

# SUBSTANCE USE /ABUSE

## & Co-occurring Disorders



**David A. Fialko, BS, ICPS, NCTS**  
**Internationally Certified Prevention Specialist**  
**Nationally Certified Tobacco Treatment Specialist**  
**The Council of Southeast Pennsylvania, Inc.**



# **BUCKS COUNTY DRUG & ALCOHOL COMMISSION, INC.**

The mission of the Bucks County Drug & Alcohol Commission, Inc. is to reduce the use of tobacco and eliminate the use of illegal drugs and the abuse, misuse of and addiction to alcohol and other drugs.

As the state and locally designated Single County Authority (SCA) for alcohol, tobacco and other drugs, our agency will work continuously to ensure the provision of a comprehensive and balanced continuum of quality prevention, intervention and treatment services for the county.

# MENTAL ILLNESS

Approximately 1 in 5 adults in the U.S experience **mental illness** in a given year.

According to the [Centers for Disease Control and Prevention \(CDC\) WISQARS Leading Causes of Death Reports](#), in 2017:

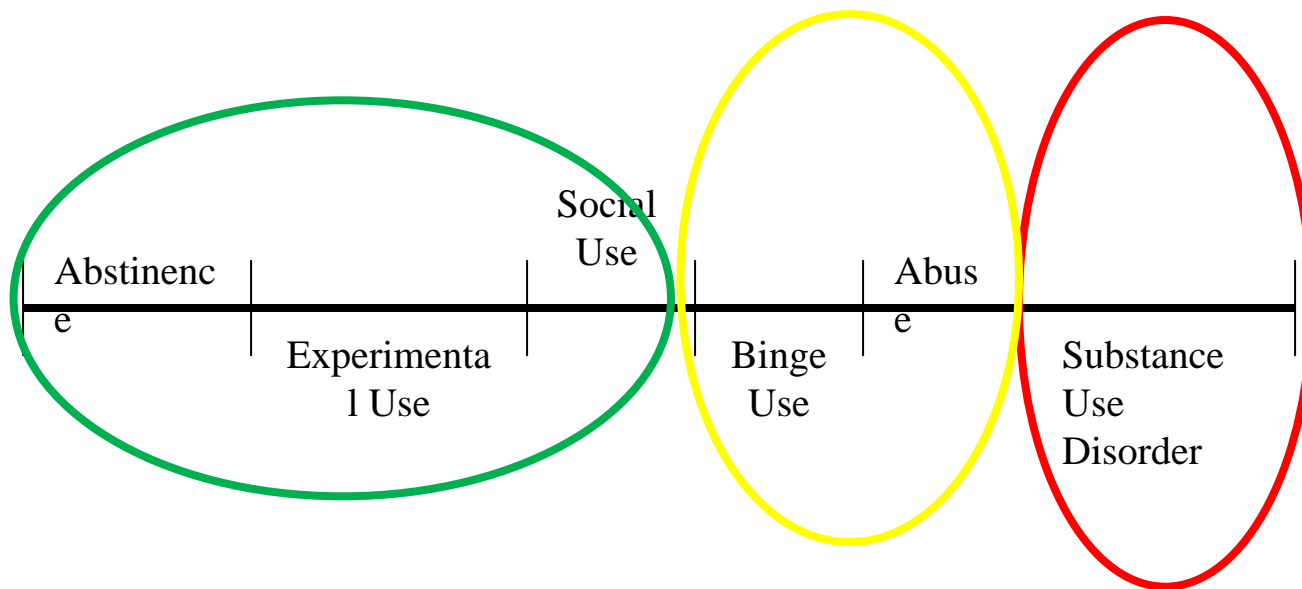
- There were more than twice as many suicides (47,173) in the United States as there were homicides (19,510).

Most people with mental illnesses are not violent, and most violent crimes are not committed by people with mental illnesses

