



## Drug Trends in Military Adults: Essential Insights for Mental Health Professionals





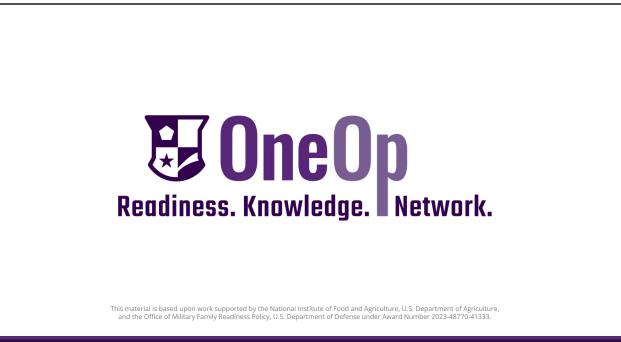
#### Event Materials

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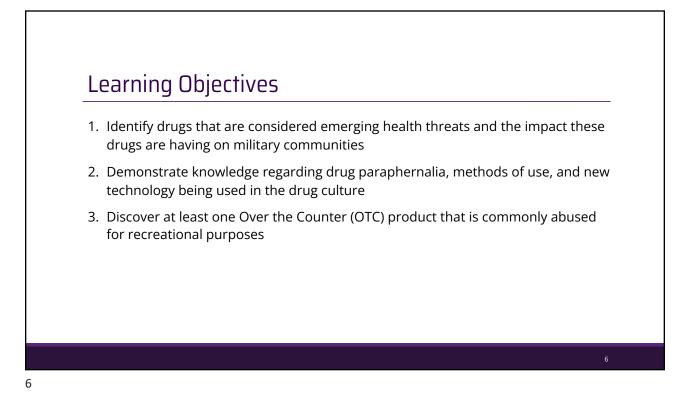
### Today's Presenter

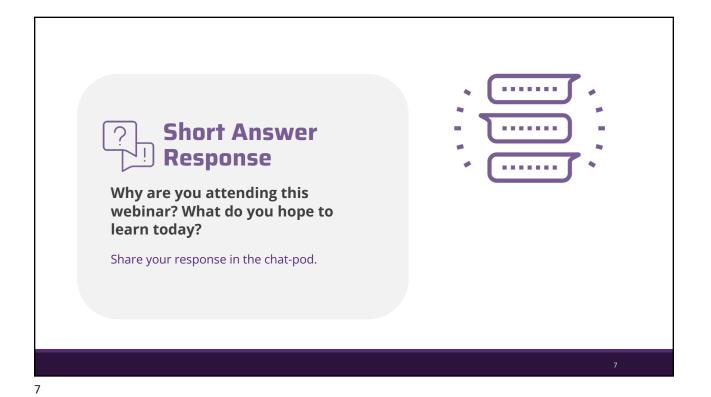


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#### The presenter has no relationships or conflicts of interest to report.









81,083 of these deaths involved synthetic opioids (primarily fentanyl).

Source: Center for Disease Control (CDC) National Center for Health Statistics. (2024, May 15). U.S. Overdose Deaths Decrease in 2023, First Time Since 2018. CDC.



# Drug Trends in Military Populations

The *2021 Health of the Force* report indicates that rates of substance use disorder diagnoses **among Soldiers were highest among those less than 25 years old** (NIDA, 2019).

#### What can providers do?

• Engage with young adult service members to build healthy coping strategies and prevent substance misuse is especially important.

Source: National Institute on Drug Abuse (NIDA). (2019, October 23). Substance Use and Military Life Drug Facts. NIDA.

# **Drug Trends in Military Populations**

Service members may be more likely to abuse alcohol than civilians, particularly in levels of binge drinking (NIDA, 2019).

- Active-duty service members may see drinking as part of their culture.
- Drinking alcohol may serve as a means to connect or de-stress with fellow service members and may be modeled as a way of handling stress within a military unit.
- Combat deployments, permanent changes of station, and prolonged work hours are a unique set of military-specific stressors that may contribute to substance misuse as compared to the stressors that may be experienced within the civilian sector.

# **Drug Trends in Military Populations**

Reported rates of illicit drug use increase when active duty personnel leave military service.

 Marijuana accounts for the vast majority of illicit drug use among veterans with 3.5% reporting use, and 1.7% reporting use of illicit drugs other than marijuana in a 1-month period. Service members have an increased risk of developing a substance use disorder (SUD), especially those who have been deployed to combat.

• Despite higher rates of substance abuse, deployed military personnel often have low rates of referral to SUD treatment services, often attributed to high levels of stigma.



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## PTSD and SUDs

PTSD occurs significantly more often among military veterans than civilian populations (Butler Center for Research, 2018).

 Approximately 18 percent of postdeployment Army soldiers experience PTSD, as compared to 6.8 percent of the general population.



The common co-occurrence of PTSD and substance use disorders is wellestablished, and military populations demonstrate a higher rate of comorbidity among PTSD and SUD than the general population.

