



Gas Stations: The Next Pharmacy?

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Objectives

- Identify what might be available for purchase at a gas station
- Understand how these substances work/affect the body
- Understand how to educate and talk to patients about the risks and dangers associated with using these substances

Accessibility¹

- The NACS (National Association of Convenience Stores) states that there are 152,396 convenience stores in the United States
 - It is estimated there is one store per 2,240 people in the United States
 - 120,061 of these convenience stores sell gas
- On average, 1,100 individuals visit a convenience store daily
 - More than 400,000 individuals per year
- Most gas stations are open late or even 24/7

Gas-Rx^{2,5}

- The term “gas station drugs” refers to a wide range of substances typically available for purchase from gas stations, corner stores, bodegas, mini marts, smoke shops, and the Internet
- These substances may be produced commercially by drug manufacturers or in clandestine laboratories to mimic the effects of more well-known illicit/controlled substances such as marijuana, cocaine, opioids, etc.
- The loopholes they use are usually sold by include being labeled as “dietary supplements”, “nutritional supplements” or “not for human consumption”



Regulation³

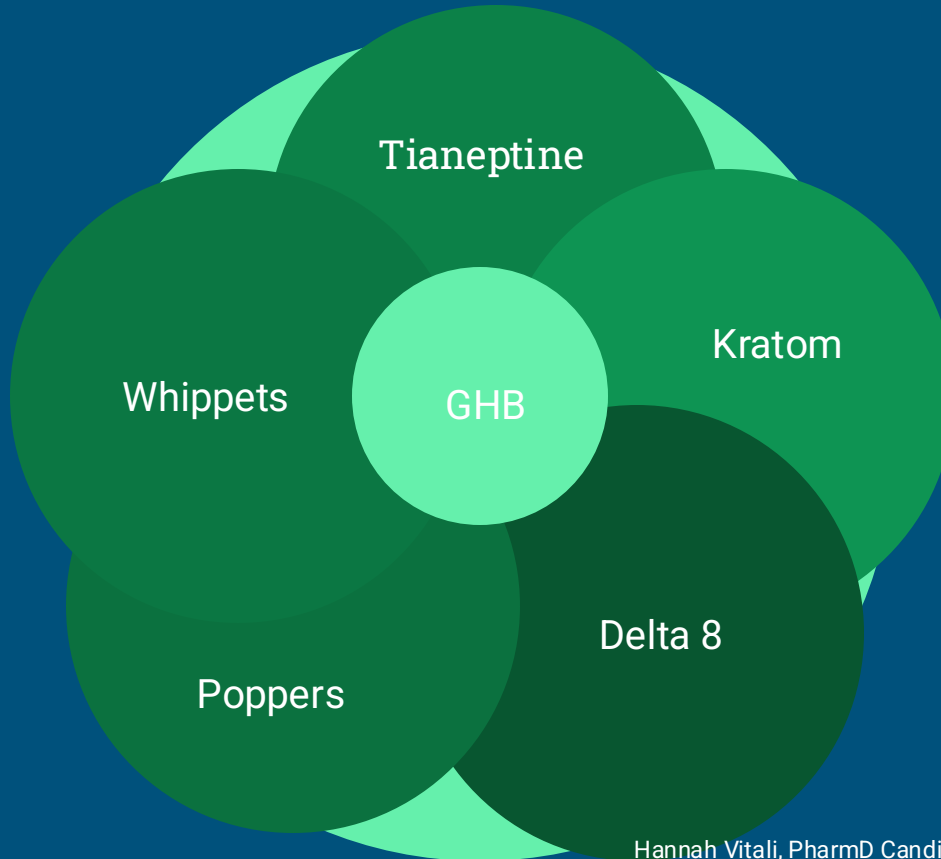


- Gas stations have no regulatory process for approval of drugs
- If the drug is marketed as a dietary supplement it should meet the Dietary Supplement Health and Education Act (DHSEA) requirements
- Raises concerns due to unknown composition of substances, misleading claims, and hidden risks such as adverse interactions
- The lack of FDA oversight means there is no guarantee of the purity, potency, or safety of these products

