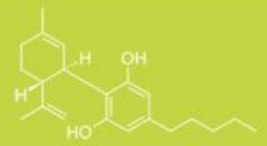
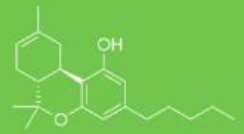
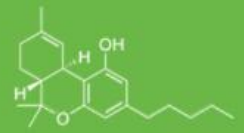
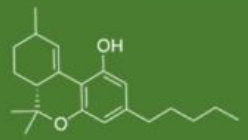
Marijuana

Brief overview of marijuana trends and developing statistics

WHAT IS LEGAL IN TENNESSEE?

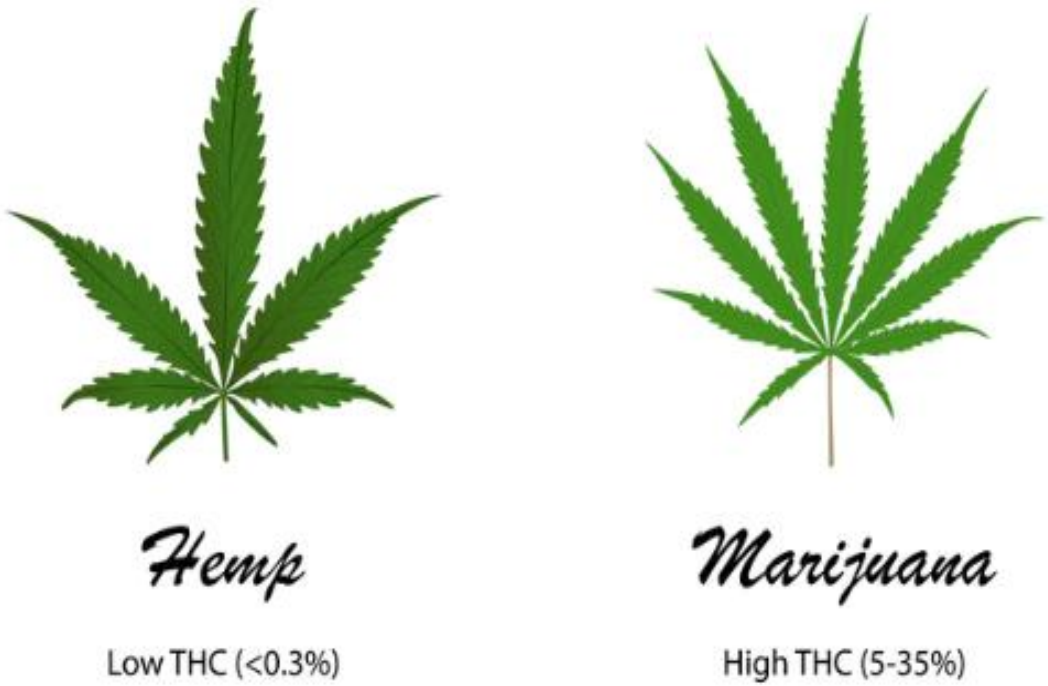
- CBD
- Delta-8 THC
- Delta-9 THC (Concentrations of 0.3% or less)
- Delta-10 THC
- THC-A (loop hole weed [concentrations of 0.3% or less*])

What's the difference?

	CBD It's what you *don't* feel	**Delta-8 THC** Relax + Chill	**Delta-9 THC** No more than 0.3%	**Delta-10 THC** Creative + Euphoric
				
Date first isolated	1940	1941	1964	1984
Is it legal in Tennessee?	Yes	Yes	Yes, under 0.3%	Yes
Is it psychoactive?	No	Yes	Yes	Yes
Average dose	20-40 mg	20-60 mg	10-30 mg	20-60 mg
Concentration in cannabis	Up to 20%	Less than 1%	Up to 30%	Less than 1%
Will it show up on a drug test?	No*	Yes	Yes	Yes
Anecdotal experiences	Pain relief + relaxation	Calming + uplifting	Euphoric + chill	Energizing + creativity

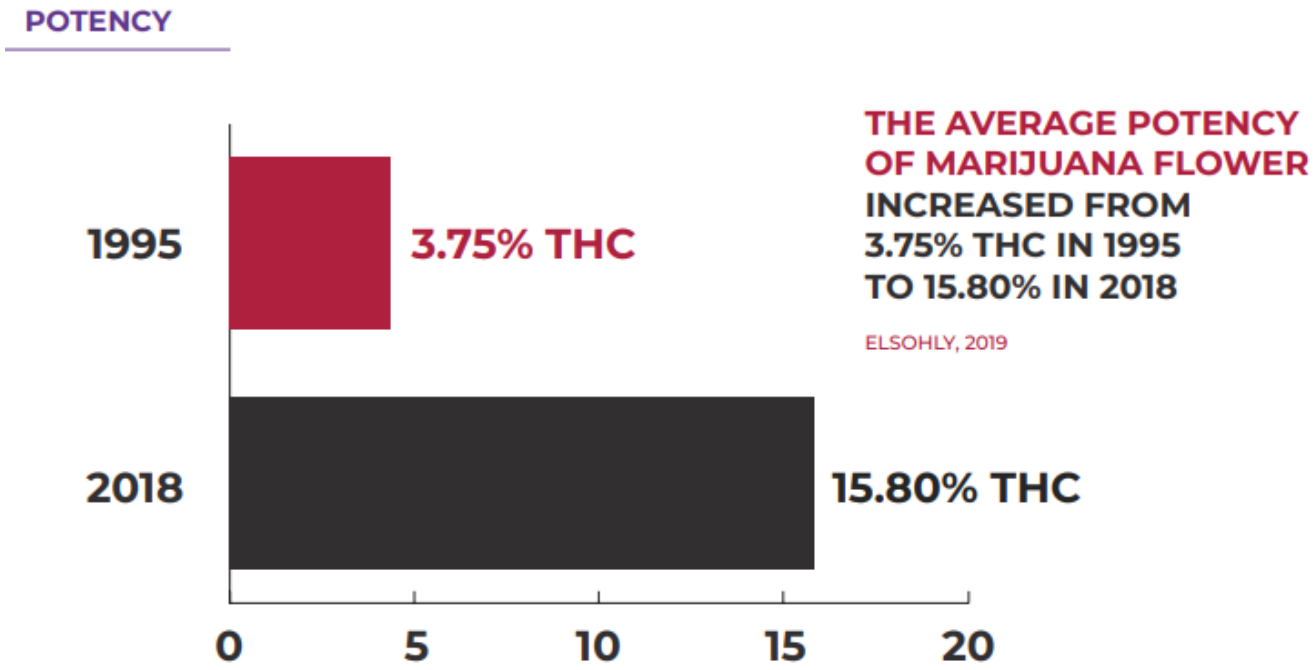
What makes Delta-9 legal?

- 2018 Farm Bill
- Redefined the term Hemp
- *Hemp.--The term 'hemp' means the plant Cannabis sativa L. and any part of that plant, including the seeds thereof and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis*

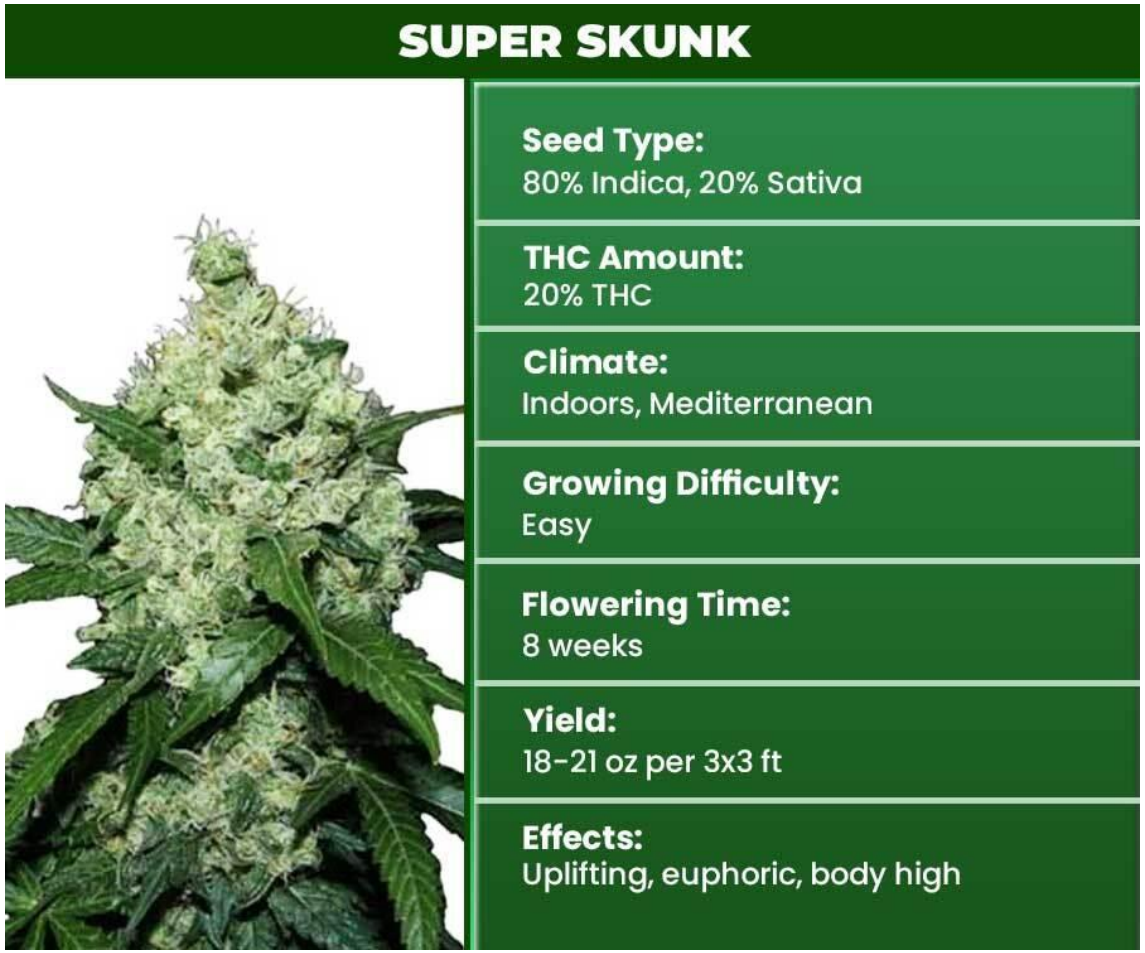


A Harmeless Plant?