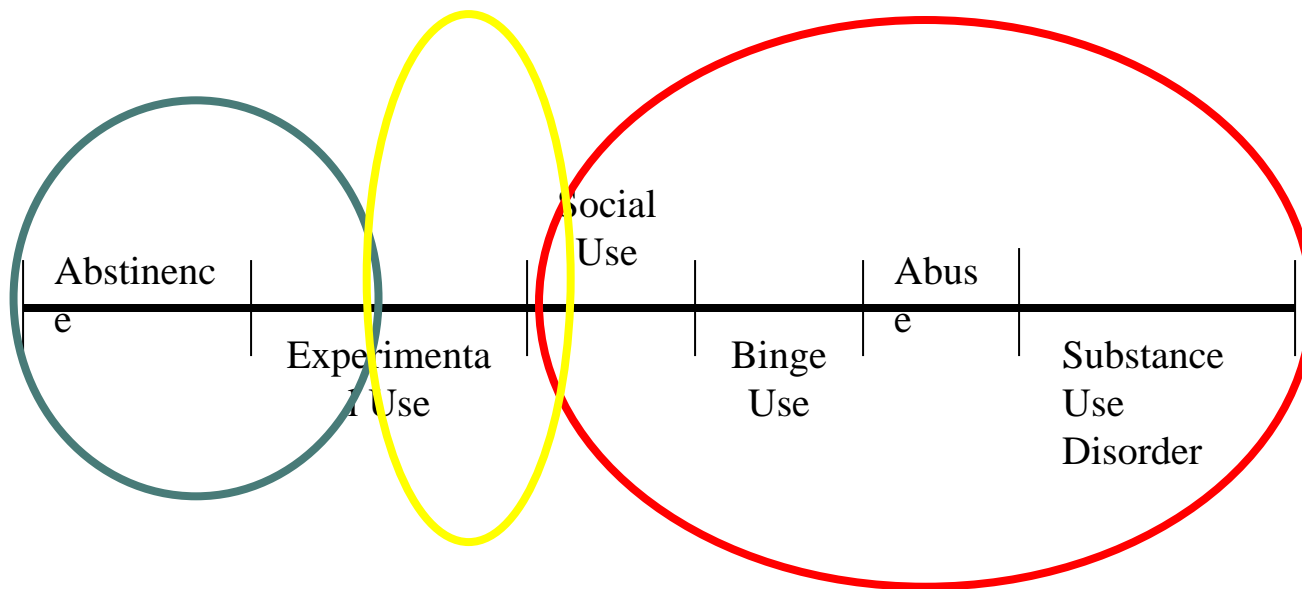
People with psychiatric disabilities are far more likely to be victims than perpetrators of violent crime.



# A CONTINUUM OF ADULT SUBSTANCE USE



# A CONTINUUM OF ADOLESCENT SUBSTANCE USE



# SUBSTANCE USE

## Substance Use

1 out of 10 Americans-aged 12 and up- battled a substance use disorder



Drug abuse and addiction cost American society more than \$740 billion annually in lost workplace productivity, healthcare expenses, and crime-related costs.



