

Xylazine and Common Trends



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Objectives

- What is the issue?
- Why do we care?
- What are Drug Trends?
- Xylazine
 - What is it?
 - What is it used with?
 - Symptomology
 - Effects of use
- Other emerging trends
 - High concentration cannabis
 - Hallucinogens

What is the Issue?

- People are always finding new ways to get high.
- Law Enforcement/BCA/Legislature is always playing catch up when it comes to new drug trends.
- Basement chemistry and lack of research can lead to unforeseen consequences for the user and the community.

Why Do We Care?

- Societal push to normalize drugs leads to more users which can lead to more impaired drivers on the road.
- As DRE's it is our responsibility to remain knowledgeable and up to date on latest drug trends and how they impact our communities and roadways.
 - DRE's can educate their departments on these trends and be the first to recognize it when it reaches their city

What is Xylazine

- Horse tranquilizer (“Tranq”)
- CNS Depressant
- Liquid



Xylazine History

- 1962: Xylazine was first synthesized by Bayer Pharmaceuticals
- 1972: Approved as veterinary tranquilizer
- Early 2000's: Xylazine detected in the drug supply in Puerto Rico
- 2019-2020: Xylazine detected on the east coast, Philadelphia being epicenter, now in 91% of fentanyl supply
- 2022: FDA warns about Xylazine exposure to humans
- 2023: Biden Harris administration designates Fentanyl combined with Xylazine as an emerging threat to the United States

Why Xylazine?

- The presence of xylazine in a drug combination lengthens the duration of the high and intensifies it.
- Very inexpensive to use as a cutting agent
- Highly addictive – users report a strong addiction after only one use

What is it used with?

- Cutting agent/adulterant with Fentanyl
 - Why Xylazine?
- Tough to study
 - Not FDA approved
 - Recent gain in popularity



Ingestion and Time Factors

- Most commonly injected
- Onset of 1-3 minutes
- Duration of 3-5 hours



DRE Matrix- CNS Depressants (Xylazine)

- HGN: **Not Present**
- VGN: **Not Present**
- LOC: Present
- Pupil Size: Normal
- Reaction to Light: Slowed
- Pulse: Down
- BP: Down
- Body Temp: Normal
- Muscle Tone: Flaccid

General Indicators

- Zombie-like State
- Swollen hands
- Reduced breathing rate
- Poor balance
- Enhanced indicators when combined with narcotic analgesics

*Xylazine is not commonly causing much, if any HGN

Xylazine Wounds

- Originally thought to be coming from injection site
- Now, seems to manifest, regardless of method of administration
- I have talked to users who tried to snort, still produces same wounds
- Vasoconstriction → Necrosis
- Users seem to understand this side effect and continue to use
- Can lead to a need for amputation

Xylazine Wounds



Xylazine Case Study

- Vehicle in Motion
 - Weaving
 - Varying speeds 55-70MPH in 60MPH zone
 - Slow reaction to lights, 11 seconds to slow or apply brakes
 - Nearly hit guard rail on right shoulder
 - Abrupt stop



Face to Face Contact

- Slow Responses
- Difficulty with speech
- Raspy, quiet speech
- Denied drug and medication use
- Mentioned being cold multiple times
 - Wearing sweatshirt and pants, 72 degrees



Pre-Arrest Screening

- No HGN
- 7/8 walk and turn
- 4/4 one leg stand
- Very poor balance
- Injection marks
- Covered wounds



Vehicle Search

“You do not have consent to search the car”



Wounds

“Carrying stuff, fell,
and scraped my
arms”



Blood Draw Results

| | |
|---------------------|--------------|
| fentanyl | Present |
| norfentanyl | Present |
| acetyl fentanyl | Not Detected |
| acetyl norfentanyl | Not Detected |
| furanyl fentanyl | Not Detected |
| furanyl norfentanyl | Not Detected |

Xylazine Recap

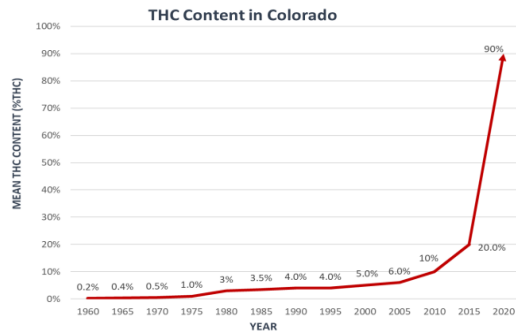
- Used with Fentanyl and/or heroin most commonly
- Causes lowered respiration rate, sedative
- Narcan still helps with Narcotic part of overdose
- Necrotic wounds are a good indicator of consistent use but not impairment
- Might not see HGN due to amount
- There is a lot we don't know at this point
 - Awareness, legislation, chemical testing

Additional Drug Trends

- High-Potency Marijuana
- Hallucinogens – legalization and research

High Potency Marijuana

- THC concentration in marijuana prior to 2000 was 4%-5%
- Post 2000 it has exploded upwards of 90%



Mahmoud A. Elsohly (2014) Potency Monitoring Program, Supported by NIDA (years 1960-2015), and Colorado Department of Health and Environment, *THC Concentration in Colorado Marijuana* (year 2020)

Forms of High Potency THC





Marijuana Background

- 2014 – Minnesota legalizes medical cannabis for a variety of qualifying conditions
 - Cancer
 - Alzheimer's
 - OCD
 - PTSD
 - IBS
 - Sleep Apnea
- Dosing Guidelines: “start low, go slow”
 - Most patients use between 2.5-5mg / day
 - Upper threshold between 20-40mg / day
- “Medicinal” Marijuana – seen prescriptions as high as 92%

Background cont.