Dietary Supplement Criteria⁴

- Dietary Supplement is a general umbrella term that includes herbals, vitamins, minerals and many substances that are not plant derived but exist in nature.
- FDA loosely regulates dietary supplements, but does not evaluate safety and effectiveness
- Dietary supplements are regulated by DSHEA of 1994
- DSHEA requires the manufacturer to ensure that their products are safe before they are marketed
- Once marketed the FDA must show it is “unsafe” before it can restrict or remove it from the market

Commonly Found Drugs





Tianeptine



Tianeptine Background⁵



- Tianeptine is Schedule II antidepressant agent
 - Schedule II: High potential for abuse with potential to cause severe psychological or physical dependence
- Also known as “Gas station Heroin,” “ZaZa Red,” “Neptune’s Fix”
- Increases serotonin uptake in the brain and reduces stress
- It binds to the same receptors in the brain as heroin and fentanyl, causing similar euphoric and addictive effects

Tianeptine Uses⁵

- Not FDA approved for medical use in the United States
 - Used to treat major depressive disorder in European, Asian and South American countries
- Used to self-treat anxiety, depression, and irritable bowel syndrome
- Marketed as a supplement, at higher doses acts as an opioid receptor agonist
- Symptoms of tianeptine withdrawal are similar to those of opioid withdrawal, including agitation, nausea, anxiety, diarrhea, and chills

Tianeptine Concerns⁵

- Poison control center cases involving tianeptine exposure have increased nationwide, from 11 total cases between 2000 and 2013 to 151 cases in 2020 alone
- In November 2023, the FDA raised additional concern over these products
 - “FDA is warning consumers to not purchase or use any Neptune’s Fix products, or any other product with tianeptine—a potentially dangerous substance that is not FDA-approved for any medical use but is illegally sold with claims to improve brain function and treat anxiety, depression, pain, opioid use disorder and other conditions.”
- Nine states have banned selling tianeptine over the counter
 - Alabama, Florida, Georgia, Indiana, Kentucky, Michigan, Mississippi, Ohio and Tennessee



Kratom



Kratom Background⁶

- Native to Southeast Asia as a tropical tree (*Mitragyna speciosa*)
- Two main chemical components: mitragynine and 7-hydroxymitragynine



Kratom Uses⁶

- Often to used to self-treat pain, diarrhea, anxiety, depression, etc.
- The effects of kratom is dose dependent
 - Stimulant effects are shown at lower doses and sedative effects are shown at high doses
- Sale of the natural form is allowed, but synthetic alkaloids of kratom are currently banned everywhere
 - Synthetic alkaloids are compounds that have similar structures

Kratom Concerns⁷

- In 2016 the DEA published notice to make kratom a schedule 1 controlled drug
 - Schedule 1: drug with no accepted medical use and high potential for abuse
 - The DEA received immense backlash from this notice, which caused for the notice to be removed
 - The DEA listed kratom as a Drug and Chemical of Concern
- Estimated 1.7 million Americans 12 years and older used kratom in 2021
- Currently banned in 6 states
 - Alabama, Arkansas, Indiana, Rhode Island, Vermont, Wisconsin
- There is an age restriction in 6 states (21 years old)
 - Georgia, Illinois, Minnesota, South Dakota, Tennessee, West Virginia