Source: Buckingham, K. (2023, March 21). Military psychologist talks facts, prevention of substance, alcohol misuse among service members. U.S. Army,

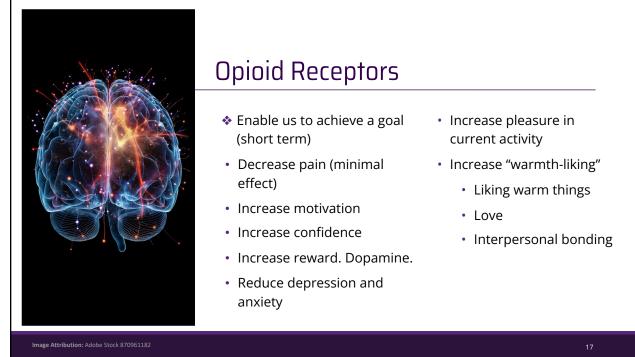
# Impact on Military Populations

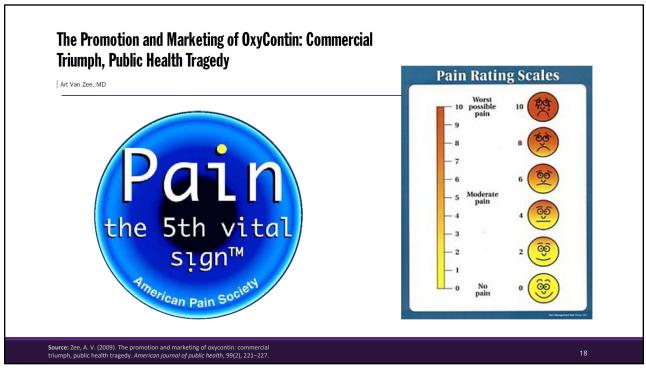
Outside of combat deployment or other traumatic events, there are a number of cultural factors that can have an exacerbating effect on alcohol and drug use, and the development and treatment of SUDs.

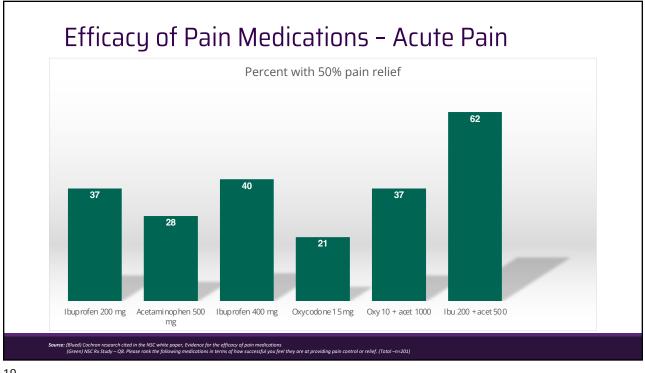
This can include:

- The availability of alcohol at military bases is a concern. College students may not have the income to buy alcohol but service members, even being underage, do have income that may be used for the purchase of alcohol.
- Workplace culture among military personnel is also an area of concern, particularly the stigma related to problematic substance use and fear of negative consequences related to seeking help.

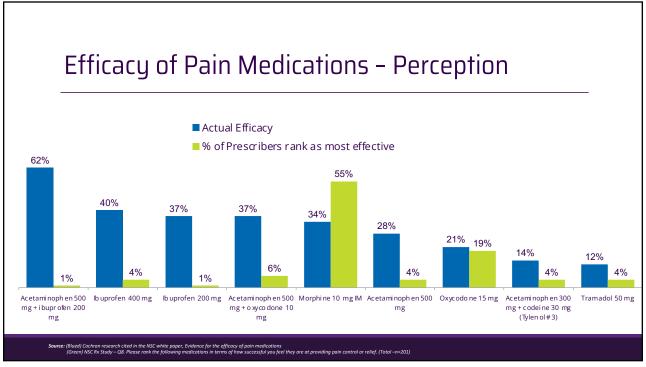
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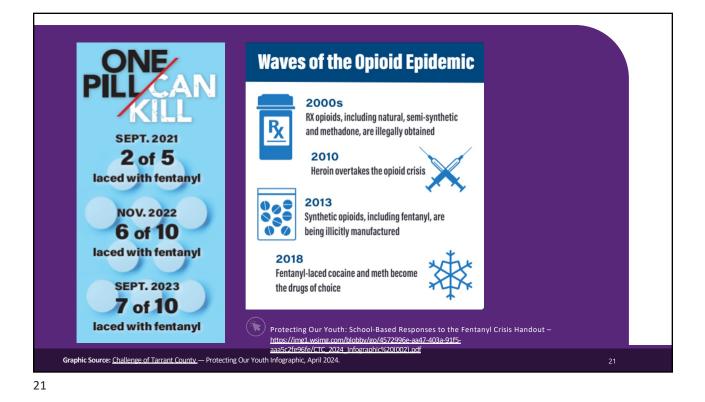


