because of its racist inception. The resulting term, *derived psychoactive cannabis products*, is broad enough to encapsulate all related products while being specific enough to exclude other substances. Adopting accurate and consistent terminology will reduce confusion and help establish a more cohesive scientific literature base. (*J. Stud. Alcohol Drugs*, 84, 000–000, 2023)

# Derived Psychoactive Cannabis Products (DPCPs)

- **Derived**
  - ~~*Synthetic*~~
  - ~~*Semi-synthetic*~~
  - ~~*Chemically rearranged*~~
  - ~~*Manufactured*~~
  - ~~*Laboratory derived*~~
  - ~~*Cannabis derived*~~
  - ~~*Hemp Derived*~~
  - **Psychoactive**
  - ~~*Isomer*~~
  - ~~*New*~~
  - ~~*Novel*~~
  - **Cannabis Product**
  - ~~*THC*~~
  - ~~*Cannabinoids*~~
  - ~~*Marijuana*~~
- Balances accuracy and understandability





Delta-8 THC

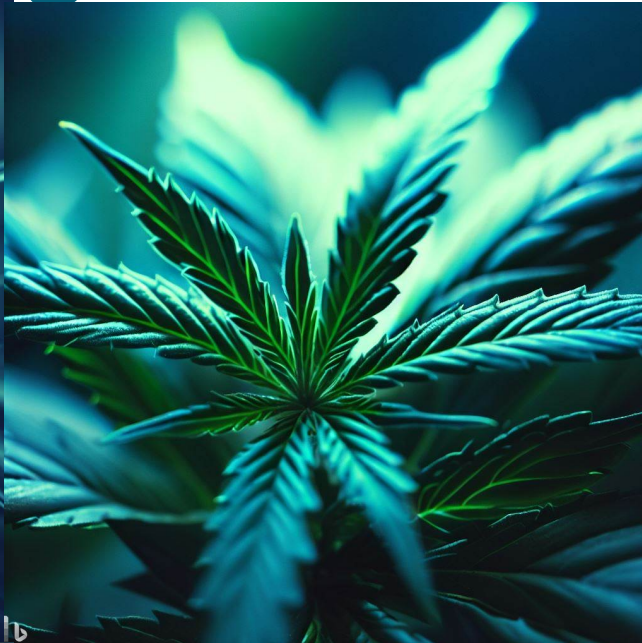


Derived  
Psychoactive  
Cannabis  
Products



What do they look like?

# AI generate images: Delta-8 THC





# AI: Derived Psychoactive Cannabis Products







# What do they actually look like?

- Any issues around product marketing?



MAXIMUM STRENGTH  
DELTA-8 THC



Reserve

NURDZ ROPE

DELTA-8 INFUSED

500mg

NET WT. 30G



FLYING MONKEY

HEAVY HITTER BLEND

PREMIUM ONE GRAM DISPOSABLE

Fruity Pebbles

THC O + DELTA 8  
ENRICHED WITH THC P

FLYING MONKEY

HEAVY HITTER BLEND

PREMIUM ONE GRAM DISPOSABLE

BLUE DREAM

THC O + DELTA 8  
ENRICHED WITH THC P

urb  
Finest Flowers



300mg  
25mg / 12 pcs

50 grams (1.7oz)

urb  
Finest Flowers



300mg  
25mg / 12 pcs

50 grams (1.7oz)