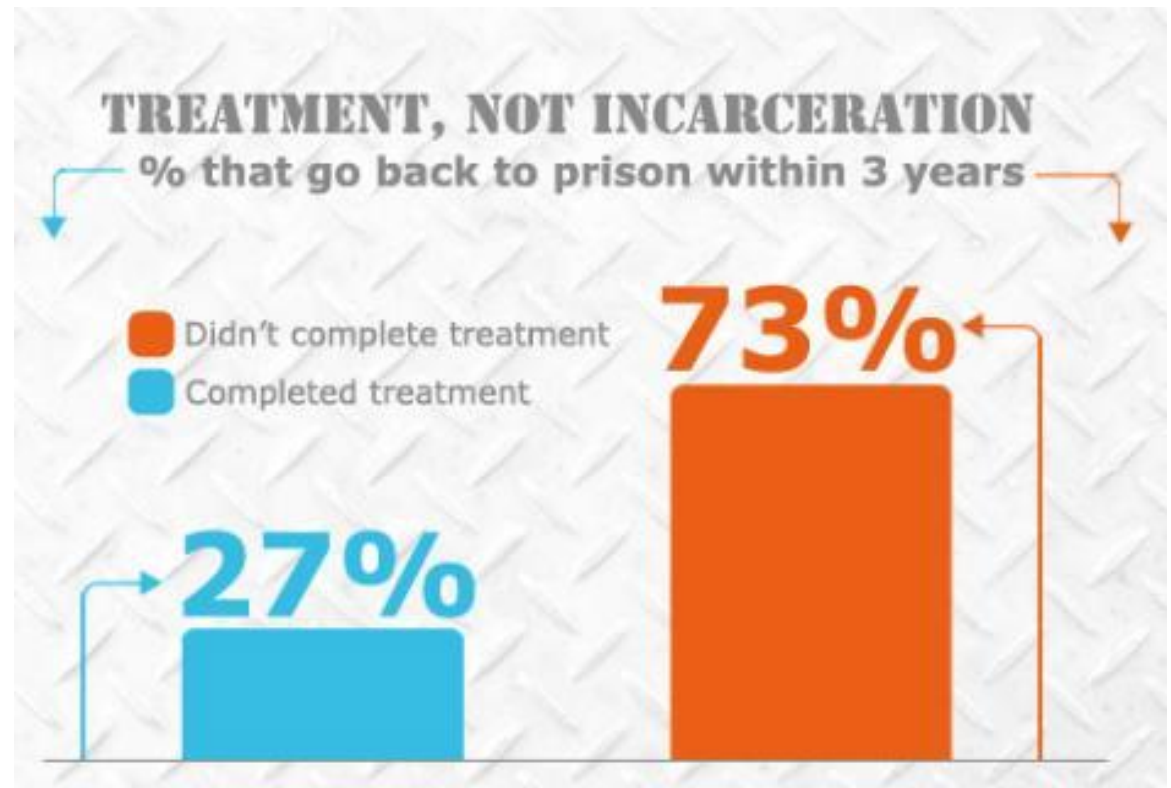
# CO-OCCURRING DISORDERS

- Universal Precautions
  - Assume all individuals who present with a substance use disorder could also have a mental health diagnosis
    - Why?
      - Past Trauma
      - ACE's
      - Symptom management of undiagnosed MH disorder



# SUBSTANCE USE AND INCARCERATED INDIVIDUAL

65% of all incarcerated individuals meet the criteria for a substance use disorder





# OLDER ADULTS

---

Do not assume no substance abuse is occurring

---

Older Adults may be abusing substances

---

Detox and Rehab take longer

---

Symptoms may include: depression, anxiety, hopelessness, dementia, chronic pain

---

Cognitive issues assumed to be related to age cleared in 75% of patients who engaged in treatment for substance use

---

Older adults often respond better to conversationalist approach.



# THE BRAIN

---



# LIMBIC SYSTEM

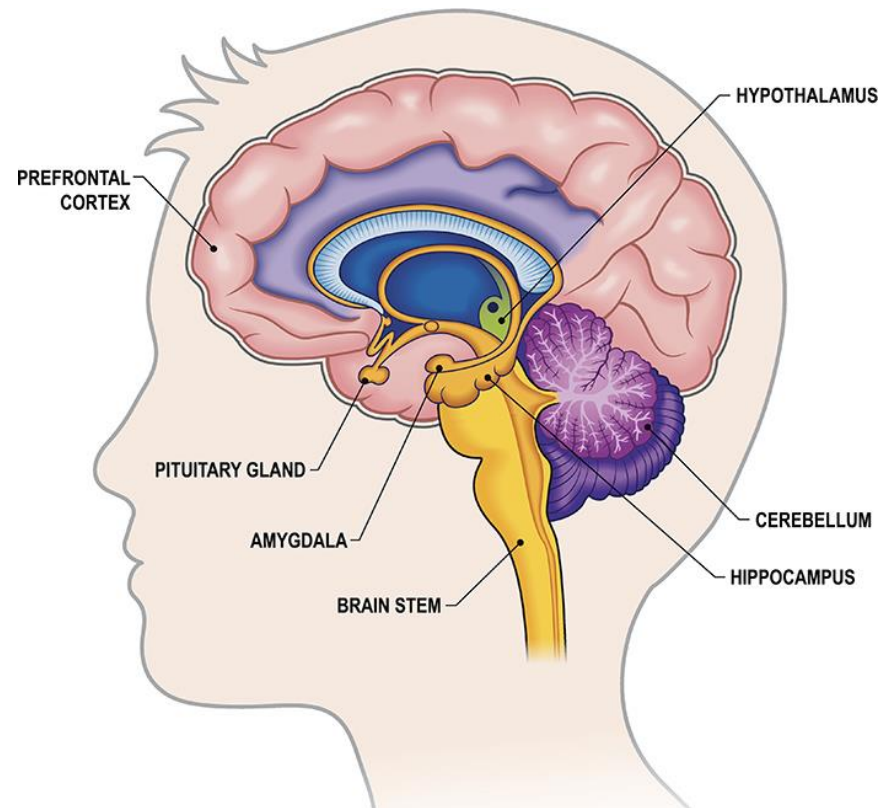
Reward center of brain

Ventral Tegmental Area (VTA) plays an important role in remembering what makes you happy