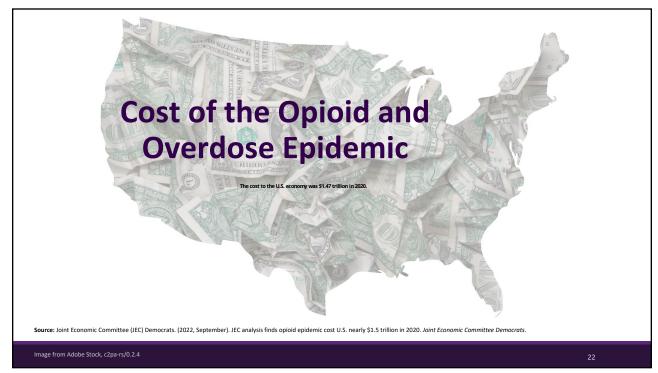


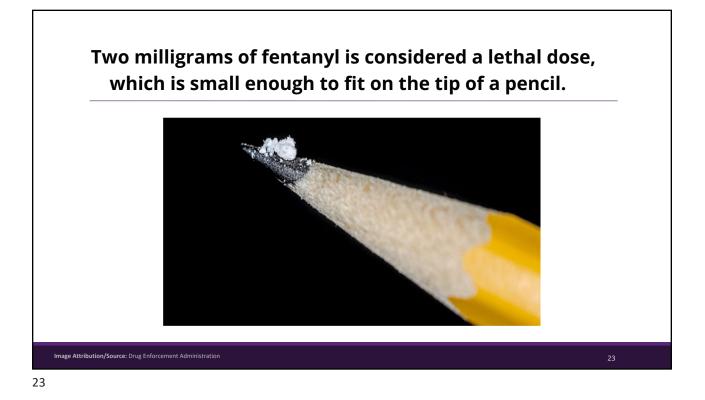


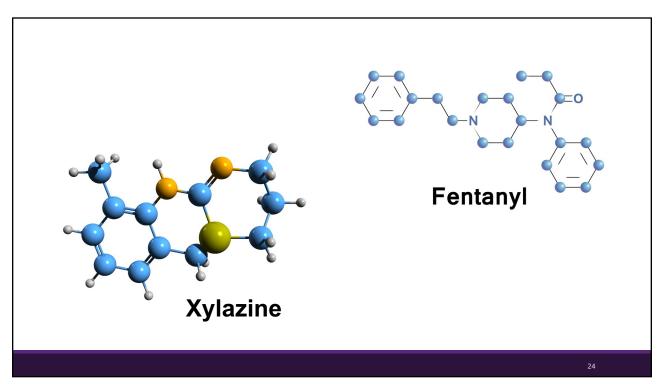












## **Xylazine**

Xylazine has turned up in overdose deaths in 25 of 38 states examined.

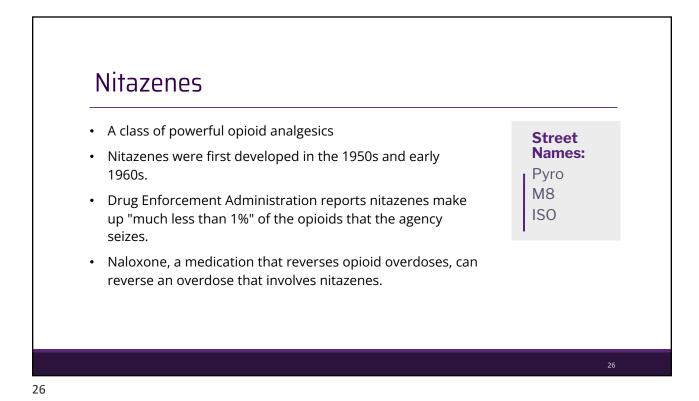
- Last year (in 2023), 30% of the fentanyl powder seized by DEA contained xylazine.
- That was up from 25% in 2022.

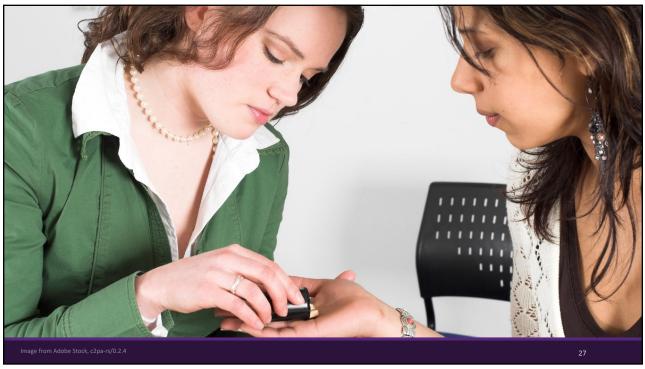
The drug is mixed with opioids, but also with cocaine or methamphetamine.

- Increases sedation and respiratory depression, which increases the risk of a fatal overdose.
- Naloxone administration may not be as effective when xylazine is mixed with opioids.

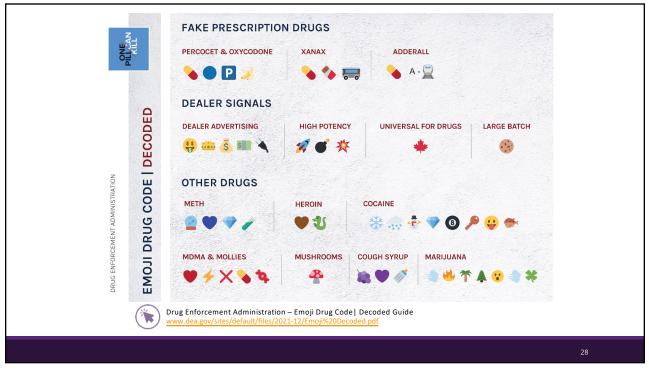
Sources: Anne Milgram, A. (2024, April 26). Statement from DEA Administrator Anne Milgram on the Increase in DEA Fentanyl Seizures Containing Xylazine. <u>United States Drug Enforcement Administration</u>.