RAINBOW ROCKS

CANDY LAND

carte blanche

HEMP DERIVED  
HHC  
DISPOSABLE VAPE

900MG | TML

CHERRY BLOSSOM

carte blanche

HEMP DERIVED  
HHC  
DISPOSABLE VAPE

indica  
900MG | TML

carte blanche

HEMP DERIVED  
HHC  
DISPOSABLE VAPE

hybrid  
900MG

Gummies  
BLUE BURST

20 GUMMIES | 1000MG

Gummies  
RASPBERRY KUSH

20 GUMMIES | 1000MG

Gummies  
BERRY BLAZ

20 GUMMIES | 1000MG

Cake 1.5



DELTA 10

PINK ANTZ  
INDICA  
DELTA 10 + 1.5 GRAM  
DISPOSABLE DEVICE

ALL NATURAL CANNABIS  
NATIVE TERPENES

Cake 1.5



DELTA 10

CHERRY CRUMBLE  
HYBRID  
DELTA 10 + 1.5 GRAM  
DISPOSABLE DEVICE

ALL NATURAL CANNABIS  
NATIVE TERPENES

Cake 1.5



DELTA 10

BANANA ROSIN  
SATIVA  
DELTA 10 + 1.5 GRAM  
DISPOSABLE DEVICE

ALL NATURAL CANNABIS  
NATIVE TERPENES



# Delta-8 THC





# Delta-9 THC





# Delta-10 THC





# HHC





# Blends



# LIVE RESIN





# Smoke Shop Retailers:

*“We have more blends than stuff on its own”*

*“We basically sell the whole darn alphabet”*





# Alleged strength compared to $\Delta$ -9

## Weaker

- Delta-6 THC
- Delta-8 THC
- Delta-10 THC

## Stronger

- PHC
- THC-O
- Delta-11 THC
- THC-H
- THC-JD
- THC-P
- HHC-P



# THCA said to be closest to $\Delta 9$

Google Trends

Home

Explore

Trending Now



● **delta 8**  
Search term

● **THCA**  
Search term

+ Add comparison

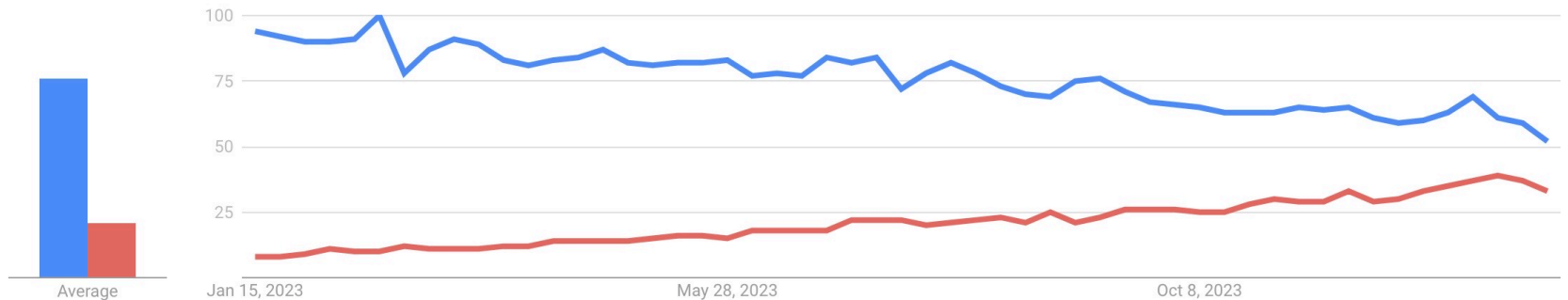
United States ▾

Past 12 months ▾

All categories ▾

Web Search ▾

Interest over time ⓘ



# Blends

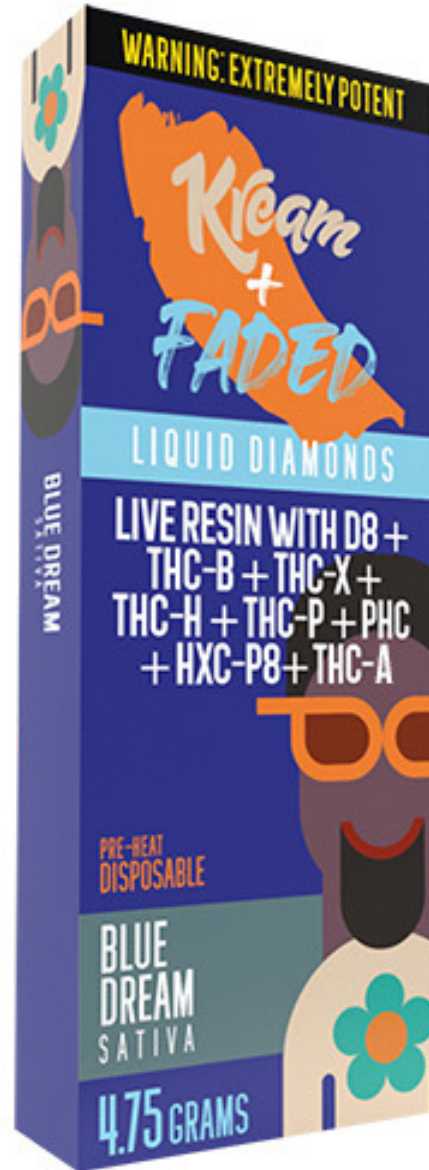




3.5 GRAM DISPOSABLE DEVICE



# Blends







## Limited Time 10% off

Save on your first order and get  
offers when you join

Submit



Accessibility

## Buy One, Get One Free:

### D8 and Gourmet Chocolate Bars

Replenish your stash of delightful  
Gourmet and Delta 8 chocolates

No discount code needed.



Limited Time Offer:  
Free THC Gummies!



## Want 15% Off?

Become an insider

Be the first to know what  
we're dropping next and  
save some \$\$\$.

Get 15% Off

No Thanks

## Get 20% off!

on your next purchase when you subscribe to  
our wellness community.

Get my discount



compounds  
One of these  
nent cannabinoid  
n methods we  
nabinoids to  
effects!