LEARNABOUTSAM.ORG

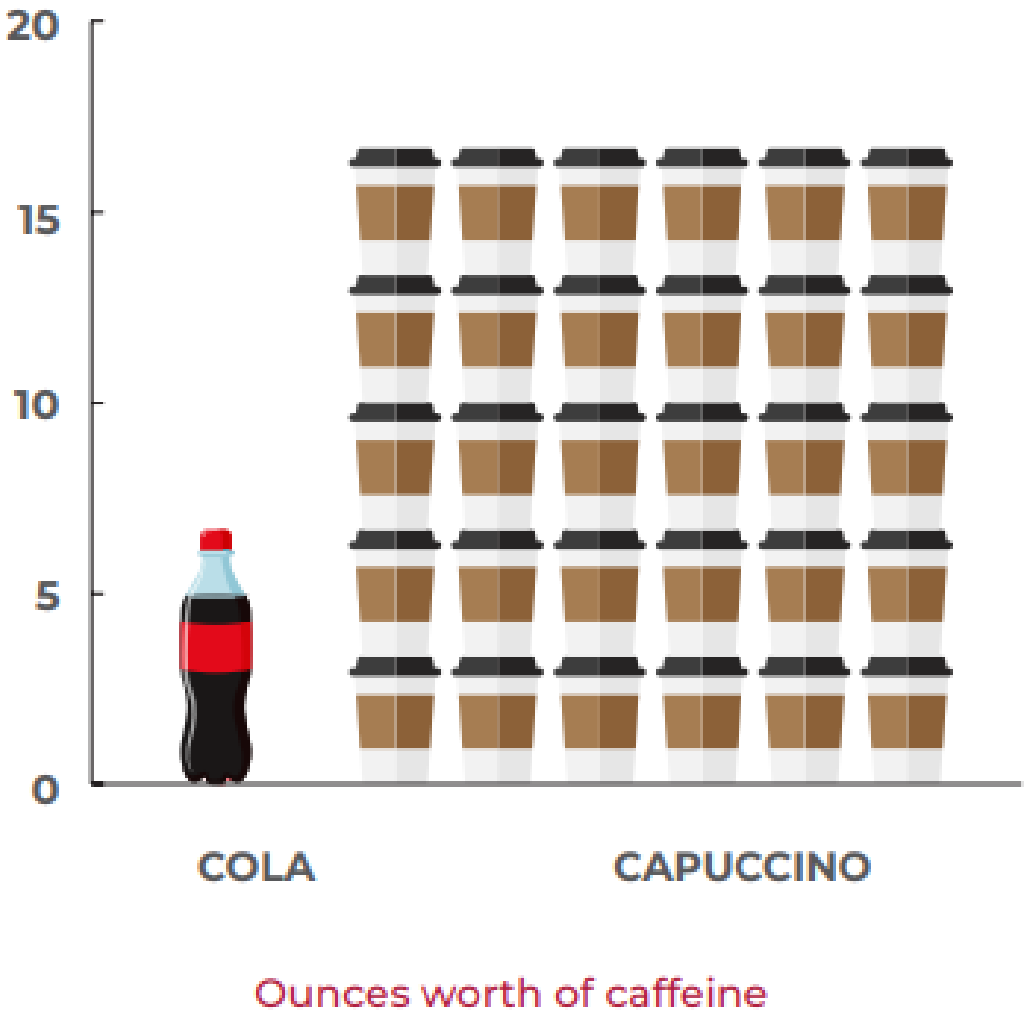


Average is 22% THC in legal state and Concentrates are up to 99% THC



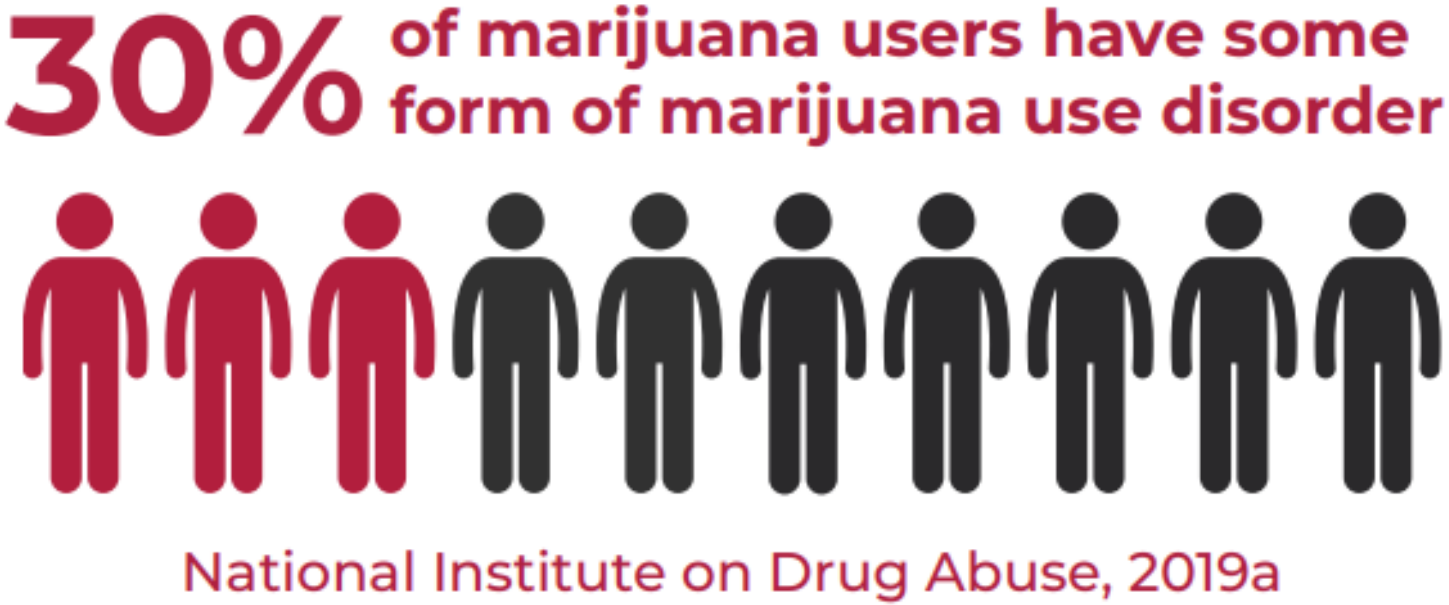
NOT ONLY POTENCY, BUT CONSUMPTION LEVELS: WHAT DO USERS LOOK LIKE TODAY?

The change in the typical marijuana user today versus twenty years ago, according to Carnegie Mellon professor Jonathan Caulkins, is akin to thinking about a typical caffeine drinker consuming one 20-ounce cola worth of caffeine versus about thirty 16-ounce cappuccinos today.



- *Coke has 57mg caffeine per 20 oz*
- *Cappuccino has 173mg per 16 oz*
- *X 30 = 5,190 mg equivalent*

Marijuana Use Disorder



Marijuana Use Disorder

- Per the Centers for Disease Control (CDC)

Addiction (Marijuana or Cannabis Use Disorder)

Print

Some people who use marijuana will develop marijuana use disorder, meaning that they are unable to stop using marijuana even though it's causing health and social problems in their lives.

- One study estimated that approximately 3 in 10 people who use marijuana have marijuana use disorder.[1]
- Another study estimated that people who use cannabis have about a 10% likelihood of becoming addicted.[2]
- The risk of developing marijuana use disorder is greater in people who start using marijuana during youth or adolescence and who use marijuana more frequently.[3]

** Hasin DS, Saha TD, Kerridge BT, et al. Prevalence of marijuana use disorders in the United States between 2001-2002 and 2012-2013. JAMA Psychiatry. 2015;72(12):1235-1242.*

USE BEFORE THE AGE OF 18 INCREASES THE LIKELIHOOD OF MARIJUANA USE DISORDER BY SEVEN FOLD

National Institute on Drug Abuse, 2019a

LEGALIZATION IS ASSOCIATED WITH A 25% INCREASE IN MARIJUANA USE DISORDER AMONG 12–17-YEAR-OLDS

CERDÁ ET AL., 2020

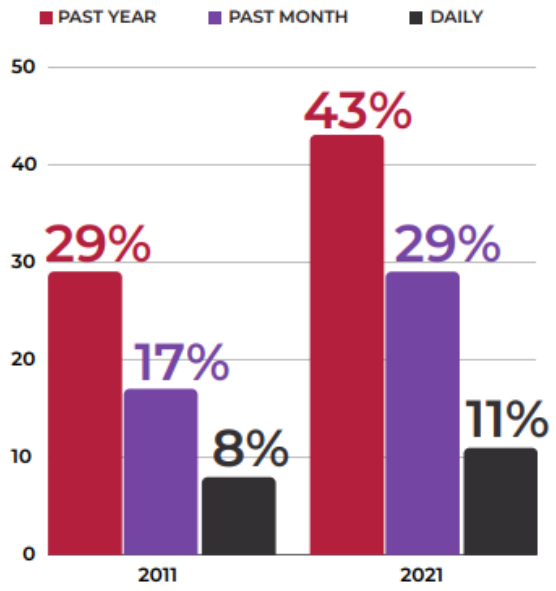
How Prevalent is Marijuana Use?