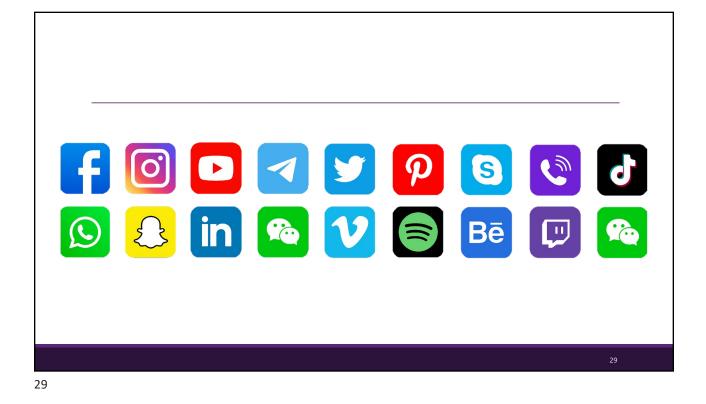














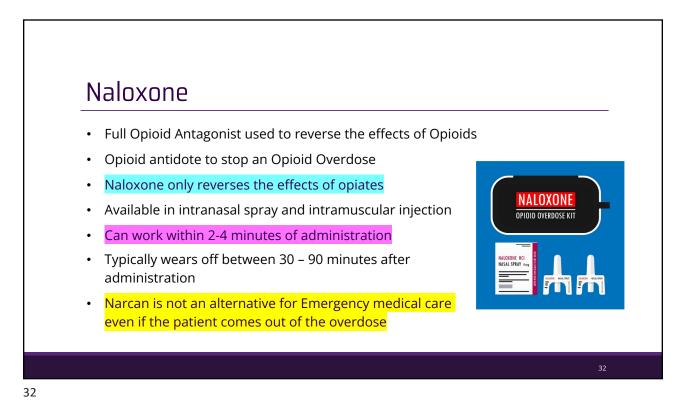
NALOXONE

OPIOID OVERDOSE KIT

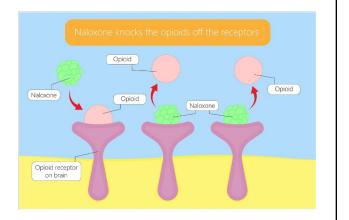
## Naloxone

- Full Opioid Antagonist used to reverse the effects of Opioids
- Opioid antidote to stop an Opioid Overdose
- Naloxone only reverses the effects of opiates
- Available in intranasal spray and intramuscular injection
- Can work within 2-4 minutes of administration
- Typically wears off between 30 90 minutes after administration
- Narcan is not an alternative for Emergency medical care even if the patient comes out of the overdose

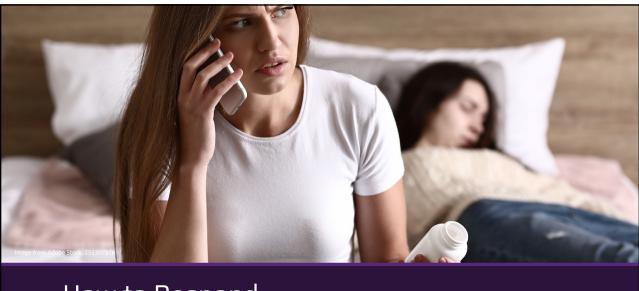




- Naloxone works by binding to the Mu receptors in the brain that the opioids use to flood the body with their effects (block pain, lower breathing, heart rate and blood pressure).
- Naloxone strips the Opioids off of the Mu receptors causing the person to go into precipitated severe withdrawal.
- Naloxone stays on the Mu receptors for approximately 30 to 90 minutes. The Opioids stay in the bloodstream and will reattach when the Naloxone leaves the receptors.



• An Opioid Overdose can recur after the Naloxone leaves the Mu receptors. Call 911 and re-administer Naloxone.



# How to Respond

#### **Signs of Overdose**

- Head can be tilted back with mouth open
- Eyes rolled back to only see white of eyes
- Person is unresponsive and cannot be woken up
- Body is limp
- Face is grayish in color, clammy to the touch
- Bluish color around mouth and nail beds
- Breathing less than 6 breaths per minute or breathing has stopped
- Deep, slow snoring/gurgling sound



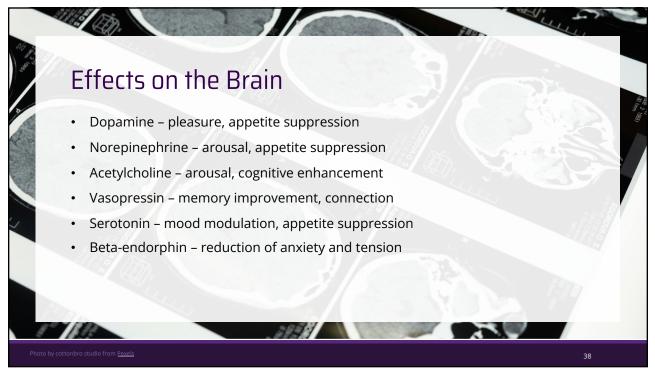
Image by <u>shadrin andrev</u> from iStocl

