

What is xylazine?

- ❖ A non-opioid sedative commonly used for procedural sedation in veterinary medicine, that has not been approved for human use. Xylazine is in a class of medications called alpha-2 adrenergic agonists.
- ❖ Commonly referred to as “tranq”, “tranq dope”, or the “zombie drug.”
- ❖ Found mainly when fentanyl is present, but has been detected in heroin, pressed pills, meth, and cocaine (*Figure 3*)
- ❖ Because xylazine is not an opiate, naloxone will not reverse the xylazine overdose but will be effective in the opioid overdose since xylazine is commonly present with opioids.
- ❖ DEA has seized xylazine in 49/50 states, Puerto Rico, and the District of Columbia as of October 30, 2024 (Wyoming is the only state remaining to not have a DEA reported encounter since 2020) (*Xylazine information*)
- ❖ In seized fentanyl samples from Kentucky since 2023, approximately 19% also contain xylazine. Majority of the time, the fentanyl + xylazine mixture is in powder form, not tablet form.

Literature Data/Reports

- ❖ Since 2020, DEA’s laboratory system analysis shows a 5-fold increase in the presence of xylazine in fentanyl tablet samples; and a 3-fold increase of xylazine in fentanyl powder samples. (*Xylazine information*)

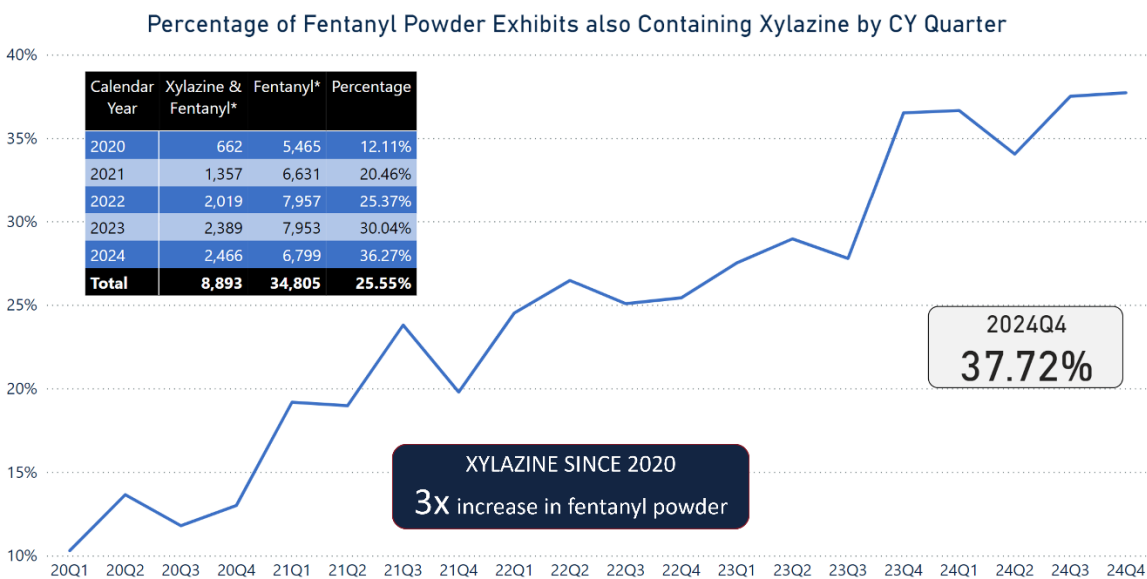
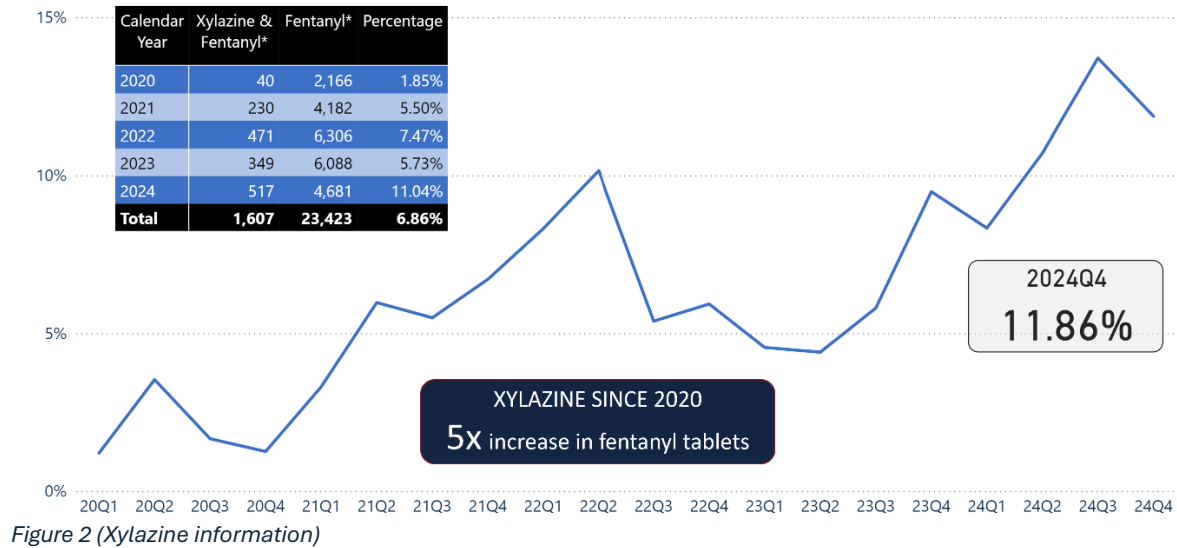
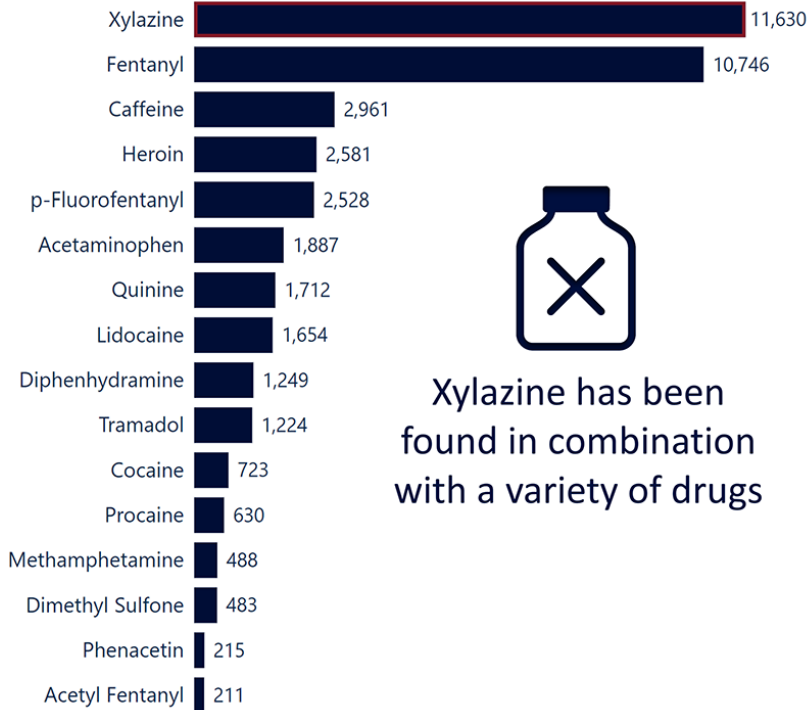


Figure 1 (*Xylazine information*)

Percentage of Fentanyl Tablets Exhibits also Containing Xylazine by CY Quarter



Top 15 Drugs Found with Xylazine



- ❖ Joint Intelligence National Threat Response – El Paso Illicit Drug (INTREPID) Lab found markers that link xylazine to repurposed veterinary preparations. The Joint INTREPID Lab’s

mission combines DEA, CBP, & FDA scientists to work collaboratively to provide actionable intelligence, scientific support, and research to law enforcement. (*Xylazine information*)

- Of the various xylazine + fentanyl samples tested, approximately 15% contained markers that link xylazine to **repurposed veterinary preparations**.
- Result: Majority of xylazine mixed in with fentanyl samples is from **powdered sources** and smuggled into the U.S.