Delta 8



Delta 8 Background⁸



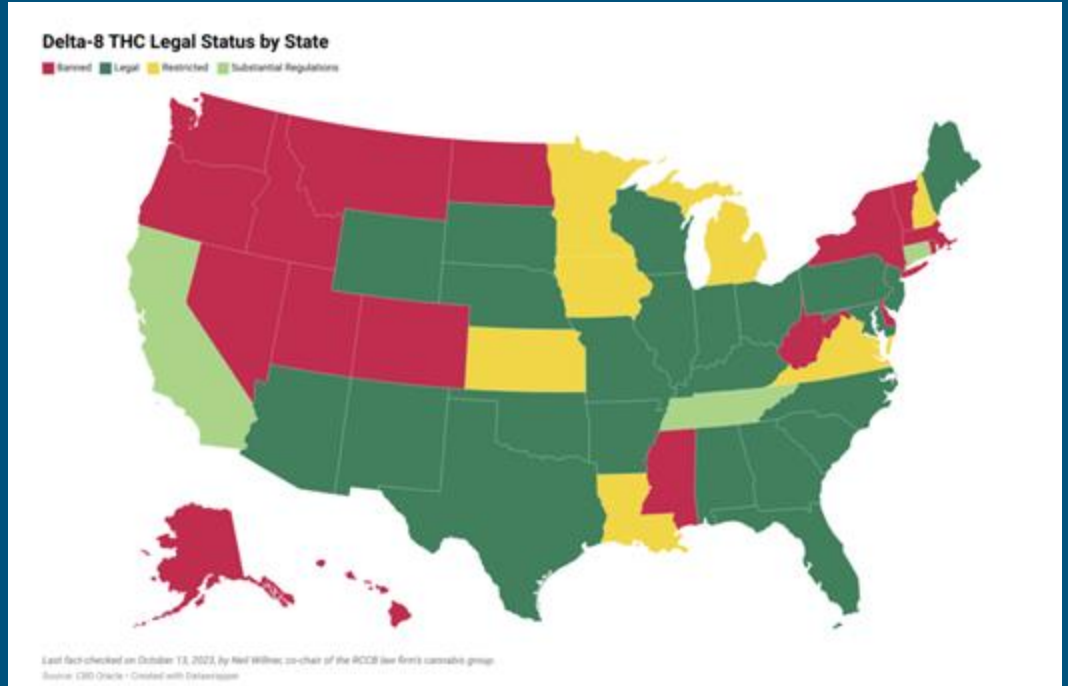
- Δ -8-tetrahydrocannabinol is a psychoactive cannabinoid found in the Cannabis plant
- Became legal in 2018 and is unregulated at the federal level
- Sold at most gas stations
- Age restriction in TN
 - Have to be 21
- Comes in many forms at gas stations
 - Vape, gummies, tinctures

Delta 8 Uses⁸

- Delta 8 is used for relaxation, euphoria, pain relief, nausea and vomiting caused by cancer drug treatment, glaucoma, trouble sleeping, and many other conditions
 - There is no good scientific evidence to support these uses

Legalization of Delta 8⁹

- Legal in 22 states and 1 district
- Banned in 17 states and severely restricted in 7 states





Poppers



Poppers Background¹⁰



- "Poppers" refers to amyl nitrite
 - Used in the medical field as a vasodilator to treat certain heart conditions
- Recreational use emerged in the 1960-1970s due to euphoric effects and enhancement of sexual experiences
- Often packaged in small bottles similar to energy shots
 - Can also be marketed as nail polish remover or cleaning products

Poppers Uses¹⁰

- Popper have psychoactive effects
 - It dilates blood vessels, leading to a sudden drop in blood pressure and increased blood flow to the brain
- This leads to sensations of warmth or “high” effect, euphoria, heightened sensory perception, experiencing a temporary loss of inhibitions, or increased sexual arousal
- Carry risks of headaches, dizziness, nausea, skin irritation, and in extreme cases, loss of consciousness or death
- Prolonged use can cause irregular heart conditions, cancer, burns on skin if spilled

Poppers Concerns¹⁰

- Schedule VII in TN, any offense is a class E felony and punishable by a sentence of 1-2 years and \$1,000 fine
 - Schedule VII: butyl nitrite or any isomer of butyl nitrite
- Not considered physically addictive, they can be habit-forming, and chronic use may lead to tolerance and dependency
- Harmful and potentially deadly drug interactions
 - Common blood pressure medications, heart failure medications and erectile dysfunction medications