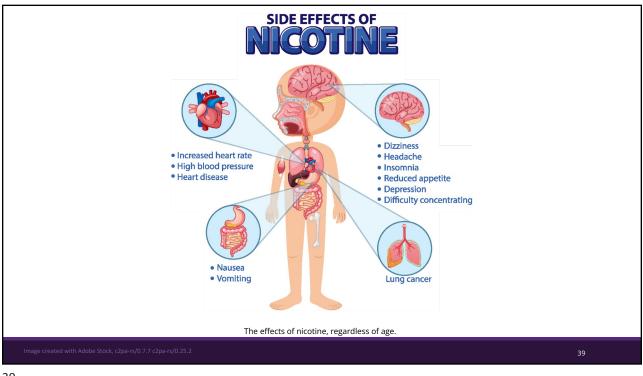
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# **Check Responsiveness**

- Call 911
  - "Someone is overdosing", "Someone is not breathing / is unresponsive."
  - Give clear address and location
- Roll person onto their back as gently as possible to avoid injury
- Start Rescue Breathing
- Give Naloxone (Narcan)
- Monitor person's response to Naloxone
- If symptoms return, the person can be given another dose of Naloxone.
  - Additional doses may be given every 2 to 3 minutes, if symptoms return before medical help arrives.









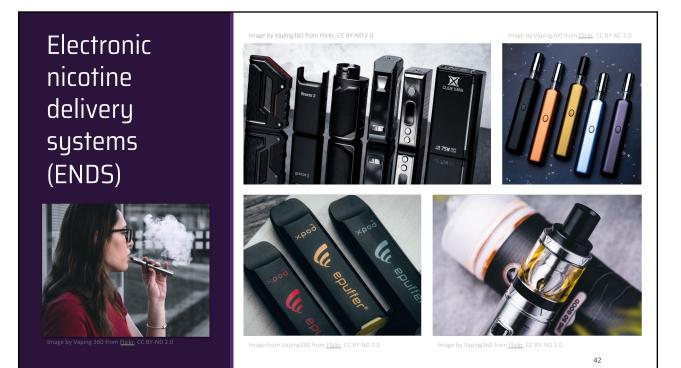
# Second hand VAPE smoke??

One study showed that indoor air quality was impaired when people in a ventilated room used e-cigarettes. Ultrafine particles can find their way from the vapor into the lungs of other people in the same space.

Another study found that the vapor not only contains nicotine, but also heavy metals, aldehyde and glycerin.

Image Source: Talesnik, D., Bock, E., and Snyder, A. (2023). Adolescent Substance Use Holds Steady in 2022. The NIH Record.





Sources: Dana-Farber Cancer Institute. (2019). Exposure to second-hand e-cigarette aerosols increasing among young people. Dana-Farber study finds. <u>Dana-Farber Concer Institute.</u> Schober, W., Scandriel, K., Watten, W., Osiander Fuchs, H., Heltmann, D., Schettgen, T., Jörres, R. A., Fromme, H. (2014), July). Use of electronic cigarettes (e-cigarettes) impairs indoor air quality and increases FNOI levels of e-cigarette. Science: International Journal of Hygiene and Environmental Health. Volume 217, Issue 6, Pages 628-637.



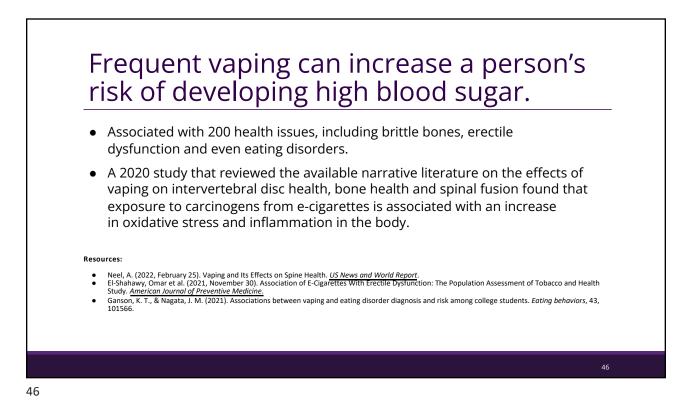
## Humectants



Substances that help create aerosol when heated, giving ENDS the ability to mimic cigarette smoke. Propylene glycol and glycerol are the most popular e-liquid humectants. PG is safe to ingest as a food and pharmaceutical additive; it is also used to create artificial fog in theatrical productions.

However, long-term exposure to these substances, along with dozens of other chemicals that are often not listed on labels and can be toxic.











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Dextromethorphan OTC products can be mixed with soda or sports drinks to create concoctions dubbed "Syrup," "Purple Drank", "Lean."Sizzurp", "Sirrp", "Purple oil", "Urrple Durrple", "Purple stuff", "(Dat) Drank", "Purple Tonic", "Texas Tea" "Memphis Mud", and "Sir".