Identifiers

- ❖ S/S in humans:
 - CNS depression, drowsiness, heavily reduces oxygen to the brain, slowed heart and breathing rates, wounds regardless of administration site, seizures, and comas.
 - Xylazine has profound sedating effects that, depending on the route of administration, begin to occur 1-2 minutes after use and may continue for up to 8 hours. (*Health Alert Network - DHHS - Nebraska.gov*)
 - Due to the prolonged sedation from xylazine, risk of sexual assault, theft/robbery, physical assault, and immobility have been reported.
- ❖ Appearance (illicit drug supply)
 - White or brown powder, but often mixed into other powders or pressed into pills, making it harder to identify based on appearance
- ❖ Routes of administration
 - Intravenous
 - Intramuscular
 - Intranasal
 - Oral
- ❖ People who inject drugs will get wounds at the injection site due to varying factors vs. xylazine wounds can occur regardless of administration route and not always at the site of administration
- ❖ Clinicians should be aware of the following characteristics of xylazine associated wounds (*Recommendations for caring for individuals with xylazine ...*)
 - Rapid progression- usually starts as a blister and progresses to an open lesion, then expands to a size greater than 10 cm (size of a bagel, in diameter) with areas of necrosis
 - Necrotic- dead tissue
 - Eschar- typically dry, dark, firm, and adherent
 - Slough- typically wet, yellow or white, soft, and stringy
 - Heterogenous- wounds may have areas of exposed underlying structures, such as tendon or bone, alongside necrotic tissue and healing granulation tissue
 - Typically occurs on limbs
 - Associated with illicit drug use
- ❖ Individuals who use drugs containing xylazine report they spend more time sleeping, and chronic xylazine use has been associated with increased occurrence of skin lesions, abscesses, and ulceration. (Lin et al., 2024)

Wound Treatment/Management

- ❖ General wound management is reported to be effective and appropriate. Professional treatment is required if wounds reach stage two or three.
- ❖ Effective at-home management can include:
 - Ensuring hands are clean before touching to avoid wound infections
 - Cleaning the wound daily with soap and water or saline solution
 - Not using alcohol-based products to clean the wound as this can dry it out
 - Patting the wound dry after cleaning
 - Using ointments, antiseptic cream, or petroleum jelly to keep the wound moist
 - Covering the wound with a bandage or plaster, ensuring this is secure but not too tight
 - Covering the bandage with a wrap or clothing to keep it dry and protected
 - Changing the bandage every 1-3 days as needed
 - Using a xylazine test strip before using illicit drugs
- ❖ Treatment of patients with xylazine-induced acute skin necrosis can include:
 - Cleaning and dressing the wound
 - Prescribing antibiotics to treat wound infection
 - Removing dead or infected skin (surgical debridement)
 - Skin grafting or flap cover to repair large open wounds
 - Amputation in very severe cases, such as extreme necrosis or nerve damage (Murphy, 2025)