52.5 MILLION AMERICANS used marijuana in 2021 vs. 17.5 Million Americans used marijuana in 1992 NSDUH 2021

USE IS INCREASING ACROSS THE BOARD, BUT ESPECIALLY IN YOUNG ADULTS AGED 19-30:

29% reported past-month use in 2021 up from 17% in 2011; 11% reported daily use, up from 8% in 2011

MTF 2021



Cannabis Induced Psychosis

- What is Cannabis Induced Psychosis?
- It is still being studied and at this time there is no “hard set” definition.
- At this time cannabis use (specifically with high percentage THC products) is sometimes causing temporary states of psychosis and triggering the onset of severe mental disorders to include schizophrenia. Cannabis use is also being linked to increased suicidal thoughts and behaviors in teens and veterans.
- The temporary psychotic states are reported to last up to 24 hours. (per medicalnewstoday.com)

Bryn Spejcher

She stabbed a man 108 times and got probation. What to know about 'cannabis-induced psychosis.'

Katie Camero
USA TODAY

Published 8:29 a.m. ET Jan. 31, 2024 | Updated 5:46 p.m. ET Jan. 31, 2024

Bryn Spejcher with her lawyers at the Ventura County Government Center, Hall of Justice, courtroom 47 on Thursday, Nov. 9, 2023. She's being charged with manslaughter in the 2018 death of Chad O'Melia of Thousand Oaks, a man she was dating. She stabbed him more than 100 times, and doctors say she was suffering from cannabis-induced psychosis at the time. *JUAN CARLO/THE STAR*

The recent sentencing of Bryn Spejcher, the 33-year-old who stabbed a man she was dating more than 100 times during a cannabis-induced psychotic episode, has brought national attention to what experts call a rare yet increasingly common side effect of recreational marijuana use.

Spejcher, who was a novice marijuana user, was smoking from 26-year-old Chad O'Melia's bong in 2018 when she went into a coughing fit and began to hallucinate. She said she thought she was dead and heard voices of paramedics trying to save her; the voices then said she had to kill O'Melia to bring herself back to life.

Spejcher stabbed him with two large knives 108 times before stabbing herself in the neck. Blood tests found no other intoxicating substances in her system aside from THC, the psychoactive compound in cannabis, and she had no prior history of mental illness, violence or suicidal impulses.

Diego Silva

Murder-accused who killed and decapitated his wife found not guilty by reason of insanity

Trial heard due to cannabis-induced psychosis, Diego Costa Silva did not know the nature and quality of his actions and did not know that what he was doing was wrong

Trial heard due to his mental disorder, Diego Costa Silva had come to believe his wife was possessed by a serpent and that she would kill him.

FRI, 08 MAR, 2024 - 15:08

EOIN REYNOLDS

Diego Costa Silva, who cut his wife's head off while suffering from a cannabis-induced psychosis, has been found not guilty of her murder by reason of insanity by a jury at the Central Criminal Court.

Mr Costa Silva, 35, had pleaded not guilty to murdering Fabiola De Campos Silva, 33, on November 4, 2021 at their home in Charlestown Place, Finglas, Dublin 11.

His trial heard due to his mental disorder, Mr Costa Silva had come to believe that his wife was possessed by a serpent and that she would kill him.

After he attacked her, by striking her on the head with a mug, strangling and stabbing her, he cut her head off believing he had to do so to make sure the serpent was dead.

Two forensic consultant psychiatrists gave evidence Mr Costa Silva was suffering from cannabis-induced psychosis with symptoms including paranoia, delusions and auditory hallucinations.

As a result of his illness, he did not know the nature and quality of his actions and did not know that what he was doing was wrong, the psychiatrists said.

Barristers for the defence and prosecution told the jury Mr Costa Silva was not legally responsible for his actions and qualified for the special verdict of not guilty by reason of insanity under the Criminal Law (Insanity) Act 2006.

The jury of seven men and five women took two hours and 24 minutes to come to their unanimous verdict.

Adam Kehl

Cannabis-induced psychosis blamed in beheading of father at Muskoka cottage

Warning: Graphic and disturbing content

By **Mary Beth Hartill MuskokaRegion.com**

Friday, November 22, 2019 | 3 min to read

Adam Kehl (left), 30, of British Columbia, has been charged with the second degree murder of his father John Kehl, 67, of Brampton following what police are describing as a "violent altercation" at a cottage on Kahshe Lake in Gravenhurst on Saturday, Aug. 11. - Adam Kehl/Facebook

MUSKOKA — The man accused of the brutal stabbing and beheading of his father at a Kahshe Lake cottage is sentenced to five years jail less time served.

The court heard cannabis-induced psychosis, not a major mental disorder, spurred the brutal death of 67-year-old John Kehl by his then 31-year-old son Adam.

Adam Kehl voluntarily entered a plea of guilt to manslaughter in front of Justice Michelle Fuest in Barrie court on Nov. 22, who called the incident "horrifying and unusually brutal."

Crown attorney Lyndsay Jeanes led the court through the weeks leading up to the horrific events of Aug. 11, 2018.

Adam had returned to Ontario from British Columbia to visit family and friends and was staying at the family's Kahshe Lake cottage in the weeks before the murder. Throughout the week, at times, he exhibited agitated and aggressive behaviour.

There were 14 people visiting on the weekend of the murder.

Kehl was, at the time, a heavy cannabis user, consuming the then-illegal substance throughout the week and twice before the incident.

His father had addressed guests after they arrived, telling them something was wrong with his son but to please not address it with him directly as he found it upsetting, and thanked them for their support.

Adam Kehl

At about 2 p.m. the group was having lunch when Adam became angry at a friend, shoving him out of the screened-in gazebo where they were dining.

“You have to leave now.”

Once outside, he grabbed his friend and punched him in the head.

He went to a bunkie and emerged a short time later carrying a large knife. John attempted to intervene and was stabbed. Once on the ground, Adam flipped his father over and continued stabbing him in the torso and head before decapitating him with a knife.

Guests fled, barricading themselves in the cottage and in the bunkie, calling police. Neighbours across the bay heard the sounds — howling like an animal, a wolf or something not human. They saw him stabbing or sawing at the body of John Kehl. Some witnesses observed him biting the body.

He picked up the head and ran across the shoreline, throwing it and what was believed to be the knife into the lake. He ran and leapt off the dock shouting the name of his girlfriend at the time, screaming, “I love you” and “I am free.”

When police arrived by boat to the water-access-only property, they saw Adam rocking back and forth above his father’s body.

Police shot him with two rubber bullets when he refused to co-operate; he seemed oblivious to these shots. They deployed a conducted energy weapon. When asked his name he responded “Adam, the Devil” in a voice different than his own.

At the OPP detachment, he was aware of what he had done. He was emotional and apologetic. He didn’t want to cause harm. Didn’t mean to do it.

In addition to the cannabis use, he was taking a prescription of 20 milligrams of escitalopram, a medication for depression. He was transferred the following day to the Central North Correctional Centre, where he acknowledged he had killed and decapitated his father and that he could see himself doing it and couldn’t control himself.

From the time he arrived at the detention centre until today, there have been no further psychotic episodes, court heard.

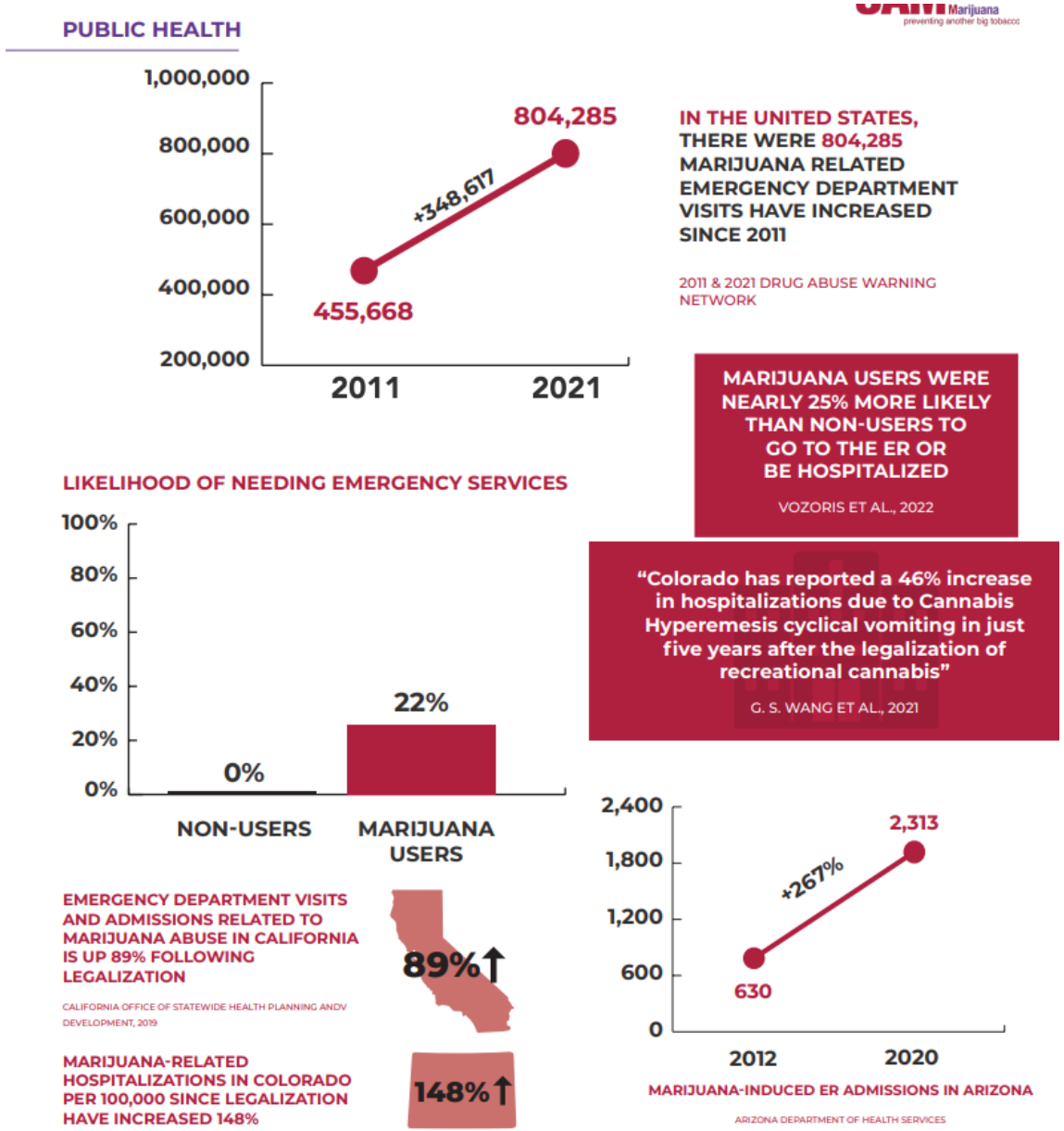
The 32-year-old spoke eloquently before the court reading from a list of apologies to those he put through this “terrifying and traumatic experience.” He made eye contact with many as he named individuals, letting them know he understands if he never sees or hears from them again, but he would welcome them if they wanted to reach out as part of their healing process. “I will be there.”