# Mother's Day SALE

# 20% OFF

Use code: **CBD4MOM**

\*Offer not valid on wholesale orders. Excludes Storz & Bickel and Puffco products. Cannot be combined with any other offer. Expires 5/15/23. Subject to change without notice.



# Mother's Day Sale

**\$15 OFF \$125+**  
CODE: **MOM15**

**\$30 OFF \$175+**  
CODE: **MOM30**

[SHOP](#)

ENDS 5/14/2023. CANNOT BE COMBINED WITH OTHER OFFERS. VOID WHERE PROHIBITED.

## Mother's Day

SPECIAL SALE

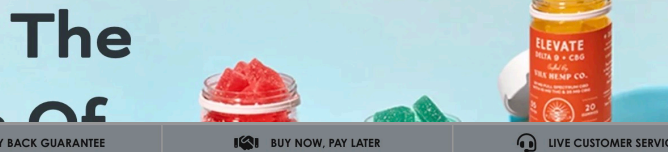
Get up to 55% OFF our exclusive Mother's Day collection.

[Find Gifts Moms Love >](#)



Code: **MOTHERSDAY** for 15% OFF + Free Lowdose Gummies

HOME PRODUCTS LEARN BLOG LOGIN



BACK GUARANTEE BUY NOW, PAY LATER LIVE CUSTOMER SERVICE

## 35% OFF STOREWIDE HAPPY MOTHER'S DAY

Ditch the boring gifts and give Mom the gift of relaxation.

[Shop Now](#)

Showing Terms and Conditions apply. 35% discount applied automatically at checkout. Dirty Heads Gummies and Mother's Day Bundles not included in promotion. Good Feels Club rewards can be combined with this offer. Other coupons cannot be combined with this offer. Ends Sunday May 14 at midnight PDT.

Delta Munchies | Buy Unrivalec

deltamunchies.com

### MOTHER'S DAY GIFT

## FREE 300MG WATERMELON GUMMIES

ON ALL ORDERS OVER \$60

USE CODE: **MOMMY**

SHOP LEARN MORE LAB RESULTS WHOLESALE BLOG EARN \$10 LOGIN / REGISTER CART / \$0.00

## TOP-SHELF THC-A DIAMOND INFUSED PREROLLS

**1.5**

GRAMS PER PREROLL

GLAZED WITH LIQUID DIAMONDS

MADE WITH PREMIUM HEMP

ROLLED AND DUSTED IN KIEF

INFUSED WITH THC-A DIAMONDS

NEVER SPRAYED



# Online Retail Assessment

## Methods

- Google “buy delta thc” in incognito mode
- Downloaded top 100 results using resultstoexcel.com
- Used SimilarWeb to compare web traffic: top 3 sites



# Online Retail Assessment

## Results

- 26 distinct intoxicating compounds being marketed
- There were **185 different combinations of intoxicating compounds** contained within these 804 products
  - there is little understanding of the health effects from using these compounds in these various combinations

# Online Retail Assessment

## Results

- 26 intoxicating compounds marketed including:

- Delta-8 THC
- THC-P
- Delta-9 THC
- HHC
- THC-A
- Delta-10 THC
- THC-H
- THC-B
- THC-JD
- THC-X
- HHC-P
- Delta-11 THC

Overall, most products (54%) were blends, containing 2 to 8 different intoxicating compounds in a single product

THC-P usually in blends

Unclear whether some are the same chemical compound...



# Online Retail Assessment

## Results

- Modalities included
  - disposable vapes (43%)
  - edibles (29%)
  - vape carts (18%)
  - pre-rolls (7%)
  - flower (2%)
  - dabs (1%)
  - vape pods (<1%)

# Online Retail Assessment

## Results

- Among the 118 brands, the most common were:
  - Exhale
  - Delta Extrax
  - Cake
  - URB
  - Looper
  - TRE House























# LOOPER

LOOPER

INDICA  
**LOOPER XL**  
LIFTED SERIES  
**FORBIDDEN FRUIT**  
3 GRAMS  
LIVE RESIN  
DISPOSABLE VAPE  
11-HYDROXY-THC  
THC-H-THC-P  
MILD STRONG  
3 GRAM • 3000 MG

INDICA  
**LOOPER XL**  
LIFTED SERIES  
**LAVA CAKE**  
3 GRAMS  
LIVE RESIN  
DISPOSABLE VAPE  
THC-A-THC-P  
MILD STRONG  
3 GRAM • 3000 MG

SATIVA  
**LOOPER XL**  
LIFTED SERIES  
**JET FUEL**  
3 GRAMS  
LIVE RESIN  
DISPOSABLE VAPE  
THC-A  
11-HYDROXY-THC • THC-P  
MILD STRONG  
3 GRAM • 3000 MG