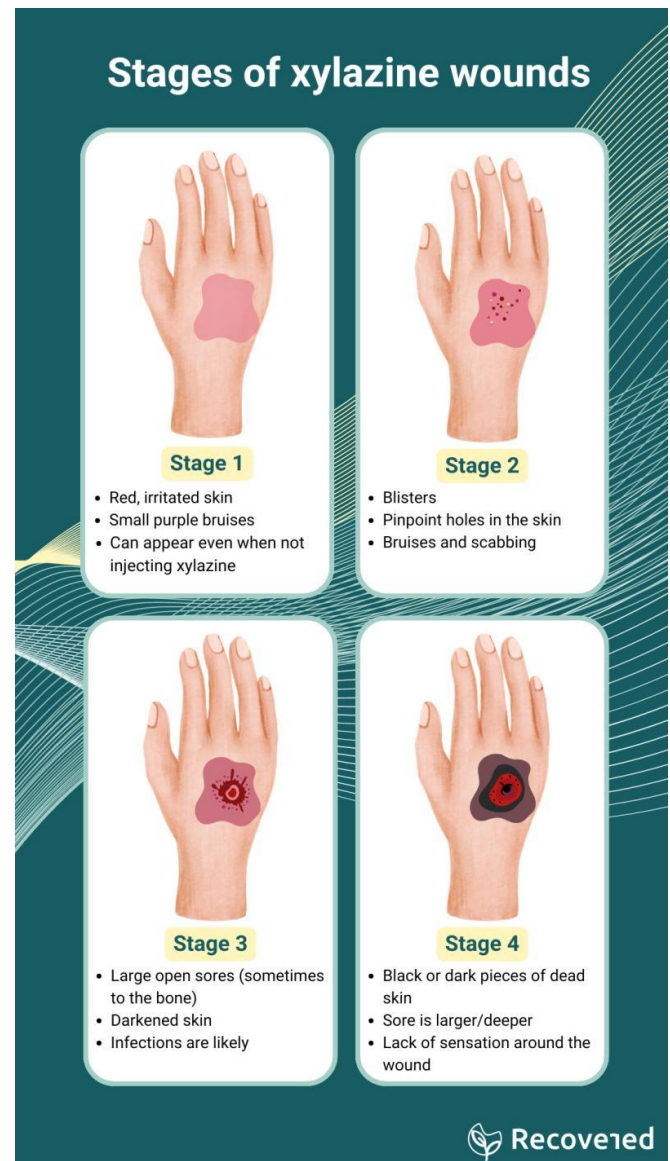


Figure 4 For more information:

<https://recovered.org/other/xylazine/xylazine-wounds>

Fentanyl/Xylazine Test Strips

- ❖ **Xylazine Test Strips (XTS)** and **fentanyl test strips (FTS)** are available, with instructions, at the Purchase District Health Department and Turning Point Recovery Community Center.
 - **XTS** cannot be tested with cocaine. Lidocaine will cross react and produce a false positive result.
 - It is advised to use a **XTS** if there has been a positive **FTS** or when it is suspected (based on sedation/wounds.)

Additional information

- ❖ Xylazine activates kappa opioid receptors like how fentanyl activates opioid receptors. This finding could hint at why withdrawal from fentanyl in combination with xylazine is so severe. (Eshelman Innovation)
- ❖ Break-ins at veterinary clinics to steal prescription medications aren't unheard of, either. Proper storage practices with controlled substances should deter and thwart most such incidents, but they can still happen. Re-examining inventory stocking and security practices to meet the high standards set by the DEA is essential. (*Veterinary Drugs & Human misuse: How is xylazine abused?*)
- ❖ Another possibility is pet owners stealing their pet's medicine to misuse the controlled substances. [13 percent of veterinarians](#) were aware of at least one pet owner who had injured their animal or faked an illness to falsely obtain animal drugs. (Staver, 2018)
- ❖ There are emerging studies with information about managing xylazine withdrawal symptoms and recommendations. Please be advised this information is still being studied.
 - <https://oasas.ny.gov/xylazine>
 - <https://harmreduction.org/wp-content/uploads/2022/11/Xylazine-in-the-Drug-Supply-one-pager.pdf>
- ❖ Again, naloxone does not reverse the xylazine overdose but will still be effective in opioid overdoses since xylazine is commonly present with opioids.

References

Health Alert Network - DHHS - Nebraska.gov. Xylazine-Related Overdose Warning. (n.d.).
<https://dhhs.ne.gov/han%20Documents/UPDATE12202023.pdf>

Lin, Y., Farnsworth, C. W., Azimi, V., Liss, D. B., Mullins, M. E., & Crews, B. O. (2024). Xylazine pharmacokinetics in patients testing positive for fentanyl and xylazine. *Clinical Chemistry*, 71(2), 266–273. <https://doi.org/10.1093/clinchem/hvae163>

Murphy, E. (2025, January 23). *Xylazine wounds: This dangerous drug rots your skin*. Recovered.
<https://recovered.org/other/xylazine/xylazine-wounds>

Recommendations for caring for individuals with xylazine ... (n.d.-a).
https://hip.phila.gov/document/4148/Recommendations_for_Caring_for_People_with_Xylazine-Associated_Wounds_1.12.pdf/

Staver, A. (2018, August 9). *Colorado vets suspect some pet owners abuse animals to get opioids*. The Denver Post. <https://www.denverpost.com/2018/08/09/colorado-vets-animal-abuse-prescription-pills/>

Triangle CERSI accelerates FDA response to complex, high-priority... Eshelman Innovation. (n.d.).
<https://eshelmaninnovation.org/news/triangle-cersi-accelerates-fda-response-to-complex-high-priority-challenges/>

Veterinary Drugs & Human misuse: How is xylazine abused?. RSS. (n.d.).
<https://ophelia.com/blog/human-misuse-of-veterinary-drugs>

Xylazine in the drug supply. (n.d.-b). <https://harmreduction.org/wp-content/uploads/2022/11/Xylazine-in-the-Drug-Supply-one-pager.pdf>

Xylazine information. DEA. (n.d.). <https://www.dea.gov/xylazine-information>

Xylazine. Office of Addiction Services and Supports. (n.d.). <https://oasas.ny.gov/xylazine>