“I never imagined I could take away someone’s life,” he said. “Especially someone I love.”

Health Issues Related to Marijuana

Short Term Effects
- Altered Senses (example seeing brighter colors)
- Altered sense of time
- Change of mood
- Impaired mobility
- Difficulty thinking
- Impaired memory
- Hallucinations
- Delusions
- Psychosis

Long Term Effects
- Impaired memory
- Lower IQ (one study showed on going users between 13-38 years old lost 8 IQ points on average)
- Respiratory issues (consistent with tobacco use)
- Increased heart rate for up to 3 hours, potentially increases heart attack risk particularly is older users
- Problems with child development during and after pregnancy



Marijuana Use During Pregnancy

- One study found that 20% of pregnant women under 24 years old screened positive for marijuana
- Often used for nausea remedy
- Linked to low birth weight
- Increased risk to the brain and behavior of fetus
- Children exposed to marijuana in the womb have an increased risk of problems paying attention, memory, and problem solving compared to unexposed children
- Research also shows THC is excreted through breast milk and could have effects on a baby's brain development.
- Marijuana use has been linked to preterm births and increased still births
- A Canadian study found that women who used marijuana during pregnancy have more than a 50% greater chance to give birth to a child with autism vs non users.
- Cannabis contains many of the same chemicals found in tobacco. These chemicals are linked to lowering supply of oxygen and nutrients to a baby in the womb

DUI

THC-involved driving fatalities are skyrocketing

Oregon
50% of drivers assessed tested positive

Washington
more than doubled

Colorado
138% increase since legalization

IMPAIRED DRIVING

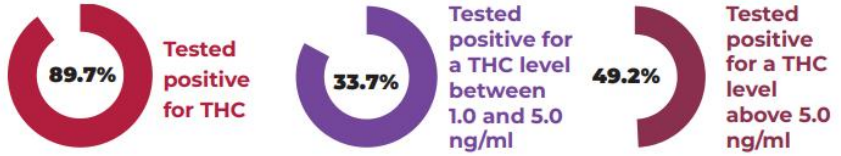
SAM Smart Approaches to Marijuana
preventing another big tobacco

6800

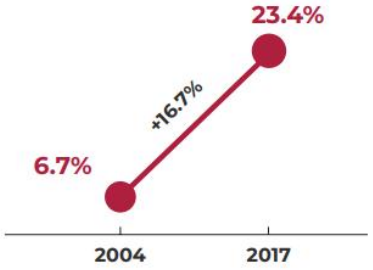
If marijuana were legalized nationwide, the U.S. would suffer an additional 6,800 excess fatal crashes every year

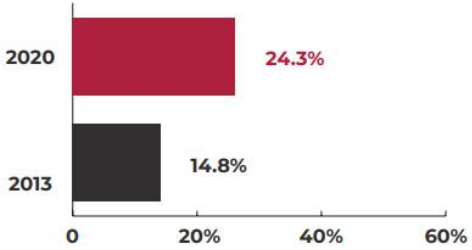
KAMER ET AL., 2020

Among Colorado drivers who underwent confirmatory testing for Delta-9 THC between 2016 and 2019



ROSENTHAL & REED, 2022





IN MICHIGAN AMONG THOSE FATAL CRASHES WHERE CANNABIS WAS TESTED, THE PROPORTION OF TESTS THAT WERE POSITIVE FOR CANNABINOIDS MORE THAN TRIPLED OVER 13 YEARS (6.7% IN 2004 TO 23.4% IN 2017).

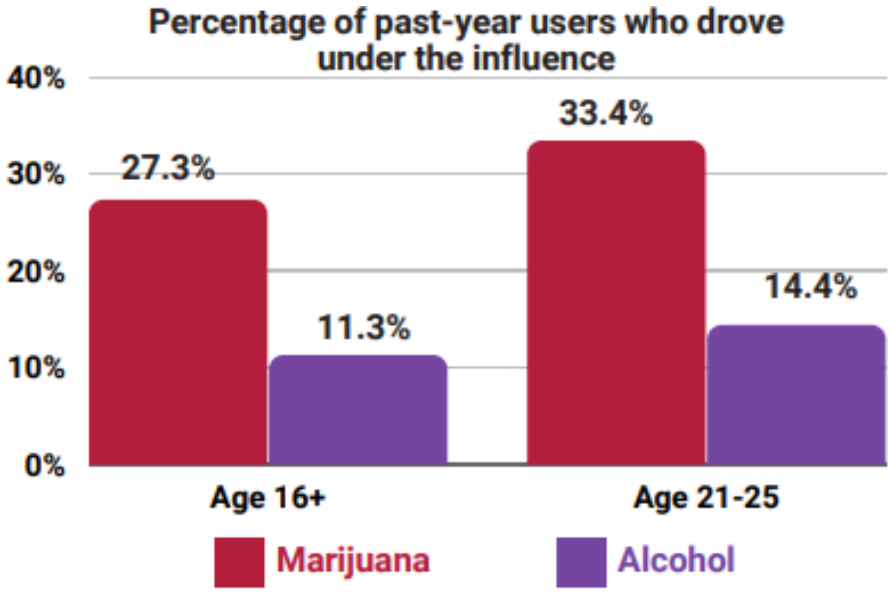
UNIVERSITY OF MICHIGAN INJURY PREVENTION CENTER, 2022, P. 12

IN 2020, 24.3% OF DRIVERS INVOLVED IN TRAFFIC FATALITIES TESTED POSITIVE FOR MARIJUANA, UP FROM 14.8% IN 2013

ROCKY MOUNTAIN HIGH INTENSITY DRUG TRAFFICKING AREA, 2021

DUI

A 2022 report from the NTSB noted that marijuana is the second most commonly detected substance after alcohol in arrests for impairment and crashes–it is more often detected than stimulants, sedatives, and prescription drugs. As with alcohol, THC impairment gets worse as dose increases, helping explain why those convicted of DUI for THC in Colorado were in crashes over ten times more often than sober drivers.



48.8% of teen drivers who currently use marijuana reported driving under the influence

6,800 estimated excess driving fatalities if marijuana were legalized on the federal level

26% of users in Virginia reported driving while under the influence at least once a week

10x Colorado drivers convicted of DUI for THC only were in crashes over ten times more frequently than sober drivers

1 in 4 road deaths in Colorado involve marijuana

DUI

Perceptions of the dangers behind THC-impaired driving are misaligned with the reality:

- 94% of drivers believed driving after drinking enough alcohol was very or extremely dangerous, while only 65% of drivers felt driving within an hour of using marijuana was very or extremely dangerous.
- Of respondents between the ages of 19 and 24, only 63.1% believed that driving under the influence of marijuana was extremely or very dangerous, but 100% of respondents in that age group said that driving while over the legal limit for alcohol is extremely or very dangerous.
- A 2022 Virginia survey found that 68% of people who used marijuana in the last 3 months claimed that marijuana actually makes people safer drivers.
- AAA's 2021 Traffic Safety Culture Index found that drivers were 10 times more likely to "regularly" drive after using marijuana than after being over the legal limit of alcohol.

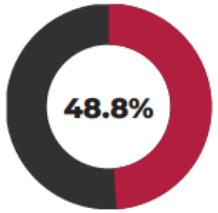
CHP: 3 dead after driver under influence of cannabis caused multi-car crash on I-880 in Fremont - ABC7 Chicago

Visit ›

1 IN 4

ROAD DEATHS IN COLORADO INVOLVE MARIJUANA

COLORADO DIVISION OF CRIMINAL JUSTICE, 2020.