**Aspirin** – symptoms of overdose may include rapid breathing, difficulty swallowing, ringing in the ears or loss of hearing, bloody urine, diarrhea, nausea, dizziness, fever, swelling of eyelids, face or lips, and convulsions.

**Chlorpheniramine Maleate (CPM)** (antihistamine) can cause severe and lifethreatening symptoms including seizures, troubled breathing, weakness, loss of consciousness, severe dryness of mouth, nose, or throat, bleeding from skin, mouth, eyes, rectum, and vagina, and possibly death.

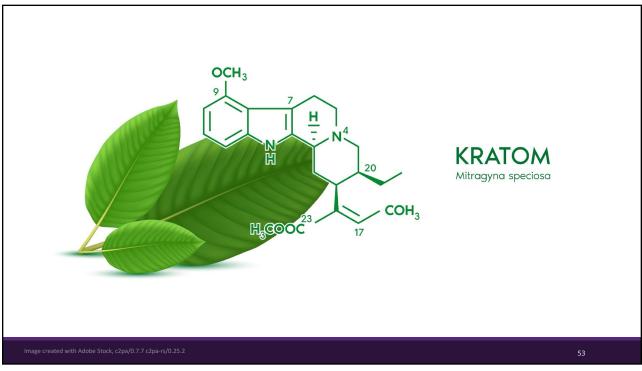




Guaifenesin (expectorant) can cause severe nausea and vomiting.

**Pseudoephedrine** (decongestant) can cause irregular heartbeat, headaches, difficulty breathing, anxiety, and seizures.

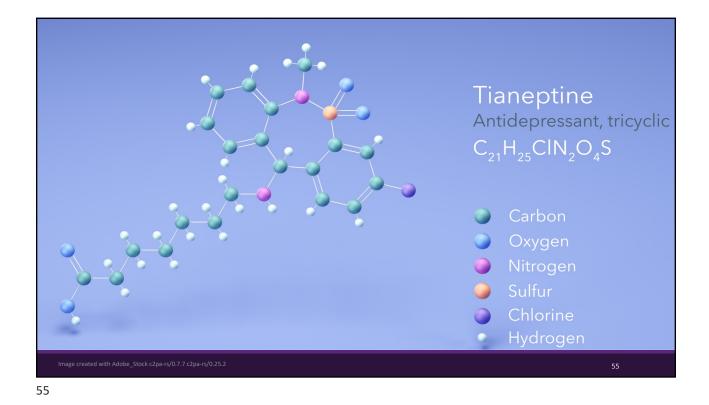


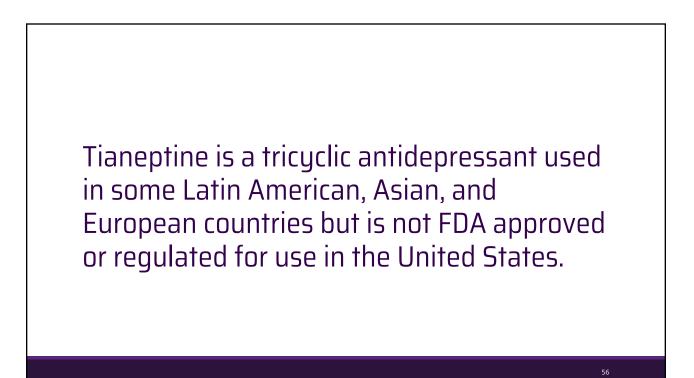






 Kratom consumption can lead to addiction. Several cases of psychosis resulting from use of kratom have been reported, where individuals addicted to kratom exhibited psychotic symptoms, including hallucinations, delusion, and confusion.





## Tianeptine

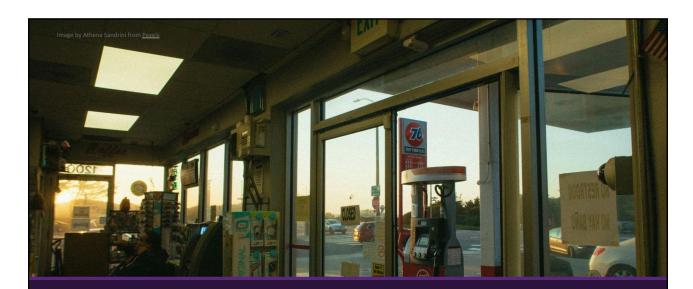
- Low blood pressure, seizure and heart rhythm irregularities such as tachycardia, according to the report. At least one person went into cardiac arrest.
- Can cause respiratory depression and severe sedation
- Been found to include dangerous synthetic cannabinoids

Image Source: FDA. (2024, February 15). FDA warns consumers not to purchase or use Neptune's Fix or any tianeptine product due to serious risks. U.S. Food and Drug Add