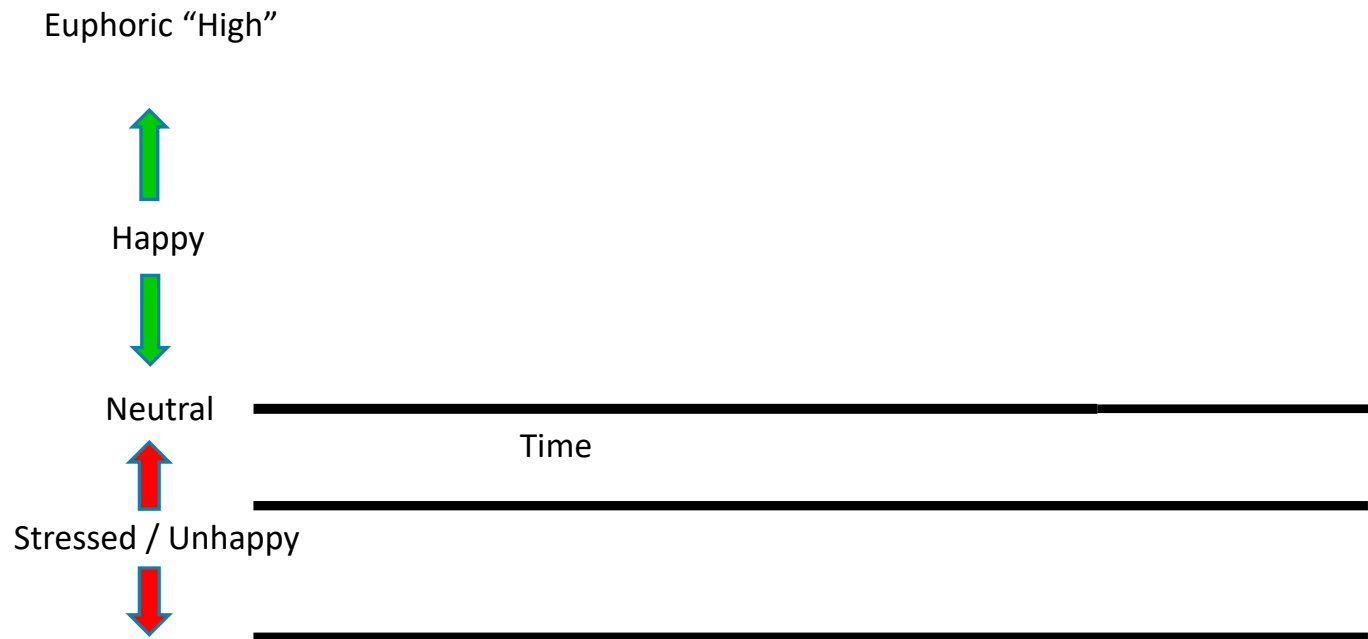
Stores People, Places and Things

Triggers

Trauma



# DOPAMINE PRODUCTION



(C) 2024 THE COUNCIL OF SOUTHEAST PENNSYLVANIA, INC.

# DOPAMINE LEVELS

## Natural

Conversation 5%

Art, Culture, Theatre 15%

Sports, Physical Exercise 25%

## Unnatural

Nicotine 15 %

Alcohol 15% - 60%

**Cannabis 100% to 150%**

**Cocaine 300%**

**Crack Cocaine 600%**

**Methamphetamines 1000%**

**Opioids 1400%**



# SUBSTANCES OF USE

---

Huffing/Inhaling

Nail Polish

Whip cream

Markers

Medicine Cabinet

Cough Syrup

Antihistamines

Mouth Wash

Hand Sanitizers

Laxatives

Diet Pills

Kitchen Cabinet

Nutmeg

Vanilla

Energy Drinks

HOUSEHOLD ITEMS USED



# SUBSTANCES

## Caffeine

- While caffeine produces a small rise in dopamine, it does not cause the large surge that unbalances the reward circuits in the brain
- Withdrawal
- Energy Drinks-college students who used energy drinks were more likely to later use stimulants for recreational use
  - Can be as much caffeine found in 14 cans of soda

## Nicotine

- Addictive
- smoking causes 1 in 5 deaths





# ALCOHOL

Oldest and best known drug in the depressant class of psychoactive substances

Involved in approximately 25% of suicide attempts per year

Suicide is 120 times more prevalent among alcoholics than the general population

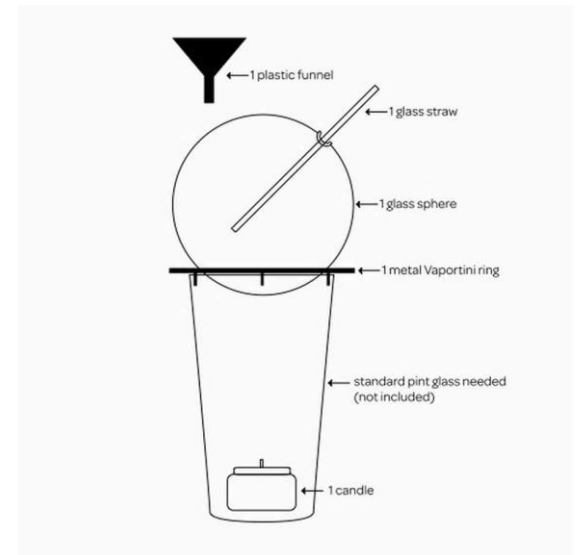
Long-term damage: Korsakoff's Syndrome (Brain deterioration) and Wernicke's Syndrome (mental derangement; Vitamin B Deficiency, Neurological deterioration), Pellagra (Nervous system damage; dementia related to Vitamin B Deficiency)

Mental Confusion and Psychological Changes



# ALCOHOL TRENDS





# THERMAL VAPORIZATION

<https://youtu.be/hpB6lb7rVDU>



# COMPRESSION VAPORIZATION

[https://youtu.be/8LO\\_uew-F9M](https://youtu.be/8LO_uew-F9M)

# ALCOHOL

## Fetal Alcohol Spectrum Disorders (FASD's)

A brain based disorder caused by alcohol exposure to the fetus during pregnancy.