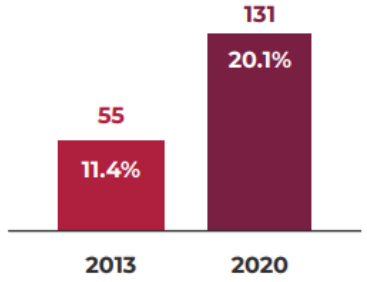


OF TEEN DRIVERS WHO USE MARIJUANA REPORT DRIVING UNDER THE INFLUENCE

LI ET AL., 2020

IN COLORADO, THERE WERE 131 MARIJUANA-RELATED TRAFFIC FATALITIES IN 2020, UP FROM 55 IN 2013—THE PERCENTAGE OF FATAL CRASHES THAT INVOLVED MARIJUANA NEARLY DOUBLED OVER THAT TIME PERIOD, INCREASING FROM 11.4% TO 20.1%

ROCKY MOUNTAIN HIGH INTENSITY DRUG TRAFFICKING AREA, 2021



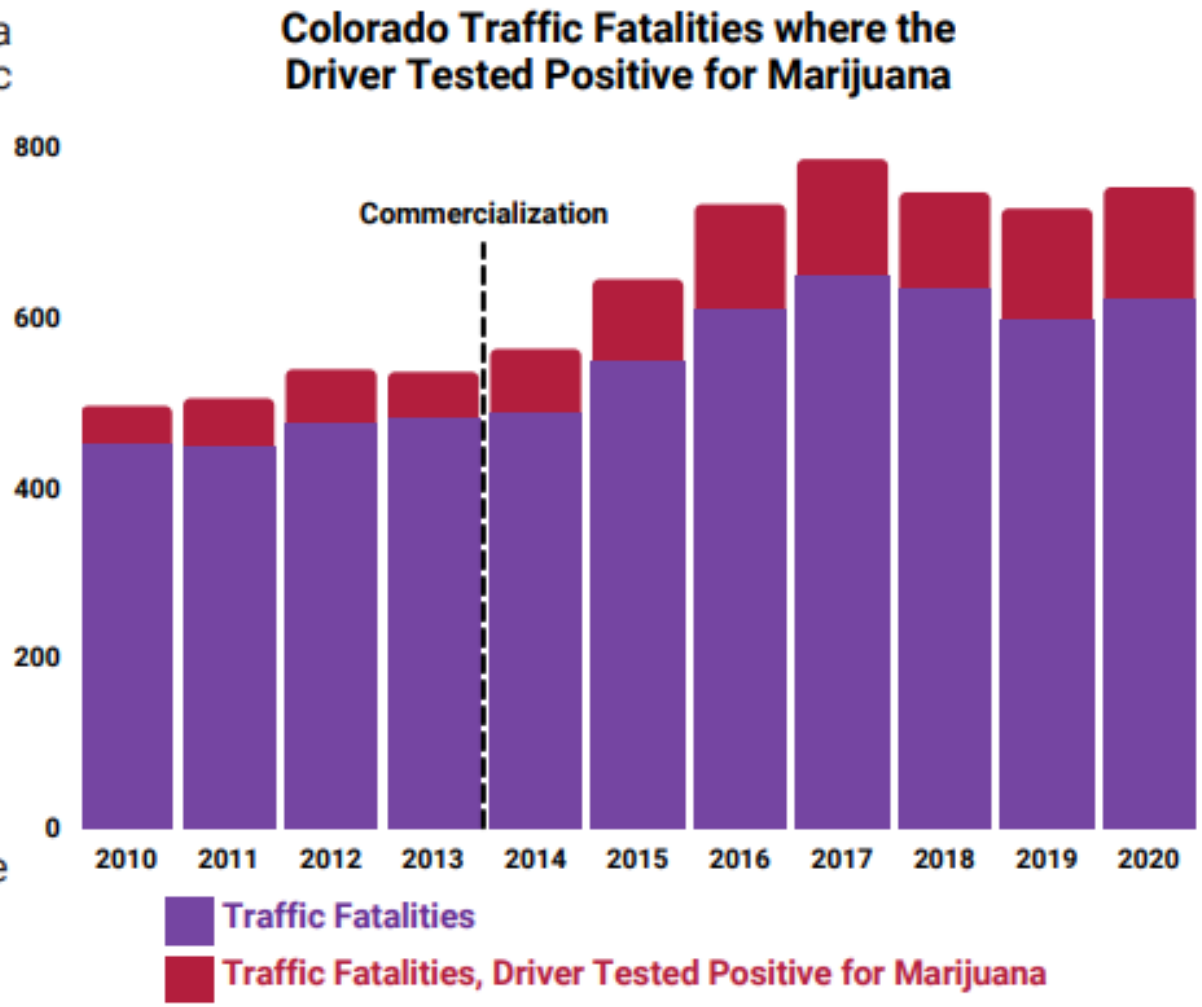
60% OF PAST 3-MONTH USERS IN VIRGINIA REPORTED DRIVING WHILE UNDER THE INFLUENCE IN THE LAST FEW MONTHS

26% REPORTED DRIVING UNDER THE INFLUENCE OF MARIJUANA AT LEAST ONCE A WEEK

STRATACOMM, 2022

DUI

- THC has been implicated in 1 in 4 road deaths in Colorado
- Since recreational marijuana was legalized in 2013, traffic deaths where drivers tested positive for marijuana increased 138% while all Colorado traffic deaths increased 29%.
- In Michigan, among fatal crashes where THC was tested, the proportion of positive tests for cannabinoids more than tripled, from 6.7% in 2004 to 23.4% in 2017.
- One in four 12th graders in Washington state said they drove with someone who had used marijuana and one in six admitted to driving after using marijuana.



But We Can Tax It!!!

Marijuana tax revenue comes up short.

- Tax revenue from marijuana accounts for less than one percent of state revenues where the drug is "legal."
- Almost every state that legalized marijuana came up short on initial revenue targets. In Massachusetts, the first year of tax revenue from marijuana sales was less than half of the anticipated $63M (Politico, 2019).
- Even as marijuana markets grow, research shows tax revenue quickly tapers off (Pew Trusts, 2019).
- Revenue projections are unreliable. As states seek to fill budget gaps, researchers advise against using marijuana tax revenue to fill long-term holes (Pew Trusts, 2019).

State	Percent of Budget
Colorado	1.30%
California	0.63%
Washington	1.03%
Alaska	0.29%
Oregon	0.30%
Nevada	0.56%

"We get $200 million a year in tax revenue, which, you know, we're a $30 billion budget, so it's a drop in the bucket – it's not going to pay for early childhood education or solve any big social ill..." (Colorado Governor John Hickenlooper, 2018)

$4.50

(Centennial Institute, 2018)

The cost for each dollar brought in by marijuana tax revenue in Colorado

> "You do not legalize for taxation. It is a myth. You are not going to pave streets. You are not going to be able to pay teachers. The big red herring is the whole thing that the tax revenue will solve a bunch of crises. But it won't."
> (Director, Marijuana Coordination (CO) Andrew Freedman, 2015)

Taxes on marijuana will not compensate for the deficits in state budgets.

- Colorado, the state with the oldest marijuana market, is the only state in the nation without a rainy-day fund.
- The budget deficits in states with mature marijuana markets comprise a combined $71B (CA, CO, NV, OR, WA). The tax revenues from marijuana barely combine for $2.5B.

The industry wants more.

- While the marijuana tax revenue in California still fails to meet its target, industry proponents are pushing legislators to reduce taxes (LA Times, 2020).
- These tactics are not new: Big Tobacco has been lobbying for tax cuts for decades and has adapted to more stringent policies by strategically aligning with trade groups for convenience stores and grocers, among others (Tobacco Free Kids, 2012). The same will happen with marijuana.

Environmental Issues

OUTDOOR MARIJUANA GROW SITES CONSUME AN ESTIMATED 29.4 MILLION GALLONS OF WATER PER YEAR IN CALIFORNIA

GRETA WENGART, INTEGRAL ECOLOGY RESEARCH CENTER CA 29.4 MILLION GALLONS MARIJUANA

INDOOR MARIJUANA GROWS EMIT AS MUCH CO2 AS 3.3 MILLION CARS

LARKIN & SWEENEY, 2022

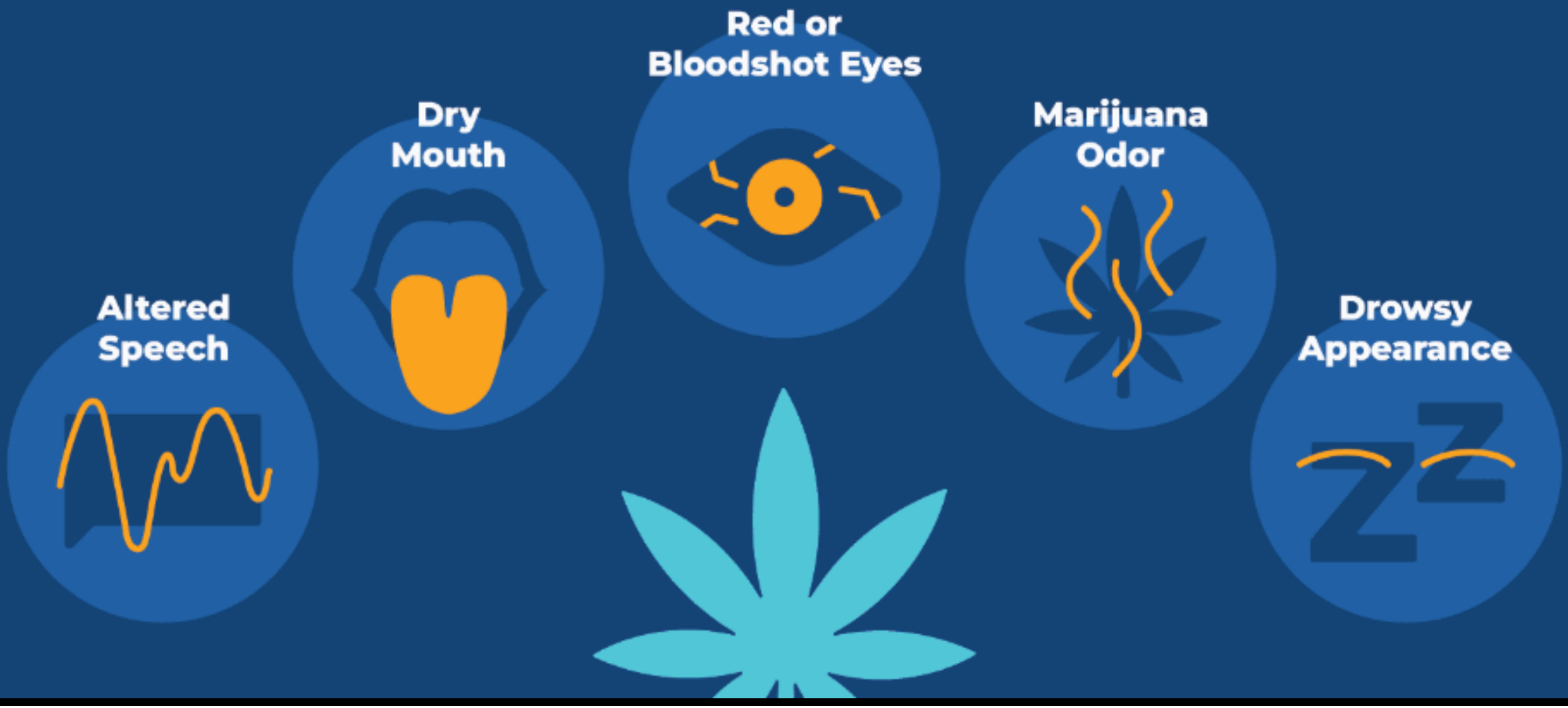
MARIJUANA PRODUCTION IS NEARLY FOUR TIMES MORE ENERGY INTENSIVE THAN COAL OR OIL PRODUCTION