SATIVA  
**LOOPER XL**  
MELTED SERIES  
**SOUP KUSH**  
3 GRAMS  
LIVE RESIN  
DISPOSABLE VAPE  
11-HYDROXY-THC  
THC-H-THC-P  
MILD STRONG  
3 GRAM • 3000 MG

SATIVA  
**LOOPER XL**  
MELTED SERIES  
**LIMONCELLO**  
3 GRAMS  
LIVE RESIN  
DISPOSABLE VAPE  
THC-A-THC-JD  
THC-P-HHC-P  
MILD STRONG  
3 GRAM • 3000 MG

INDICA  
**LOOPER XL**  
MELTED SERIES  
**PURPLE PUNCH**  
3 GRAMS  
LIVE RESIN  
DISPOSABLE VAPE  
THC-JD  
THC-H-THC-P  
MILD STRONG  
3 GRAM • 3000 MG

















# Certificate of Analysis (COA)

- QR codes on products (Barcode)
  - Scan with your smartphone, directs to a webpage
- Takes consumer to COA for some batch of product
  - Provide access to info about potency, purity, etc.
- However
  - Can be very technical and difficult to understand for the average consumer
  - May not be for the batch that specific product came from
  - Cherry picking best lab findings
  - They could be falsified/wrong
    - Even if we know the chemicals, do we know the harms?



NEWS

# CBD Oracle Lab Study Shows Some Delta-8 Products Are 7700% Over the Legal Delta-9 THC Limit

We got 51 hemp-derived Delta-8 THC products tested by an independent lab, and found high levels of Delta-9 THC in most of them. And that was just the beginning.



By [Lee Johnson](#)

Updated on October 21, 2021



# Effective Regulation Generally

- System of licensing/zoning
- Taxes, minimum pricing policies
- Restrictions on youth-oriented marketing
- Health and safety claims
- Ingredient labeling
- Potency and product safety standards
- Regulate retail environment (rather than PUP)



# Effective Regulations?

- Can we effectively regulate these products?
  - How if we don't know all the harms?
    - From each compound individually
      - in multitude of combinations sold
        - Hundreds of combination of intoxicating compounds
        - Combined with lots of other various ingredients
        - Used across a variety of modalities
    - Is limiting sales not to those under 21 a “good” regulation?
      - On the surface seems very important given observations
      - Failing to protect most people
        - How can they make informed choices about risks?
      - Still going to get into the hands of young people

# 2024 Farm Bill

- Opportunity to address the negative consequences of the 2018 Farm bill
  - Explicitly exclude all semi-synthetic cannabis derived products





SENT VIA ELECTRONIC MAIL ONLY

March 20, 2024

The Honorable Glenn "GT" Thompson  
Chairman  
Committee On Agriculture  
United States House of Representatives  
1301 Longworth House Office Building  
Washington, D.C. 20515

The Honorable David Scott  
Ranking Member  
Committee On Agriculture  
United States House of Representatives  
1010 Longworth House Office Building  
Washington, D.C. 20515

The Honorable Debbie Stabenow  
Chair  
Committee on Agriculture, Nutrition, & Forestry  
United States Senate  
328A Russell Senate Office Building  
Washington, D.C. 20510

The Honorable John Boozman  
Ranking Member  
Committee on Agriculture, Nutrition, & Forestry  
United States Senate  
328A Russell Senate Office Building  
Washington, D.C. 20510

Re: The Five-Year Reauthorization of the Farm Bill

Dear Chairman Thompson, Chair Stabenow, Ranking Members Representative Scott, and Senator Boozman:

We, the attorneys general of Indiana, Arkansas, California, Colorado, Connecticut, District of Columbia, Georgia, Hawaii, Iowa, Kansas, Maryland, Minnesota, Missouri, North Carolina, North Dakota, Oregon, Pennsylvania, South Dakota, Tennessee, Commonwealth of Virginia, and Washington write to call your attention to a crisis issue impacting our states, our public safety, and our role as law enforcement officials. As Congress prepares to embark on a new five-year reauthorization of the Farm Bill, we strongly urge your committees to address the glaring

THC limit which distinguishes industrial hemp from cannabis, is inadequate to distinguish the potential for intoxication. The result that has been seen is excessively potent products that are manufactured under fewer controls than in states that have legalized cannabis. Because of the ambiguity created by the 2018 Farm Bill, a massive gray market worth an estimated \$28 billion has exploded, forcing cannabis-equivalent products into our economies regardless of states' intentions to legalize cannabis use, and dangerously undermining regulations and consumer protections in states where adult-use legal cannabis programs are already in place. Many states now face poisonings from poorly manufactured products, products with misleading labels, and consumption by individuals who are under the age of twenty-one. As hemp-based THC-infused products increase in popularity, particularly edibles, illicit suppliers have begun co-opting legitimate brand names and packaging to sell candy, snacks, and cereal that are intoxicating and confusing to consumers. These copycat hemp products place children at exceptional risk.

