



# Cannabis and the Highway

Sgt. Tyler Milless  
Minnesota State Patrol  
Minnesota State DRE Coordinator

David Bernstein  
Minneapolis City Attorney's Office  
Minnesota DWI Task Force



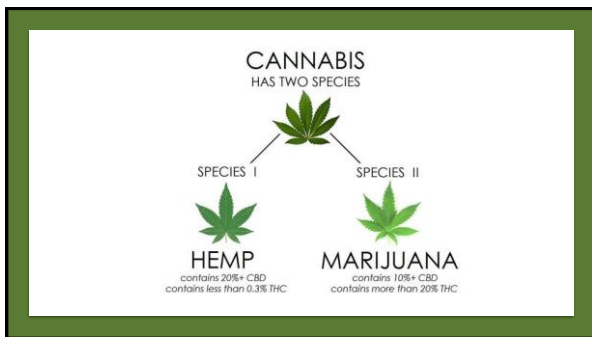

EXPLORE [Minnesota.com](http://Minnesota.com)

## DWI TASK FORCE

FEB [www.dwitaskforce.com](http://www.dwitaskforce.com) Est. 1992




## Topics:

- 1) Impairment effects of cannabis/THC
- 2) Public perception about cannabis and driving
- 3) Existing cannabis DWI laws
- 4) Pending legislation

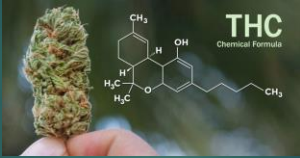


## MANY DIFFERENT STRAINS OF CANNABIS

THINK OF CANNAS LIKE DIFFERENT TYPES OF FRUIT. YOU CAN GET AN APPLE OR AN ORANGE. BUT YOU CAN ALSO GET A CRISP APPLES OR A JUICY ORANGE. THE DIFFERENCES ARE HUGE.

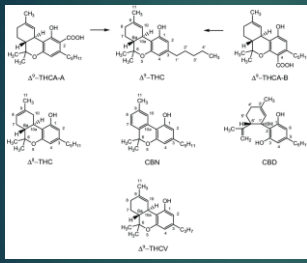
SATIVA STRAINS		INDICA STRAINS		HYBRID STRAINS	
	Sativa strains have an uplifting effect and often contain high THC levels. • Longing for mental clarity • Energizing to depth • Boosting creativity		Indica strains are usually shorter and grow better indoors. Popular strains include: • Relaxation • Pain relief		Hybrid strains offer a mix of effects, combining the best of both worlds from their parent strains. • Offer a balance of mental and body effects • Versatility
<b>AMERICA HAZE</b> <small>Highly potent, long-lasting effects</small>	<b>CHEERY AK</b> <small>Highly potent, long-lasting effects</small>	<b>BLUE GINGER</b> <small>Highly potent, long-lasting effects</small>	<b>TRICOLORA</b> <small>Highly potent, long-lasting effects</small>	<b>BLUE DREAM</b> <small>Highly potent, long-lasting effects</small>	<b>OG KUSH</b> <small>Highly potent, long-lasting effects</small>
<b>GREEN CRICK</b> <small>Highly potent, long-lasting effects</small>	<b>SOUL JOURNALS</b> <small>Highly potent, long-lasting effects</small>	<b>POETRY LIGHTS</b> <small>Highly potent, long-lasting effects</small>	<b>KEYWALKER OG</b> <small>Highly potent, long-lasting effects</small>	<b>LEONARDO</b> <small>Highly potent, long-lasting effects</small>	<b>PHOENIX EXPRESS</b> <small>Highly potent, long-lasting effects</small>

# Tetrahydrocannabinol



**THC**  
Chemical Formula

Psychoactive



THCA

THCV

Delta 8

Delta 9

Delta 10

CBD

CBN

## THC Levels

Mid 1990's: Averaged 2-4%



2014: Averaged 14%, some strains leveling 37%

CBD: 0.3%



Edibles: Unknown due to manufacturer

Wax (Dab): 60% - 99.99%

Leafline Labs Products: 5 mg to 1200 mg THC


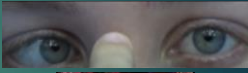




## Shatter / Dab / Wax / Resin / Hash

## Signs of Ingestion/Impairment

- Odor
- Red, bloodshot eyes
- Lack of Convergence
- Debris in mouth (green tongue)
- Body Tremors
- Eyelid Tremors