MILLS, 2012

Signs and Symptoms

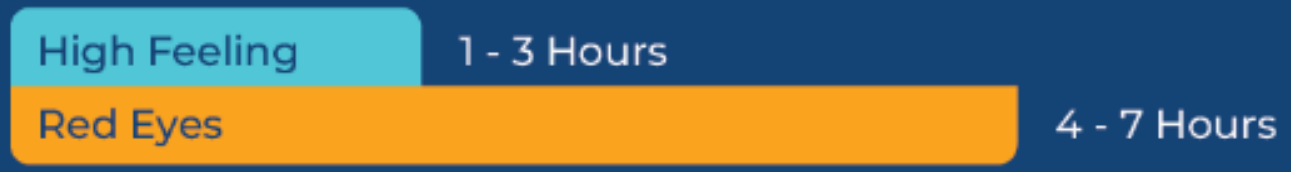
Constricted Pupils	Red Eyes	Dilated Pupils
Heroin Morphine Oxycodone Fentanyl Methadone Codeine Hydrocodone	Marijuana Cocaine or Crack Benzodiazepines (i.e. Xanax) Depressants (i.e. Alcohol or Sedatives)	Amphetamines Methamphetamines Cocaine or Crack Hallucinogens (i.e. LSD or mushrooms) Opiates (prescription painkillers) Heroin Marijuana Speed

Observable Signs of Marijuana Use



Red eye symptoms last through the "high" and for an extra 3-4 hours after.

Smoking



Vaping or Dabbing

Edibles

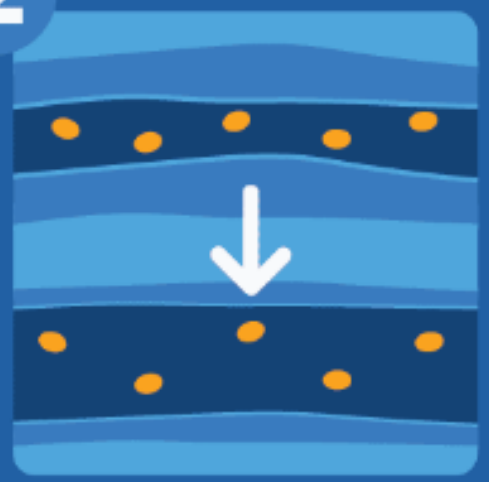
How Marijuana Use Makes Eyes Red

SANDSTONE CARE

1

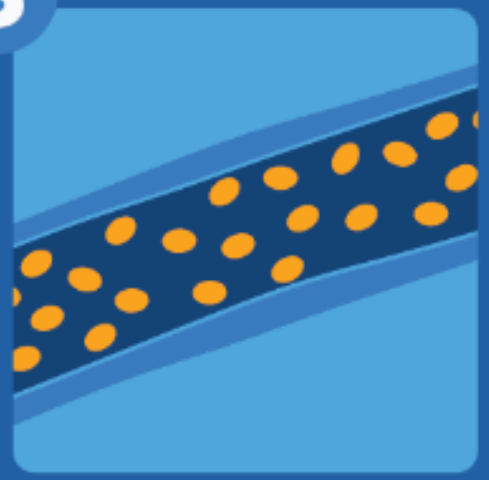
Marijuana is Consumed

2



Blood Vessels Relax

3



Blood Flow Increases

4

Eyes Become Red

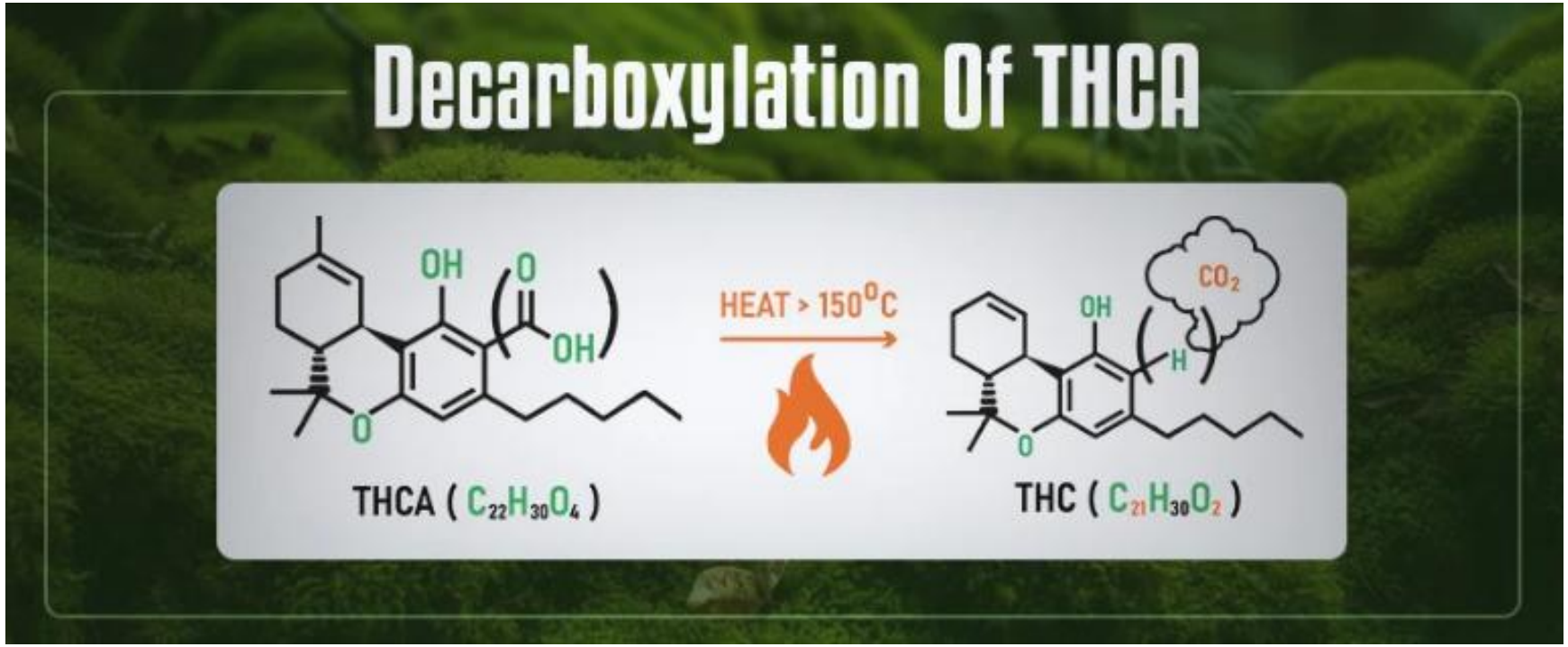
Weed Use Can Cause Blurry Vision

SANDSTONE CARE

	ONSET	EFFECTS PEAK	EFFECTS LAST
EDIBLES	30 Mins to 2 Hours	2 to 3 Hours	6 to 8 Hours
BEVERAGES	10 to 15 Minutes	45 Minutes to 1 Hour	1 to 2 Hours
FLOWER/VAPES	2 to 10 Minutes	15 to 30 Minutes	1 to 3 Hours
SUBLINGUAL DROPS	5 to 15 Minutes	1 to 2 Hours	4 to 6 Hours
TOPICALS	1 to 5 Minutes	1 to 1.5 Hours	4 to 6 Hours

LOOPHOLE WEED

Yes it does…..



The conversion rate of THCA to Delta-9 THC can vary, but it generally falls around 0.877. This means that when THCA is decarboxylated, approximately 87.7% of it converts to Delta-9 THC

Pluto

4.5 (2.5k) reviews

Creative | High | THCa 27.62%

Unlock out-of-this-world creativity. California-grown, high potency THCa flower for your best thoughts.