Disorder presents:

- Impaired social and adaptive behavior
- Severe conduct disorders in adolescence,
- Mental health concerns
- School failure
- Employment challenges
- Substance abuse
- Difficulty with the law, and incarceration.
- Youth with FASD's are 19 times more likely to be incarcerated than youth without FASD's

The few studies that have identified incarcerated individuals with FASD estimate that the number of undiagnosed persons in correctional facilities is high

[Popova S, Lange S, Bekmuradov D, Mihic A, Rehm J. Fetal alcohol spectrum disorder prevalence estimates in correctional systems: a systematic literature review. Can J Public Health. 2011 Sep-Oct;102\(5\):336-40. doi: 10.1007/BF03404172. PMID: 22032097; PMCID: PMC6973953.](#)



# E-CIGS/VAPING

Pipe, Juuling, USB looking

Produce an aerosol by heating liquid

Harmful:

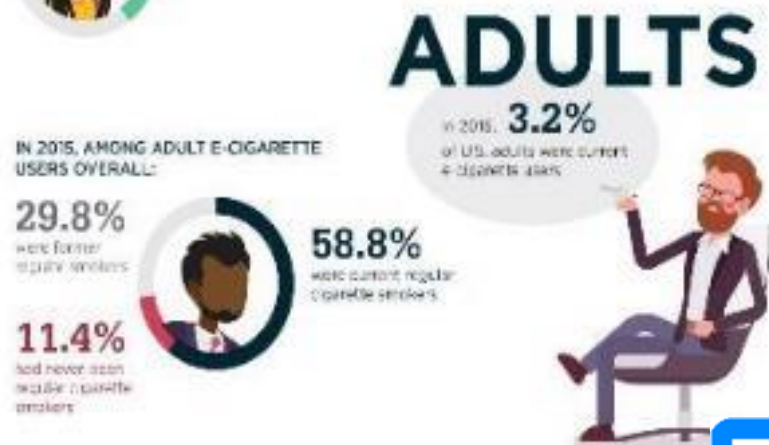
Nicotine or Marijuana

Inhale heavy metals like lead

Flavoring chemicals

Cross utilization for cannabis / marijuana

E-CIGARETTES ARE NOW THE MOST COMMONLY USED TOBACCO PRODUCT AMONG U.S. YOUTH.





E-cigarettes / carts contains liquid nicotine, flavoring , cartridge to heat up nicotine and flavoring

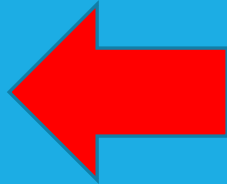
- E-pens, vape pens, e-Hookahs, hookah pens
- E-liquid in flavors
- Unregulated
- Hash oil products are #1 preferred form of use amongst minors



# VAPING



# CANNABIS CONCERNS



## Access:

- Marijuana products have more oversight than ever before, but points of There are 97 medical marijuana dispensaries in Montgomery, Philadelphia and Bucks county Region
- There is currently no legal “adult use marijuana” (aka recreational)

## Age of exposure

- Exposure to marijuana can change brain chemistry

## Purity:

- Drugs today are more potent than prior generations
- Can be either very pure or something even more dangerous

## Perceived Level of Harm

- Social norms and media have influenced an all-time acceptance of substance use by the US population.





# THINGS TO CONSIDER AMONGST STATES WHERE CANNABIS IS LEGAL

**Cannabis use disorder**—AKA as problematic use :

CUD's among adults increased after the legalization of recreational marijuana use

- Cannabis use disorder increased by 37 percent in these legal states.

According to a new study from Columbia University Mailman School of Public Health and NYU School of Medicine.

- Among adults aged 26 or older, past-month marijuana use after legalization was 26 percent higher than in non-recreational states.
- Similarly, frequent use rose by 23 percent
- Similarly, there was a small increase in cannabis use disorder in youth in these states.