This year's anticipated reauthorization of the Farm Bill and the need for this reauthorization to make much-needed improvements to the statute established in 2018 comes at a critical time, as our states are being tested in our efforts to regulate these potentially dangerous products. These intoxicating hemp products, by virtue of their potential hazard to consumers, must be regulated by each state. The definition of hemp should be amended to clarify that there is no federal hemp intoxicants loophole, and the 2023 reauthorization should reaffirm that members of Congress do not intend to limit states in restrictions or regulations related to cannabinoids or any other derivatives of hemp which are deemed intoxicating.

We share your commitment to farmers and support an orderly market for industrial hemp and non-intoxicating hemp-derived products. The promise of the 2018 Farm Bill to create this agricultural commodity market, however, has failed. Instead, hemp-derived intoxicants have proliferated across our states, posing a significant threat to public health and safety, and benefiting unregulated, untaxed, and unaccountable market actors. It is our duty to protect our states and communities, yet the federal law lacks the clarity needed to act vigorously on their behalf. We urge Congress in the strongest possible terms to address this reckless policy.

Sincerely,



Todd Rokita  
Attorney General



Tim Griffin  
Attorney General of Arkansas



# AGs' Letter to Ag Committee

- Great news!
  - There is coordinated responds to these problematic substances
  - Federal loophole creating this gray market needs to be closed
  - Each state needs their own laws to enforce this

# Much Needed Clarification

- The explicit exclusion of all semi-synthetic cannabis derived products from the federal definition
- Make it clear that this supersedes state laws
  - But does not preempt state laws that are more restrictive
  - However, not granting “home rule” powers allowing states to decide whether to legalize and how to regulate



# Gaps to Address: Edibles

- High THC content, delta-9 THC edibles/vapes
- Rather than limiting THC content per serving
  - Which can be easily circumvented by changing label and/or cutting into smaller pieces
- Specify that food and beverage products are not “hemp”

# Gaps to Address: THCA

- THCA converts to Delta-9 THC when heated, so it should be included in Delta-9 THC limit (0.3%)
  - Convert all delta-9-THCA to delta-9-THC to calculated percent by dry weight (sample that has undergone decarboxylation); or
  - Multiply percent by dry weight of delta-9-THCA by 0.877 and add it to the percentage by dry weight of delta-9-THC



# Gaps to Address: Enforcement

- Clarification on testing and enforcement responsibilities is essential
  - Who in the supply chain is accountable for verifying legal standards are met?
    - Detail repercussions for non-compliance
      - Keep in mind products that are imported directly to U.S. retailers or consumers

# What Role Should Actors Play?

- Cultivators/Growers
- Extractors
- Processors
  - *Testing Laboratories*
- Product Manufacturers
- Copackers
- Wholesalers/Distributors
- Retailers
  - *Regulatory Agencies*
- Consumers



# 2024 Farm Bill Reauthorization

- Major opportunity to address the negative consequences of the 2018 Farm bill
- How should each state respond should be based on:
  - the interest of protecting public health and safety
  - their laws
  - related regulatory infrastructure

# Research Publications

**Rossheim, M.E., LoParco, C.R., Berg, C.J., Tillett, K.K., Trangenstein, P.J., Henry, D., Yockey, R.A., Livingston, M.D., Jernigan, D.H., & Sussman, S.Y.** (in press). Derived psychoactive cannabis products and 4/20 specials: An assessment of popular brands and retail price discounts in Fort Worth, Texas, 2023. *Drug and Alcohol Dependence*. doi: 10.1016/j.drugalcdep.2024.111119

**Rossheim, M.E., Tillett, K.K., Vasilev, V., LoParco, C.R., Berg, C.J., Trangenstein, P.J., Yockey, R.A., Sussman, S.Y., Siegel, M., & Jernigan, D.H.** (in press). Types and Brands of Derived Psychoactive Cannabis Products: An Online Retail Assessment, 2023. *Cannabis and Cannabinoid Research*.