• Significant withdrawal syndrome

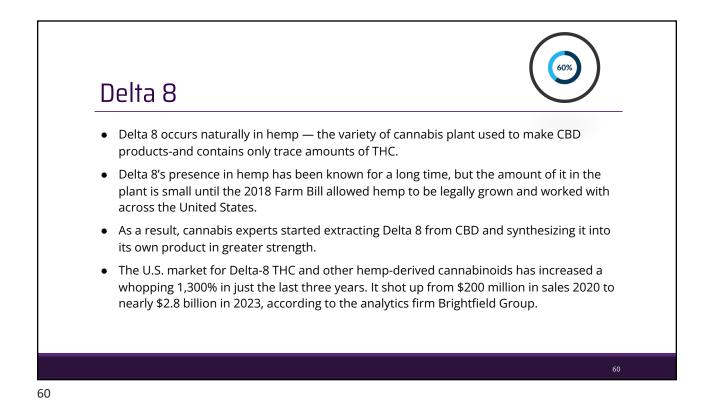


Coaxil® Stablon® Neptune's Fix Tianaa® Pegasus Tianna Red Dawn Za Za Red



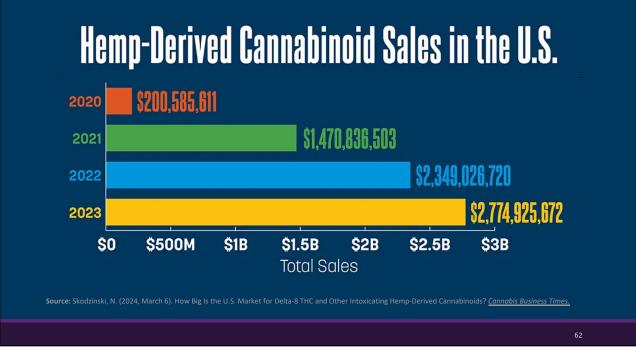
Sold in gas stations, on Amazon, and in vape shops.



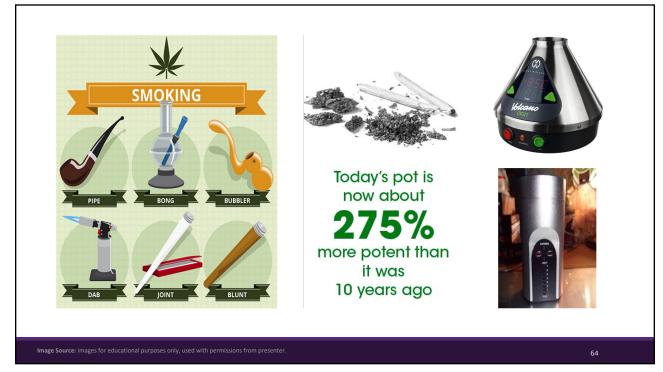


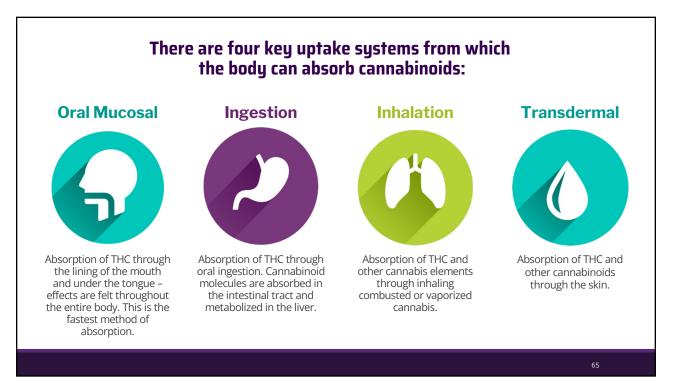


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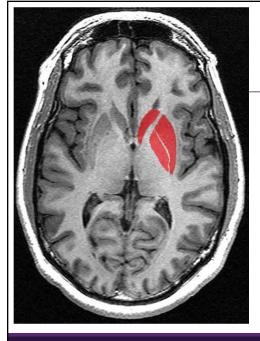










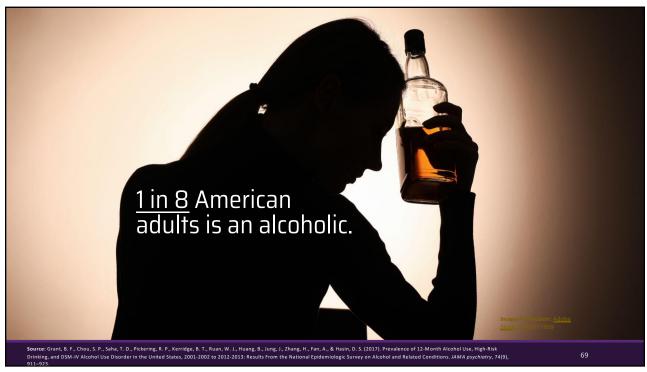


#### Heavy Cannabis Use Associated With Reduced Dopamine Release

Cannabis users had significantly lower dopamine release in the striatum, including subregions involved in associative and sensorimotor learning, and in the globus pallidus.