- August 1st, 2023 – Minnesota legalizes recreational cannabis
 - Legal limit for hemp-derived cannabinoid products in Minnesota is 5mg/serving and 50mg/package for edibles
 - Can possess up to 2 pounds of flower in home or 2 ounces in public
 - Possess or transport up to 800mg of edibles
 - Can grow up to 8 plants with only 4 flowering at one time.
 - No legal limit on THC content of flower grown at home. Some kits advertise up to 20-25% THC

Medicinal Cannabis



- Currently no research has been conducted on high concentrate THC as it relates to any medical condition
- All studies showing the benefit of medicinal cannabis are done with less than 10% THC.
- No legitimate science exists that validates medicinal cannabis higher than 10% THC
- High level THC cannabis typically has lower CBD content due to the offset in THC-CBD ratio. (Most MN edibles are 1:1)
 - *“Girl Scout Cookie” has a THC range of 17-28% THC but only .09-.2% CBD*

Dangers of High Potency THC

Mental Health

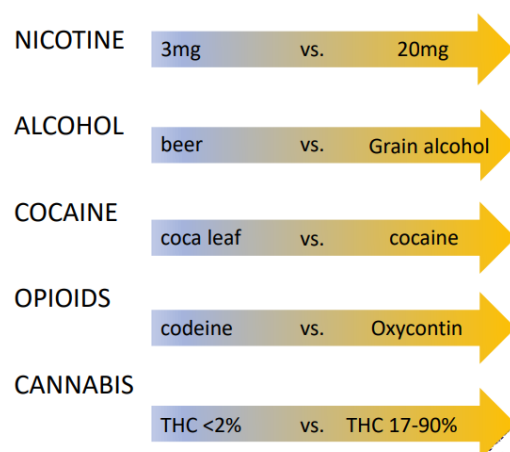
- High-potency cannabis appears to be associated with greater risk of depression, anxiety, and psychotic symptoms
- 2019 Study:
 - 15% THC or more occasional use =3x increased risk for psychosis
 - Daily use (>15%) 5x increased risk
 - Less than 5% THC showed no risk for psychosis

Adolescents

- Increase in dabbing and edible use among adolescents in CO since 2015 (legalized 2014)
- Among adolescents reporting use of vape products in Colorado, 50.1% reported using marijuana in the past 30 days versus 7.6% of those not using vape products
- Exposure to cannabis during adolescence disrupts glutamate which plays an important role in normal brain development

Addiction

- Higher drug potency = more potential for addiction



DRE Matrix - Cannabis

- HGN: Not Present*
- VGN: Not Present
- LOC: Present
- Pupil Size: Dilated (6)
- Reaction to Light: Normal
- Pulse Rate: Up
- BP: Up
- Body Temp: Normal
- Muscle Tone: Normal

General Indicators

- Bloodshot eyes
- Eyelid flutters
- Inability to focus
- Short term memory issues
- Inability to remain still
- Paranoia
- High potential for cannabis overdose for inexperienced users

*High potency cannabis may cause lack of smooth pursuit

Traffic Safety Concerns

- The increase in marijuana potency is only going to increase the level of impairment
- Pro-cannabis marketing and messaging continues to push the narrative that using cannabis and driving is not that big of an issue



Hallucinogens

- The use of hallucinogens can be found throughout history as early as 12,000 BC
- LSD was created in 1938 by Albert Hoffman who accidentally discovered its effects a few years later.
- Researched as potential treatment for schizophrenia and alcoholism.
- Research grinded to a halt in the 1970s and 80s due to governmental intervention and the “war on drugs”

Emergence of Hallucinogens for MH Treatment

- After decades of advocacy, education, and research the use of hallucinogens for the treatment of mental health disorders is gaining momentum.
- Discussed positively on many popular podcasts



MDMA

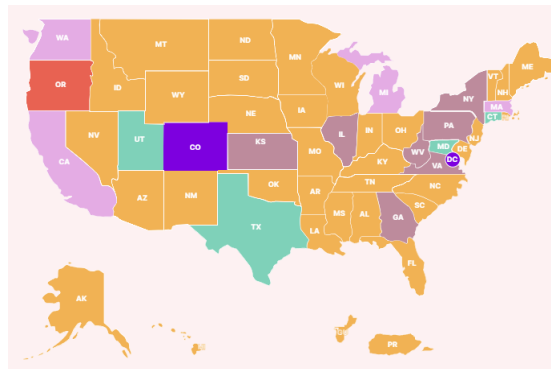
- August 2024 – FDA rejects MDMA (Ecstasy) as an approved therapy for PTSD
 - Cited lack of empirical evidence
 - Concerned about validity of data that was collected specifically around the fact that those getting the placebo knew it



- Although formal FDA approval for MDMA has been delayed the push for use of other hallucinogens will continue

Psilocybin

- Psilocybin is likely the next substance to follow Cannabis in widespread legalization for medicinal and recreational use.
- Yellow- currently illegal
- Pink- decriminalized in counties/cities
- Teal- active legislation
- Red- legal for therapeutic use
- Purple- legal for both medical and recreational
- Oregon first state to legalize (2020)



DRE Matrix – Hallucinogens

- HGN: Not Present
- VGN: Not Present
- LOC: Not Present
- Pupil Size: Dilated
- Reaction to Light: Slow
- Pulse: Up
- BP: Up
- Body Temp: Up
- Muscle Tone: Rigid

General Indicators

- Disoriented
- Droopy Eyelids
- Dazed
- Synesthesia
- Nausea
- Uncoordinated
- Piloerection
- Sweating

Traffic Safety Concerns

- With the increased media attention mixed with the hesitation for formal authorization people will continue to self-experiment and self-medicate.
- Increase in popularity of microdosing

Questions?

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