The Columbia University study is the first to look at the impact of recreational marijuana legalization on both use and cannabis use disorder across multiple age groups. Findings are published online in JAMA Psychiatry. <https://pubmed.ncbi.nlm.nih.gov/31722000/>



# CANNABIS POTENCY (FLOWERING MATERIAL)

## National average of marijuana's THC content:

- 1978 was 1.37%
- 1988 it was 3.59%
- 1998 4.43%
- 2008 8.49% University of Mississippi's Potency Monitoring Project (UMPMC)

## Colorado average of marijuana's THC content:

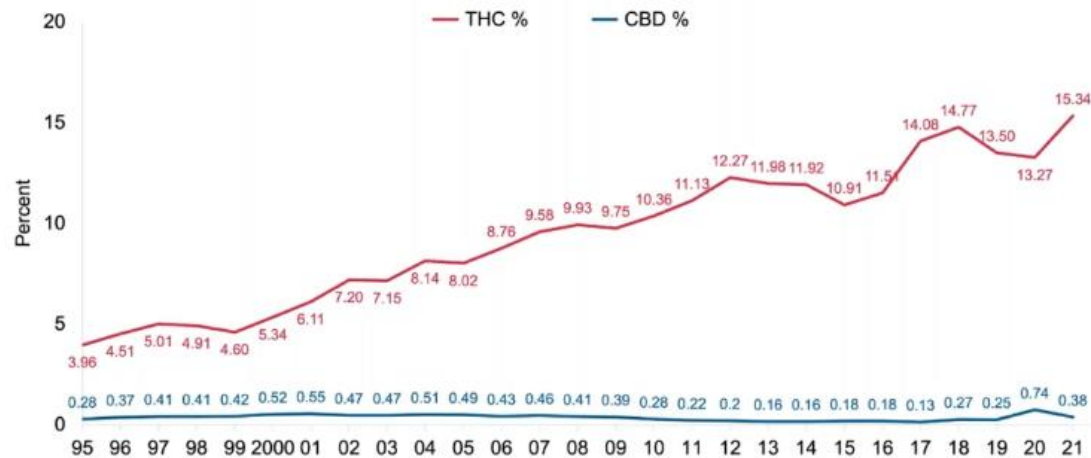
- 2016 17.1% Colorado Health Research Council (CHRC)



# CANNABIS POTENCY (FLOWERING MATERIAL)

## More THC, More Consequences

Percentage of THC and CBD in Cannabis Samples Seized by the DEA, 1995-2021





# NOT THE SAME AS PREVIOUS GENERATIONS

# NOT THE SAME AS PREVIOUS GENERATIONS

Godfather OG is the world's strongest marijuana strain, claims High Times. The THC concentration of this indica-dominant hybrid is said to be around 34% THC



# QUESTION

**Do we currently have legal access to recreational cannabis?**

# INDUSTRIAL HEMP: THCA & DELTA 8



Federally Regulated / poorly enacted

Prohibiting THCA smoke / inhalable limits



Legislators impose laws / regulatory bodies can enact “rules” / “laws” to regulate the fed law.

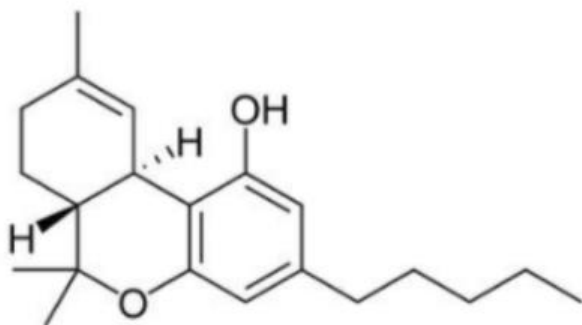
limits Governors and Attorneys Generals



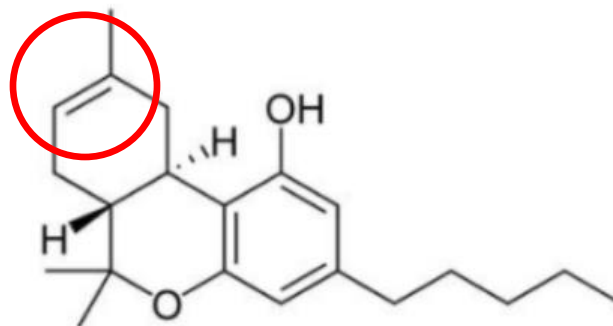
Hemp Industry sued Arkansas and won to allow the state to sell Delta 8. A standard that is now set for states to not be able to prevent Delta 8 sales