**Rossheim, M.E., LoParco, C., Henry, D., Trangenstein, P.J., & Walters, S.T.** (2023). Delta-8, Delta-10, HHC, THC-O, THCP, and THCV: What should we call these products? *Journal of Studies on Alcohol and Drugs*. doi: 10.15288/jsad.23-00008

**Rossheim, M.E., LoParco, C.R., Walker, A., Livingston, M.D., Trangenstein, P.J., Olsson, S., McDonald, K.K., Yockey, R.A., Lunningham, J.M., Kong, A.Y., Henry, D., Walters, S.T., Thombs, D.L., & Jernigan, D.H.** (2022). Delta-8 THC Retail Availability, Price, and Minimum Purchase Age. *Cannabis and Cannabinoid Research*. doi: 10.1089/can.2022.0079

**LoParco, C.R., Rossheim, M.E., Walters, S. T., Zhou, Z., Olsson, S., & Sussman, S.** (2023). Delta-8 tetrahydrocannabinol: a scoping review and commentary. *Addiction*, 118(6):1011–28. doi: 10.1111/add.16142

**Walker, A.L., LoParco, C.R., Rossheim, M.E., & Livingston, M.D.** (2023). #Delta8: A retailer-driven increase in Delta-8 THC discussions on Twitter from 2020 to 2021. *American Journal of Drug and Alcohol Abuse*, 49(4):491-9, doi:10.1080/00952990.2023.2222433

Henry, D., Partin, K., **LoParco, C., & Rossheim, M.** (2023). The Hemp-Derived Cannabinoid Industry and the Potential of Self-Regulation: Using Social Media to Assess an Evolving Health Risk. *Social Science & Medicine*.

Livingston, M.D., Walker, A., Cannell, M.B., **& Rossheim, M.E.** (2022). Popularity of Delta-8 THC on the Internet Across US States, 2021. *American Journal of Public Health*, 112(2), 296–299. doi: 10.2105/AJPH.2021.306586.

**LoParco, C.R., Walters, S.T., Zhou, Z., & Rossheim, M.E.** (in press). Associations between cannabis risk perceptions and Delta-8 THC use among young adults. *Journal of Substance Use*. <https://doi.org/10.1080/14659891.2023.2293798>.

**LoParco, C.R., Kong, A.Y., Yockey, R.A., Sekhon, V., Olsson, S., & Rossheim, M.E.** (in press). Factors associated with Delta-8 THC retail availability in Fort Worth, Texas, 2021-2022. *Substance Use & Misuse*. doi: 10.1080/10826084.2024.2305793

**LoParco, C.R., Olsson, S.E., Greene, K.M., Livingston, M.D., Henry, D., Trangenstein, P.J., Walker, A., & Rossheim, M.E.** (2022). How are retailers describing Delta-8 THC? A mixed-methods study in Fort Worth, Texas. *Journal of Studies on Alcohol and Drugs*, 84(2):298-302. doi: 10.15288/jsad.22-00287

**LoParco, C.R., Olsson, S., Sekhon, V., McDonald, K.K., Yockey, R.A., Livingston, M.D., Trangenstein, P.J., & Rossheim, M.E.** (2023). Associations between Delta-8 THC and Four Loko retail availability in Fort Worth, Texas. *Health Behavior Research*.

**LoParco, C.R., Olsson, S.E., Greene, K.M., Berg, C.J., Walters, S.T., Zhou, Z., & Rossheim, M.E.** (in press). Driving under the influence of alcohol, cannabis, and Delta-8 THC: Perceived likelihood, risk perceptions, and behaviors. *Journal of Psychoactive Drugs*.



# An Overlooked Threat to Public Safety

## What are Derived Psychoactive Cannabis Products (DPCPs)?

DPCPs have psychoactive properties similar to cannabis, but they are chemically derived, not grown.

Because of a loophole created by the 2018 Farm Bill (i.e., Agriculture Improvement Act), these compounds are **regulated as “hemp”** despite their psychoactive properties (because they have < 0.3%  $\Delta$ -9 by weight).<sup>1-3</sup> This loophole also legalizes  $\Delta$ -9 THC edibles, as the product weight allows for a high dose of THC.<sup>1</sup>

One in six past-month cannabis users (17%) used  $\Delta$ -8 THC, the first DPCP to enter the market.<sup>4</sup>

## DPCPs carry risk of harm, especially to young people.<sup>1,5-7</sup>

Most states do not require testing for chemical contaminants, even though DPCPs are commonly synthesized using harsh solvents known to be hazardous to human health.<sup>1</sup> Potency limits are rare, despite conclusive evidence that more potent products carry higher risk of harms.<sup>1</sup> Research supports that DPCP use is associated with acute psychiatric, lung, chest and heart disorders, as well as injuries and poisonings.<sup>5</sup>

DPCPs are also very new, so we don't know all the short- and long-term risks from use.<sup>1</sup> DPCPs are consumed accidentally by children, as evidenced by the large number of calls to Poison Control Centers involving minors because of poor labeling and a lack of child-proof containers.<sup>6</sup> These products are marketed to young people. Some DPCP product packaging mimics well-known food brands that appeal to children, including Cap'n Crunch, Cocoa Puffs, Froot Loops, Nerds Ropes, Starbursts and Sour Patch Kids, among others.<sup>10</sup>