## Effects of Cannabis

- Relaxation
- Euphoria
- Relaxed Inhibitions
- Disoriented
- Lack of Concentration
- Altered Time and Distance Perception
- Impaired Memory
- Altercations in Thought Process
- Drowsiness
- Sedation
- Mood change

## Cannabis influences . . .

- Attention
- Concentration
- Decision-making
- Impulsivity
- Inhibition
- Reaction Time
- Risk-taking
- Verbal fluency
- Working Memory

## BCA Test Results

MINNESOTA DEPARTMENT OF PUBLIC SAFETY  
Bureau of Criminal Apprehension - Forensic Science Laboratory

Lab No. XXXXXX  
Report No. 1

**Results of Laboratory Examination**  
The following are results confirmed by Liquid Chromatography/Mass Spectrometry:

Type of Drug:	Concentration	Associated Expanded Uncertainty:	Units
delta-9-tetrahydrocannabinol (delta-9-THC)	2.95	±0.52	ng/ml
11-hydroxy-delta-9-tetrahydrocannabinol (an active metabolite of delta-9-THC)	1.07	±0.16	ng/ml
11-acetyl-delta-9-tetrahydrocannabinol (an inactive metabolite of delta-9-THC)	65	±15	ng/ml
delta-8-tetrahydrocannabinol (delta-8-THC)	Not Detected		
Cannabidiol (CBD)	Not Detected		
Cannabidiol (CBN)	Not Detected		
Cannabinol (CBG)	Not Detected		

NATIONAL SAFETY COUNCIL



Research Document  
Marijuana and Driving  
September 2017

## THC Levels

"It is concluded that it is unsafe to operate a vehicle or other complex equipment while under the influence of cannabis, due to the increased risk of death or injury to the operator and the public."

It is further concluded that due to rapid changes in blood THC concentrations over time, there is no minimum safe threshold blood concentration below which a driver can be considered to have been unaffected while driving following recent cannabis use. Consequently, there is no scientific basis for the adoption of THC *per se* laws for driving."



## Polydrug Use

Additive Effect: 1 + 1 = 10

- Cannabis +
- Alcohol
  - CBD
  - Xanax
  - Prescription Drugs

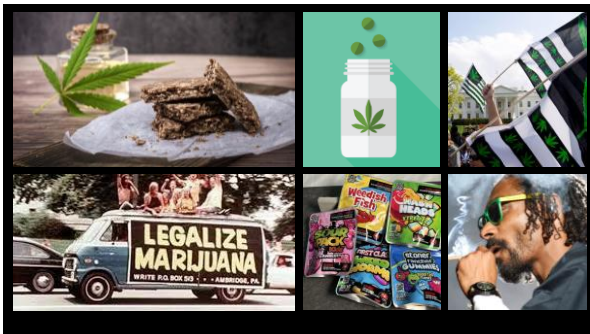
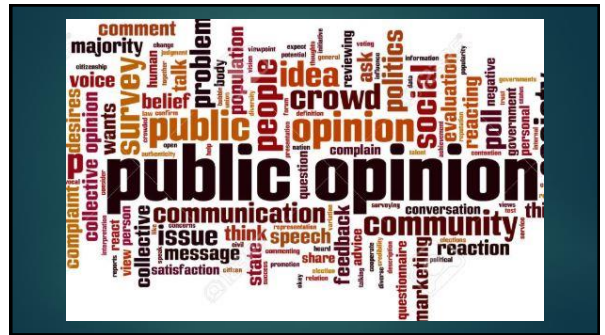
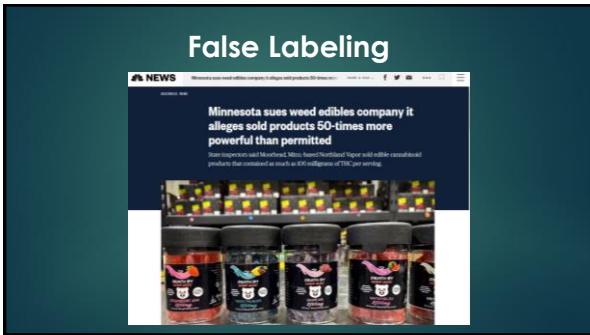
**MARIJUANA AND ALCOHOL**

Consumption of any amount of alcohol with weed significantly increases THC levels in the user's blood, leading to a worsened marijuana intoxication.