Federal supersedes state laws Industry has \$\$\$ to sue

# DELTA 9 VRS. DELTA 8



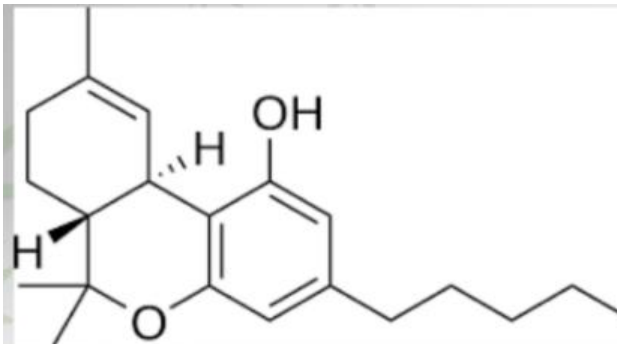
delta-9-THC



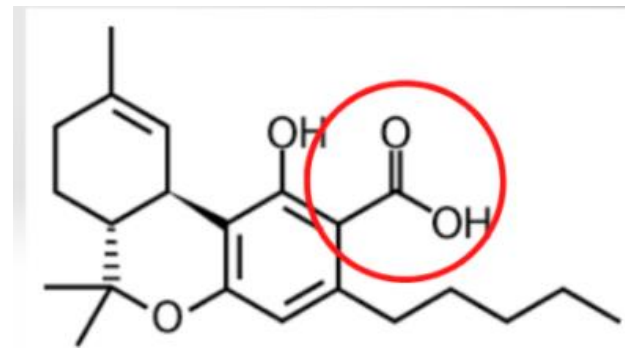
delta-8-THC



# DELTA 9 VRS. THCA



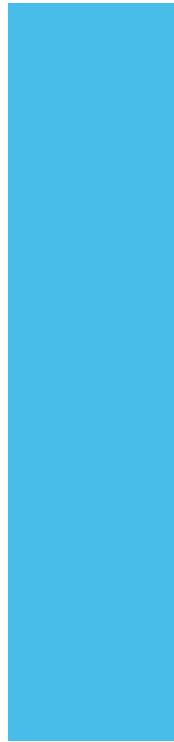
**Delta-9 THC**



**THCA**



SHUP



# DELTA 8

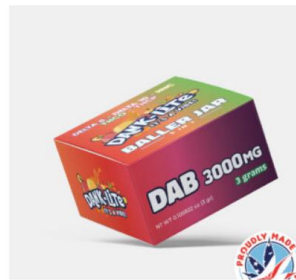
Delta-8 products are hemp-derived and fall under the guidelines of the 2018 Farm Bill. This means that the end product must contain less than 0.3% THC per total volume. Delta-8 tetrahydrocannabinol

- Legal since it comes from HEMP not “Marijuana”
- Very similar to Delta-9 THC
- Delta-8 provides similar effects as Delta-9
  - Less potent
- Will test positive for marijuana on drug test due to its metabolites



Baked Cherry Pie

\$15.00 - \$700.00



Baller Jar Dab – Golden GOAT (Hybrid)

\$50.00

# DELTA 8 & LAWS?

Municipalities would benefit from ordinances banning sales of Delta 8 products.

Virginia banned Delta-8 THC

# SYNTHETIC DRUGS

## **MDMA-club drug**

Synthetic hallucinogen-  
lowered inhibitions, enhanced  
sensory perception

Slang-Adam, Clarity, Eve,  
Lover's speed, Peace, Uppers,  
X, Molly, Sky

## **DMT-intense short lived hallucinogens**

Slang-DMT, Dmitri



# HALLUCINOGENS

Teas

**Kratom**

**Khat**

**Salvia**

**Ketamine**-animal tranquilizer  
(K-Hole)



## Mushrooms

Slang-Little smoke, Magic mushrooms, purple passion, shrooms  
Fresh or dried mushrooms-brewed or eaten

## LSD

Slang-Acid, blotter, blue heaven, cubes, yellow sunshine

## PCP

Slang-Angel Dust, boat, peace pill  
Mixed with Marijuana-**WET**

# HALLUCINOGENS



# COUGH AND COLD MEDICINE

## **Dextromethorphan (DXM)**

Euphoria and dissociative  
effects/hallucinations

OTC

Cause nausea

Coricidine-no guaifenesin

Robotripping

Skittling

CCC or triple C

## **Promethazine-codeine cough medicine**

Euphoria and dissociative  
effects/hallucinations

Prescription

Syrup

Sizzup

Purple drank



Solvents, aerosols, and gases found in spray paints, markers glues, cleaning fluids, butane lighters

Before inhaling, inhalants are either sprayed into a plastic bag, poured into a bottle, or soaked onto a cloth and inhaled either through the nose or mouth.