## Availability and Access

DPCPs are available in every state, including those that have banned certain DPCPs such as  $\Delta$ -8 THC.<sup>1,2</sup> This is because the loophole allows for the continuous engineering of new types of DPCPs, including  $\Delta$ -6 THC,  $\Delta$ -10 THC,  $\Delta$ -11 THC, THC-A, THC-O, THC-P, THC-V, THC-JD, PHC, HHC, HHC-P and HXC.<sup>2</sup>

Some of these new DPCPs are marketed as being far more potent than cannabis. DPCPs are easy to buy online: age verification measures are rarely used and easily circumvented.<sup>8</sup> In many states, there are no age laws, so it is up to the retailers whether to sell DPCPs to children.<sup>1,9</sup>

DPCPs are marketed in ways that are extremely likely to attract children, such as added in candy, chips and chocolates. DPCPs are inexpensive (sometimes < \$5), and stores are disproportionately located in low-income areas.<sup>9</sup>



## No psychoactive drug should be sold as “hemp.”

The 2023 Farm Bill should close the loophole that helps kids access unregulated, psychoactive candy.

Questions or concerns? Please contact: [Matthew.Rossheim@unthsc.edu](mailto:Matthew.Rossheim@unthsc.edu)

References: 1 LoParo, C.R., Rossheim, M.E., Walters, S. T., Zhou, Z., Olsson, S., & Sussman, S. (2023). Delta-8 tetrahydrocannabinol: a scoping review and commentary. *Addiction*, 118(6):1011–28. doi: 10.1111/add.16142 | 2 Rossheim, M.E., LoParo, C., Henry, D., Traugottstein, P.J., & Walters, S.T. (2023). Delta-8, Delta-10, HHC, THC-O, THCP, and THCV: What should we call these products? *Journal of Studies on Alcohol and Drugs*. doi: 10.15288/jsad.23-00008 | 3 Livingston, M.D., Walker, A., Cannon, M.B., & Rossheim, M.E. (2022). Popularity of Delta-8 THC on the Internet Across US States, 2021. *American Journal of Public Health*, 112(2), 296–299. doi: 10.2195/AJPH.2021.306586 | 4 Irvine, O., Baehrey, A., Borodovsky, J., Walsh, C., Skarvewitz, D., Fink, D.S., Struble, C.A., Hahib, M., Akarovich, E., & Hasin, D.S. (2022). Delta-8 THC use in US adults: Sociodemographic characteristics and correlates. *Addictive Behaviors*, 133, 10774. doi: 10.1016/j.addbeh.2022.10774 | 5 Leas, E.C., Hamill, R.M., Salykhalidzeva, N., Morales, M.E., Huffaker, S.L., Mejerian, T., & Grant, I. (2023). Self-reported adverse events associated with Delta-8-tetrahydrocannabinol (Delta-8-THC) Use. *Journal of Cannabis Research*, 5(5). doi: 10.1186/s42238-023-00191-y | 6 United States Food and Drug Administration (FDA). (2022). 5 Things to Know about Delta-8 Tetrahydrocannabinol – Delta-8 THC. <https://www.fda.gov/consumers/consumer-updates/5-things-know-about-delta-8-tetrahydrocannabinol-delta-8-thc> | 7 Bozina, M.E., Hanochara, S.V.R.R., Vasavada, T. (2022). Marijuana variant of concern: Delta 8-tetrahydrocannabinol (Delta-8-THC, Delta-8-THC). *Psychiatry Research Case Reports*, 1(2). doi: 10.1016/j.psycr.2022.100023 | 8 Egan, K.L., Villard, S., & Soule, E.K. (2023). Absence of Age Verification for Online Purchases of Cannabidiol and Delta-8: Implications for Youth Access. *Journal of Adolescent Health*. doi: 10.1016/j.jadoheh.2023.01.020 | 9 Rossheim, M.E., LoParo, C.R., Walker, A., Livingston, M.D., Traugottstein, P.J., Olsson, S., McQuaid, K.K., Yockey, R.A., Laminghan, J.M., Kong, A.Y., Henry, D., Walters, S.T., Thomas, D.L., & Jernigan, D.H. (2022). Delta-8 THC Retail Availability, Price, and Minimum Purchase Age. *Cannabis and Cannabinoid Research*. doi: 10.1089/can.2022.079 | 10 <https://www.fda.gov/food/alerts-advisories-safety-information/fda-warns-consumers-about-accidental-ingestion-children-food-products-containing-thc>



SCAN TO VIEW



WORKS CITED

SCAN TO VIEW



WEBSITE

Derived Psychoactive Cannabis Products (DPCPs)

# AN OVERLOOKED THREAT TO PUBLIC SAFETY



**Above:** Some DPCP product packaging mimics well-known food brands and flavors that appeal to children, including Cap'n Crunch, Cocoa Puffs, Froot Loops, Nerds Ropes, Starbursts and Sour Patch Kids, among others.