	Nausea	Memory problems
	Anxiety	Increased appetite
	Tremors	Sleepiness & fatigue
	Headaches	Onset of hallucinations
	Bloodshot eyes	Decreased coordination

## Contaminants



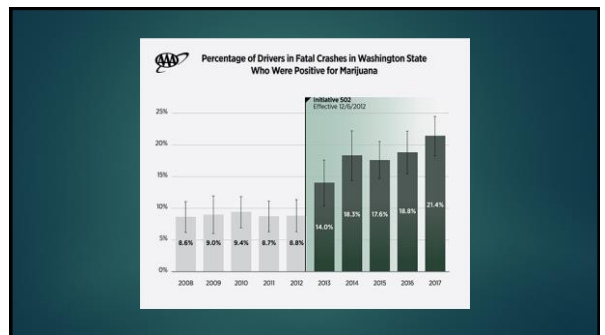
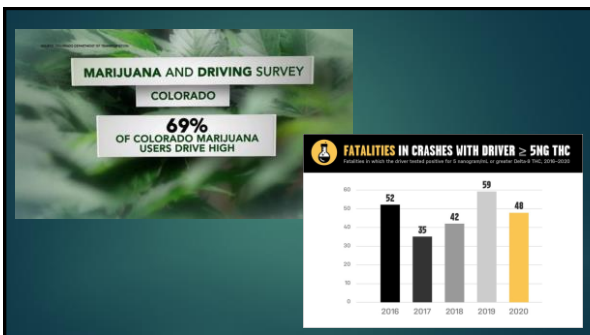


**AAA**

**JAMA Psychiatry**

JAMA 2021 Study; participants willing to drive 1 hour, 30 minutes after use, but worse driving performance is evidence several hours after use

AAA 2021 Traffic Safety Culture Index: Safer to drive after consuming marijuana than alcohol





"We focus on total traffic fatalities because there is some substitution between driving under the influence of alcohol and under the influence of marijuana. The relevant measure for public safety is the net effect; the concern is not whether marijuana-related fatalities increase but rather whether any increase is offset by fewer fatalities under the influence of alcohol."

### DWI Laws in Minnesota



### Minn. Stat. § 169A.20, subd. 1(2)

It is a crime for any person to drive, operate, or be in physical control of a motor vehicle while under the influence of a controlled substance.

### CRIMJIG 29.04: Driving Under the Influence of a Controlled Substance - Elements

"There is no set standard as to the quantity of a controlled substance a person must ingest before a person is regarded as being 'under the influence.' When a person is so affected by a controlled substance that the person does not possess that clearness of intellect and control of themselves as they otherwise would have, that person is under the influence of a controlled substance."

### Totality of the Circumstances

- Officer's training & experience
- Driving Conduct (if applicable)
- Observations
- Admissions
- Performance on field sobriety tests
- DRE Exam
- Test Results



### Medical Cannabis Not a Defense to DWI!

- Medical Cannabis is not a prescription
- Affirmative defense does not apply to driving under the influence



Impairment is impairment

### H.F. 100 / S.F. 73 Cannabis Legalization Bill



### H.F. 100 / S.F. 73 Cannabis vs. Marijuana vs. THC



### H.F. 100 / S.F. 73

Prohibits using while driving

Open packages in trunk



### H.F. 100 / S.F. 73

### Oral Fluid Roadside Testing Pilot Project





## Questions?



Sgt. Tyler Milless  
[Tyler.milless@state.mn.us](mailto:Tyler.milless@state.mn.us)

David Bernstein  
[david.bernstein@minneapolismn.gov](mailto:david.bernstein@minneapolismn.gov)  
[david.bernstein@dwitaskforce.com](mailto:david.bernstein@dwitaskforce.com)