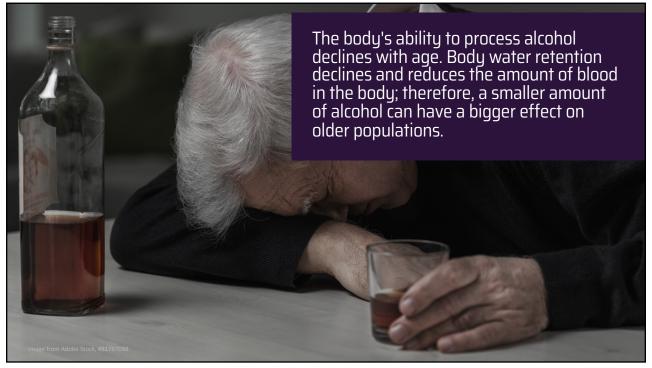
"Deficits in striatal dopamine release in cannabis dependence," was published online on March 22, 2016, in Molecular Psychiatry.





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## Effects

The brain responds to alcohol differently, based on age.

Alcohol's bi-phasic impact on the adolescent and young adult brain is different from the adult brain.

- For **older adults** (typically those over the age of 24), alcohol acts as a sedative, for **younger adults** (those under the age of 24), alcohol acts an excitatory drug (20 minutes vs. 8–10 hours).
- Young adults drink less often than older adults, but drink more than older adults.

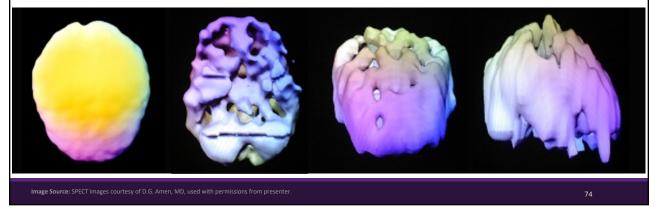


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### Alcohol and the Brain

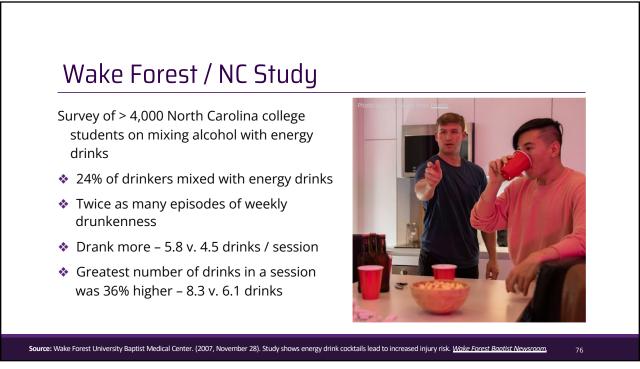
Alcohol use creates profound changes in brain metabolism.

38-year-old male with 17 years of heavy weekend alcohol displays a significant decrease in brain activity.



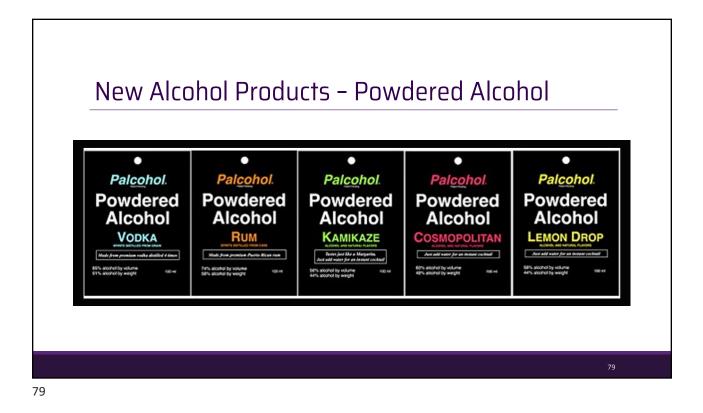
## Public Health Implications – Alcohol-Energy Drinks

- Marketing and product design promotes youth consumption
- Alcohol + Caffeine = "Wide awake drunk"
- Caffeine masks alcohol's intoxicating effects, promotes risk taking
- Youth/Young Adult most likely to take risks









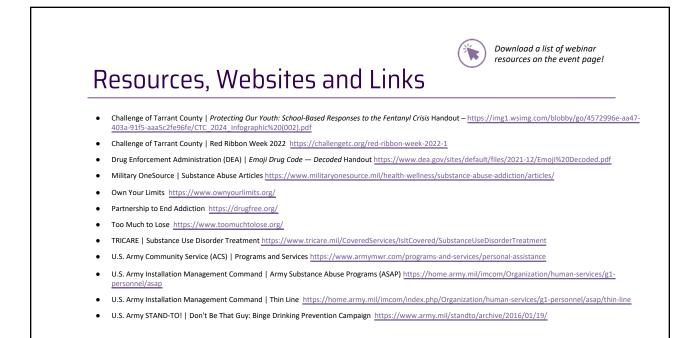














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## **Citations for Images**

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This webinar has been approved for **1.5 continuing education (CE) credit hours** from the following:

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- The Commission for Case Manager Certification
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#### Coping Compass: Identifying and Addressing Problematic Adolescent Behavior

#### November 12, 11 AM - 12:30 PM ET

This webinar will provide insight into the underlying causes of behaviors often associated with anxiety, depression, antisocial behavior, and suicidal ideation. Examples and practical strategies for early identification, and intervention to promote positive changes are also shared. **Continuing education credits are available**!

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