- THCa 27.62%
- Indica Hybrid
- Pine-y
- Pesticide-Free
- American Grown
- 100% Federally Legal

1 g	3.5 g	7 g	14 g	28 g
$17.00/g	$15.43/g	$13.29/g	$12.71/g	$10.18/g

One Time Purchase

Subscribe & Save 15%

Deliver every 30 days

Ships within 24 hours See available States →

- 1 +

Add to cart $17

Earn 34 Mood Points! Free shipping on orders $99+ 100 Days Free Return

Analysis Example

New Bloom Labs

Certificate of Analysis

Page: 1 of 1

Sample: 03-15-2024-47329W5437
Sample Received:03/15/2024;
Report Created: 03/22/2024; Expires: 03/18/2025

Pluto
Plant

24.437 % Total THC	0.219 % Δ-9 THC
28.635 % Total Cannabinoids	ND % Total CBD

Cannabinoids

(Testing Method:HPLC, CON-P-3000)
Date Tested: 03/15/2024

Analyte	LOD %	LOQ %	Mass %	Mass mg/g
Δ-8-Tetrahydrocannabinol (Δ-8 THC)	0.0500	0.0750	ND	ND
Δ-9-Tetrahydrocannabinol (Δ-9 THC)	0.0500	0.0750	0.219	2.190
Δ-9-Tetrahydrocannabinolic Acid (THCA-A)	0.0500	0.0750	27.615	276.150
Δ-9-Tetrahydrocannabiphorol (Δ-9-THCP)	0.0500	0.0750	ND	ND
Δ-9-Tetrahydrocannabivarin (Δ-9-THCV)	0.0500	0.0750	ND	ND
Δ-9-Tetrahydrocannabivarinic Acid (Δ-9-THCVA)	0.0500	0.0750	<LOQ	<LOQ
R-Δ-10-Tetrahydrocannabinol (R-Δ-10-THC)	0.0500	0.0750	ND	ND
S-Δ-10-Tetrahydrocannabinol (S-Δ-10-THC)	0.0500	0.0750	ND	ND
9R-Hexahydrocannabinol (9R-HHC)	0.0500	0.0750	ND	ND
9S-Hexahydrocannabinol (9S-HHC)	0.0500	0.0750	ND	ND
Tetrahydrocannabinol Acetate (THCO)	0.0500	0.0750	ND	ND
Cannabidivarin (CBDV)	0.0500	0.0750	ND	ND
Cannabidivarinic Acid (CBDVA)	0.0500	0.0750	ND	ND
Cannabidiol (CBD)	0.0500	0.0750	ND	ND
Cannabidiolic Acid (CBDA)	0.0500	0.0750	ND	ND
Cannabigerol (CBG)	0.0220	0.0750	<LOQ	<LOQ
Cannabigerolic Acid (CBGA)	0.0500	0.0750	0.660	6.600
Cannabinol (CBN)	0.0500	0.0750	ND	ND
Cannabinolic Acid (CBNA)	0.0220	0.0750	<LOQ	<LOQ
Cannabichromene (CBC)	0.0500	0.0750	ND	ND
Cannabichromenic Acid (CBCA)	0.0500	0.0750	0.141	1.410
Total			28.635	286.350

Total THC = THCa * 0.877 + Δ9-THC;Total CBD = CBDa * 0.877 + CBD; LOQ = Limit of Quantitation; ND = Not Detected.

Total THC Measurement of Uncertainty: ± 0.050%
Total CBD Measurement of Uncertainty: ± 2.000%
THCO potency analysis does not designate quantitative specificity of Δ-8-THCO and Δ-9-THCO isomers

Amended report issued to reflect change in sample identification.

	LOD %	LOQ %	Mass %	Mass mg/g
Δ-8-Tetrahydrocannabinol (Δ-8 THC)	0.0500	0.0750	ND	ND
Δ-9-Tetrahydrocannabinol (Δ-9 THC)	0.0500	0.0750	0.219	2.190
Δ-9-Tetrahydrocannabinolic Acid (THCA-A)	0.0500	0.0750	27.615	276.150
Δ-9-Tetrahydrocannabiphorol (Δ-9-THCP)	0.0500	0.0750	ND	ND
Δ-9-Tetrahydrocannabivarin (Δ-9-THCV)	0.0500	0.0750	ND	ND
Δ-9-Tetrahydrocannabivarinic Acid (Δ-9-THCVA)	0.0500	0.0750	<LOQ	<LOQ
R-Δ-10-Tetrahydrocannabinol (R-Δ-10-THC)	0.0500	0.0750	ND	ND
S-Δ-10-Tetrahydrocannabinol (S-Δ-10-THC)	0.0500	0.0750	ND	ND

This is the analysis of the Pluto strain. At this time in TN this product is legal under the farm bill, but will smoke like Delta 9 at ~24% THC

TN Dept. of Agriculture update 2024

- In September of 2024, the Tennessee Dept. of Ag. changed their testing rules. The new testing standards go into effect in December 2024. Due to the conversation of THC-a to THC-D9, testing standards for THC-a is also being lowered to concentrations of 0.3% and lower. Anything tested over this range is considered marijuana. Any samples, or batches tested over this by the department are subject to seizure. At this time this seems to be effecting distributors on the commercial side, but unknown if this will trickle down to street level possession law changes. This will essentially end legal commercial distribution of THC-a.

House Bill 1376

- On May 21, 2025, Gov. Lee signed HB 1376 into law.
- This bill changed the total allowable THC level to be 0.3% or lower. This is including THC-a and Delta-8. Previous law only pertained to Delta 9.
- This will effectively end THC-a popularity.
- The law will go into effect on January 1, 2026.
- The Tennessee Alcoholic Beverage Commission (ABC) will be in charge of enforcement of this law.

When does this become a problem?

Marijuana

- Not complicated, marijuana is illegal.

Hemp / CBD

- Almost no oversight for growers or distributors. (We have bought CBD products that tested with high percents of Delta 9)
- Opens the door for marijuana products to be labeled as CBD. (We have seen this here in our county)
- Some people report marijuana like effects after consuming products (impairment issues)
- Products are not regulated by FDA (possibly changing soon)
- Unknown long term effects. Current studies show potential harm to liver, interactions with medications, and male reproduction system.
- Also no long term studies of children exposed to CBD or pregnant women.

If it's so bad, then why is there such a big push to legalize it?

IT'S THE MODERN DAY BIG TOBACCO BOOM!!

The global cannabis market was valued at $43.72 billion dollars in 2022, and projected to hit $57.18 billion in 2023, and up to $444.34 billion by 2030 (fourtunebusinessinsights.com). Statista.com is showing a projection of $64.73 billion this year (2024).

Altria (parent company to Marlboro) acquired 45% stake in Cronos, one of the largest international marijuana distributors.

Imperial Brands, the fourth largest tobacco company in the world, has invested roughly $94 million USD in Auxly, a Canadian marijuana company.

In March 2022, Pfizer made a deal worth $6.7 billion with Arena Pharmaceuticals to develop cannabinoid type therapeutics.

John Stewart, former Purdue Pharma CEO (creators of oxycontin), left pharmaceuticals to start his own marijuana company.

Constellation Brands, makers of Corona, purchased a 9.9% stake in Canopy Growth for $191 million, then upped it to 38% for $4 billion in 2018. The company has the option to increase their investment up to 139.7 million new shares for up to $5 billion more. Canopy Growth is one of the largest cannabis companies and is based in Ontario.

Blue Moon has also made investments in the marijuana industry.

Altria and Constellation lead to the establishment of CPEAR, which is an advocacy group that pushes for legalization at the state and federal level. They released a paper in March of 2022, that showed that marijuana use does not increase in states where marijuana is legal. But they used nation wide youth marijuana data, which included states where it's NOT legal, instead of only looking at state level data inb legalized states. They also did not mention any of the dozens of studies showing increased use with legalization.

An investigative journalist, Jonathan Gornall, has linked many of these large commercial organizations with vested interests in the creation of the recreational and medical market. He even found that several tobacco companies were funding studies on medical marijuana.

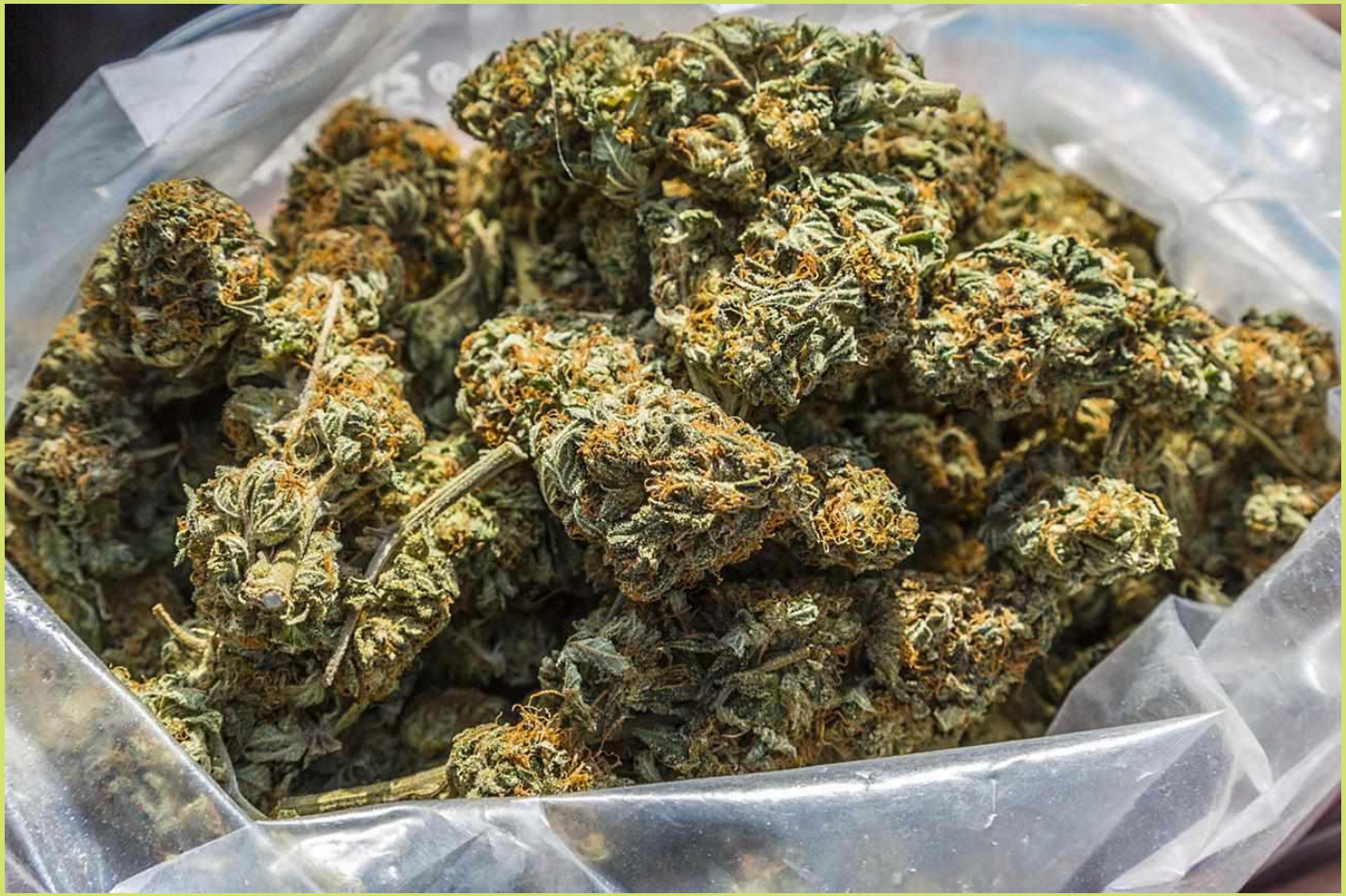
Marijuana commercialization presents a new addiction-for-profit industry