## WHAT ARE DERIVED PSYCHOACTIVE CANNABIS PRODUCTS (DPCPS)?

- DPCPs have intoxicating properties similar to cannabis, but they are **chemically derived, not grown**.
- Due to a definition in the 2018 Farm Bill (i.e., Agriculture Improvement Act), these compounds are **being regulated as “hemp” despite their intoxicating effects** (because they have < 0.3%  $\Delta$ -9 THC by weight).<sup>1-3</sup>
  - Companies are now marketing at least 26 different intoxicating cannabis compounds, including  $\Delta$ -8 THC,  $\Delta$ -9 THC,  $\Delta$ -10 THC,  $\Delta$ -11 THC, THC-A, THC-B, THC-H, THC-JD, THC-O, THC-P, THC-X, HHC and HHC-P.<sup>4</sup>
- In 2023, 1-in-9 12th graders reported  $\Delta$ -8 THC use in the past year.<sup>5</sup>

## AVAILABILITY AND ACCESS

- DPCPs are available in nearly every state, including most that have **banned certain DPCPs** such as  $\Delta$ -8 THC.<sup>1,2</sup>
  - This is because companies continuously create new types of DPCPs to circumvent these laws.
  - Some of these new DPCPs are marketed as being far more potent than  $\Delta$ -9 THC.
- DPCPs are easy to buy online: **Age verification measures are rarely used and easily circumvented**.<sup>12</sup>
- In most states, **there are no age laws**, so it is up to the retailers whether to sell DPCPs to children.<sup>1,13</sup>
- DPCPs are marketed in ways that are **extremely likely to attract children**, such as added in candy, chips and chocolates.
- DPCPs are inexpensive (sometimes < \$5), and stores are **disproportionately located in low-income areas**.<sup>14</sup>

Questions or concerns? Please contact: [Matthew.Rossheim@unthsc.edu](mailto:Matthew.Rossheim@unthsc.edu).

## DPCPS CARRY RISK OF HARM, ESPECIALLY TO YOUNG PEOPLE.<sup>1,5-7</sup>

- Most states **do not require testing for chemical contaminants, even though DPCPs are commonly synthesized using harsh solvents** that are hazardous to human health.<sup>1</sup>
- Potency limits are rare, despite conclusive evidence that more potent products carry higher risk of harms.<sup>1</sup>
- Research supports that DPCP use is associated with **acute psychiatric disorders, including severe psychosis, as well as lung, chest and heart disorders, injuries and poisonings**.<sup>6-8</sup>
- DPCPs are new, so we don't know all the short- and long-term risks from use.<sup>1</sup>
- DPCPs are often consumed accidentally by children because of poor labeling and a lack of child-proof containers.<sup>9</sup>
- This problem appears to be getting worse. In 2022, U.S. Poison Centers managed **82% more  $\Delta$ -8 THC cases** than in 2021.<sup>10</sup>
- These products are marketed to young people. Some DPCP product packaging **mimics well-known food brands and flavors that appeal to children**, including Cap'n Crunch, Cocoa Puffs, Froot Loops, Nerds Ropes, Starbursts and Sour Patch Kids, among others.<sup>11</sup>

## No psychoactive drug should be sold as “hemp.”

The 2024 Farm Bill and state laws should help prevent kids from accessing harmful, psychoactive candy.





# HSC - Derived Psychoactive Cannabis Products





# Questions

- How prevalent is the use of each DPCP?
  - How valid are our measures?
    - Survey questions, biological tests, field sobriety tests...
- How do the effects of various DPCPs (and their combinations) compare to Delta-9 THC in terms of potency, and mental and physical health effects
  - Short- and long-term
- Are there specific populations that should be particularly cautious about using DPCPs?
  - Young people
  - Taken with other substances, prescription medications



# Questions?

Matt Rossheim, PhD, MPH, CPH

Matthew.Rossheim@unthsc.edu





Stay in touch!

[help@countertools.org](mailto:help@countertools.org)



**CounterTools.org**

[bit.ly/CounterToolsNewsletter](http://bit.ly/CounterToolsNewsletter)



[Facebook.com/CounterToolsNC](https://www.facebook.com/CounterToolsNC)



[@CounterTools](https://twitter.com/CounterTools)



[LinkedIn.com/company/Counter-Tools](https://www.linkedin.com/company/Counter-Tools)



**CounterTobacco.org**

[bit.ly/CounterTobaccoNews](http://bit.ly/CounterTobaccoNews)

[Facebook.com/CounterTobacco](https://www.facebook.com/CounterTobacco)

[@CounterTobacco](https://twitter.com/CounterTobacco)