- Depressants
- Slang-Poppers, Snappers, Whippets, Laughing Gas



# INHALANTS







Treats anxiety and sleep problems

#### Benzodiazepines

Alprazolam (Xanax), Diazepam (Valium), Lorazepam (Ativan), Rohypnol

#### Sleep Medications

Lunesta, Ambien, Sonata

#### Barbiturates

Phenobarbital (Nembutal, Luminal)



# TRANQUILIZERS AND SEDATIVES



# AMPHETAMINES

- Stimulant that treats attention-deficit hyperactivity disorder, narcolepsy, help you lose weight
- Adderrall, Benzedrine, Concerta, Ritalin
- Non-Stimulant meds for ADHD, ADD
  - Strattera, Clonidine (Kapvay), Guanfacine (Intuniv)



## Stimulant

increased metabolism, rapid heart rate and similar effects.

The effects of methamphetamine are quite the same but may also include:

Impaired speech

Rapid pulse

Dry mouth

Shallow breathing

Constipation

Dizziness

Insomnia

Methamphetamine actually breaks down and metabolizes into amphetamine.



# METHAMPHETAMINES



Cocaine is a stimulant that leads to psychological and physical dependence that compels the individual to use cocaine

The effects of the drug only last for a short time

To sustain the high, users will often take cocaine repeatedly in a short period

Mixed with cornstarch, talcum powder, or flour and other drugs such as the stimulant amphetamine, or synthetic opioids, including fentanyl.



COCAINE



# HEROIN

Synthesized from morphine, a naturally occurring substance extracted from the seed pod of the Asian opium poppy plant

Heroin usually appears as a white or brown powder or as a black sticky substance, known as “black tar heroin”

An estimated 808,000 people aged 12 or older in 2018 used heroin in the past year



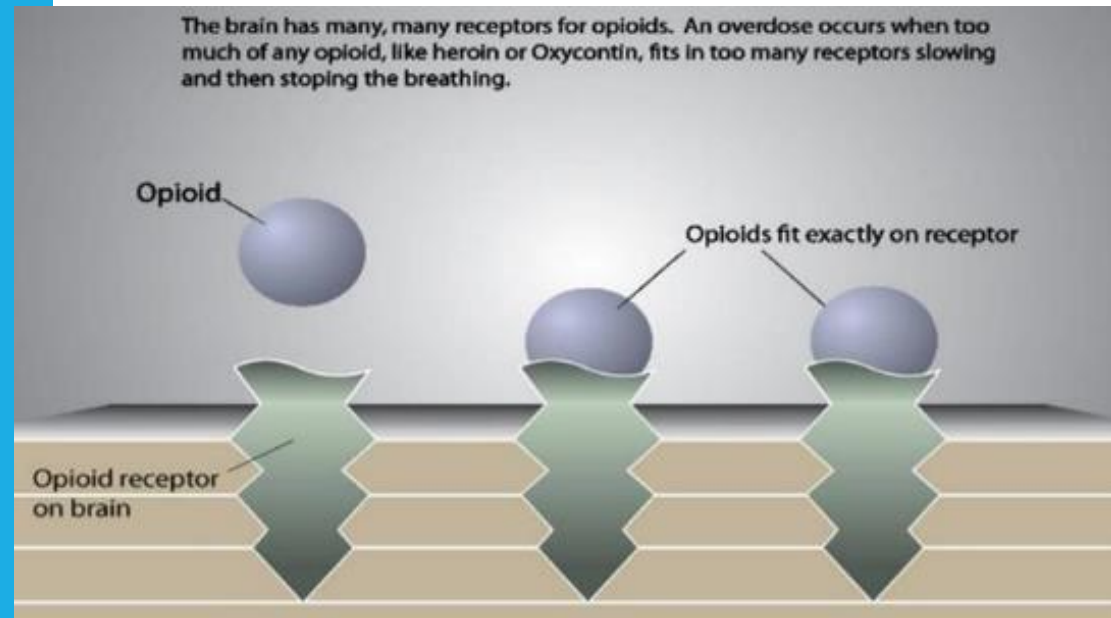
# OPIATES OTHER THAN HEROIN

## Pain relievers

- Codeine
- Percocet, Oxycodone, Oxycontin
  - All have oxycodone but in different strengths and pattern of release
- Vicodine, Lortab, Loracet
  - Hydrocodone
- Fentanyl, Acetyl Fentanyl
- Other Opiates of Use
  - Morphine, Dilaudid, Demerol, Methadone



# WHAT IS AN OPIOID OVERDOSE



# WHAT IS AN OPIOID OVERDOSE

Opioid overdose kills by:

- Respiratory Depression
  - This involves signaling to the heart

Overdose can occur 1-3 hours after the drug is taken

Drug overdoses are often witnessed

Narcan





# MENTAL HEALTH MEDICATIONS

## Neurontin/Gabapentin

Energy, little side effects after  
use

## Wellbutrin

Snorted

Can cause seizures



# QUESTIONS

There Are No Bad  
Questions!

Only Bad Answers!