Whippets



Whippets Background¹¹

- Inhaled nitrous oxide that can be found in whipped cream aerosol canisters
- Nitrous oxide is commonly called laughing gas
 - Used in medical practice for sedation and help people relax during procedures



Effects from Whippets¹¹

- Can cause psychiatric symptoms
 - Hallucinations, paranoia, etc
- Prolonged use can lead to muscle atrophy and/or organ damage
 - This can cause brain cells to die as result of oxygen deprivation
- Euphoric feeling only last a few seconds or minutes
 - This causes most individuals to repeat use relatively quickly

Whippet Concerns¹¹

- Doesn't affect levels of dopamine or serotonin
 - It decreases oxygen and increased carbon dioxide in your body
 - The more you repeat use, the more oxygen is decreasing from your body
- Not physically addictive but can be psychologically addicting
 - Psychologically addicting because of the “rush” the individual experiences
- Certain states have created age restrictions (under 21 years old) on nitrous oxide canisters



GHB

GHB Background¹²



- Gamma-hydroxybutyrate: Schedule 1
- Known as "G," "liquid ecstasy," and "liquid X."
- Usually sold as liquid or white powder that dissolves in water
 - Liquid form is clear, colorless and slightly salty in taste
- More commonly known as a date rape drug which became popular in 1990s at clubs and raves

GHB Uses¹²

- Misused for euphoric and calming effects
 - Increases libido
 - Some believe it builds muscles and causes weight loss
- Major cause for concern is that it can cause amnesia
 - If an individual is given or “slipped” this drug, they could forget a period of time and events that occurred
- Can also produce hallucinations and excited or aggressive behavior

GHB Rx Form¹²

- Sodium oxybate is another name for GHB
 - This is an FDA approved prescription medication used to improve daytime sleepiness and muscle weakness with narcolepsy
- It is classified as a schedule III drug
 - Schedule III: drugs with moderate to low potential for physical and psychological dependence
- Takes 15-30 mins for effect and last 2-4 hours
 - Taken multiple times throughout the night



How Can We Help?

- Talk to patients regarding the risks of these drugs
- Remind patients that just because a substance is conveniently sold does not mean it is safe
- Provide person-centered and trauma-informed care to patients, even if they are not ready to stop using
- Carry naloxone and encourage its use when a person's respiration is depressed, or if an opioid overdose is suspected. Though limited, there is some evidence that naloxone may have efficacy in treating tiapatine toxicity.
- Educate patients on overdose risk-prevention strategies, such as avoiding mixing substances
- Refer individuals to local harm reduction agencies or other trusted, community-based providers available to connect patients to needed resources (i.e., sterile syringes, overdose education, HIV testing, fentanyl test strips, etc.)

How to Protect You and Your Family

- Consumers should avoid all products containing these substances, including those claiming to treat an ailment or disorder. Talk to your health care provider if you need help with opioid dependence, depression, anxiety, pain, or other ailments. There are approved treatments for those and related conditions.
- Help is available to treat opioid or other substance use disorders. Find state-licensed providers who specialize in treating substance use disorders and addiction at www.findtreatment.gov. Or call 1-800-662-HELP (4357).
- The FDA has taken steps to protect people from unapproved products, including warning consumers that these substances are an unsafe food additive and not a dietary ingredient. We have issued warning letters to companies illegally marketing products as dietary supplements and unapproved drugs.

Takeaways

- Gas stations are easily accessible and loosely regulated by the FDA
 - They use a loophole by calling these life altering drugs “dietary supplements”
- It is crucial that the risks associated with these drugs are public knowledge
 - There is a reason why some of these drugs are banned from certain states
- Abuse of these drugs not only impact the individual, but also their family and friends
 - It is necessary that these individuals and love ones know what resources are available for help

Questions?

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