DIFFERENT FORMS OF MARIJUANA PRODUCTS
(that you will primarily see)

- Raw flower
- Edibles
- Concentrates
- Vapes

Raw Flower

- Raw flower form is most commonly smoked.
- Has the strongest scent typically, in both the raw form and when smoked.
- Sometimes baked into homemade edibles



- Street terms you will hear may include – sticky, loud, lows, highs, that gas, green, tree
- Many times people will hide the product, but will forget to hide to accompanying paraphernalia. Things to look for:

ZIG-ZAG
FRENCH
SLOW BURNING
CIGARETTE PAPERS
1 1/4 SIZE
GUMMED
IMPORTED
ZIG-ZAG CIGARETTE PAPER
DOUBLES THE SMOKER'S PLEASURE
PAPETERIES BRAUNSTEIN PARIS

Edibles

- Most of what we see now are commercial grade products in professional packaging
- Edibles can also be made at home (i.e. brownies and cookies).
- Often times instead of using raw flower in home made products people will opt to use cannabis infused butter
- Effects of the high typically last longer due to the chemicals going through the digestion track. Highs can last up to 6+ hours, vs up to 4hrs from smoking/vaping
- Dosing is nearly impossible

Edibles

SOUR
Skittlez
Medicated
CA
600mg

WHITE CHOCOLATE
m&m's
CHOCOLATE
m&m's
600 MG
MEDICATED
CA

Edibles

TEAR & SHARE & ENJOY!
FRUITY PEBBLEZ
treats
600mg
Medicated
THC
600 mg
WHITE CHOCOLATE
CHOCOLATE

Cheetos
Flamin' Hot
Crunchy
THC
600 mg
TEAR & SHARE & ENJOY!
FRUITY PEBBLEZ

Edibles

INFUSED
Real Chocolate Chip Cookies
CHEWY
Trips Ahoy!
250MG
500MG

Trolli
SOUR BRITE
Crawlers
THC
600mg
MEDICATED
NET WT 5 OZ (142g)
250M
500MG

Edibles

Canna Butter
600 mg THC
Brownie Bites

Cheetos
Fruitz
Trolli
Trips Ahoy!
Fruity Pebblez
Treats
m&m's

Edibles

MEDICATED
HEAVY HITTERS
CANNABIS INFUSED
GUMMIES
WATERMELON
6 PIECES · 100MG THC EACH
(Two 10mg servings per piece)
600MG
THC TOTAL
CA
NET WT. 21 G (0.74 OZ)

Doritos
NACHO
CHEESE
THC
600 mg
TORTILLA CHIPS
NET WT. 1 OZ. (28.3 g)
THC 0
2018 Farm Bill Compliant

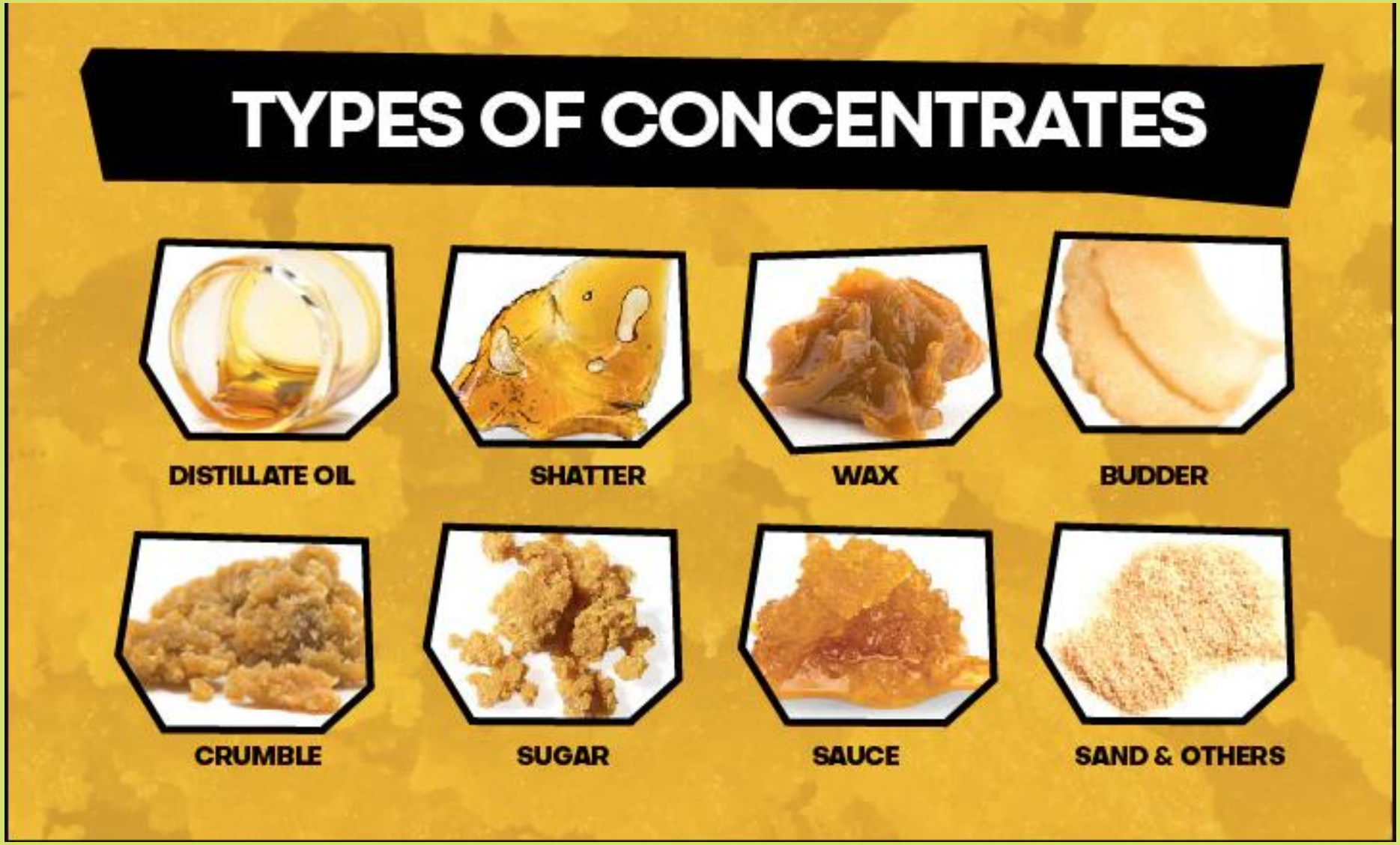
Edibles

Fritos
CHILI CHEESE
RUFFLES
QUESO

Hemp
TEA OF MIND
PURE COCO
WHITE CANNABIS CHOCOLATE
ORIGINAL AMSTERDAM
CANNABIS CHOCOLATE
BÍLÁ ČOKOLÁDA
70% HOŘKÁ
CANNABIS CHOCOLATE

Concentrates

- The strongest forms of any cannabis products
- Come in many variations, and more are being created to this day
- Concentrations up to 99% THC (remember the weed 20 yrs ago was only about 3%)
- Typically smoked from a pipe style device or diffuser
- Usually require high heat to melt down so you will often see butane torches

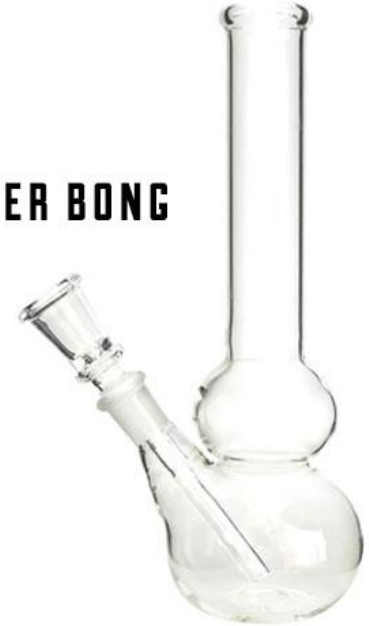

TYPES OF CONCENTRATES
DISTILLATE OIL
SHATTER
WAX
BUDDER
CRUMBLE
SUGAR
SAUCE
SAND & OTHERS

Nails

Dab tool

Dome

Water bong



Cannabis Extract

Torch

ROSIN
REFINERY
ROSIN
REFINERY
SINGLE SOURCE
THC
Habana
THC
Habana
THC
Habana
THC
Habana
THC
Cold CURE
MELTS
STRAWBERRIES & CREAM
MONOPOLY
EXOTIC MELTS
THC
POT COUNTY
CANNABIS
CURED

Vapes

- Contains cannabis concentrates
- Very common among youth
- Come in prefabricated rigs and refills
- High quality extracts will have little to no marijuana scent even when used
- Prefabricated models will typically have the marijuana warning label on them

SLUSHY JUICE

What to look for on commercial packaging

Det. Corey Floyd
Rutherford County Sheriff's Office
Narcotics Unit
615-801-3155
cfloyd@rcsotn.org