



Xylazine

SCORF Coffee Chat, November 3, 2023

Xylazine

- **Chemical name:** 2(2,6-dimethyl phenylamine)-4-H-5,6-dihydro-1, 3-thiazine hydrochloride
- **Trade & other names:** Rompun[®], Sedazine[™], AnaSed[®], Chanazine[®]
- Alpha-2 adrenergic agonist; **not** an opioid
- Drug used for veterinary use as a sedative and relaxant for large animals
 - Only approved in the U.S. for veterinary use, **not approved for use in humans**
- **Street names:** tranq, tranq dope
- Can be injected (usual route), swallowed, or sniffed

Xylazine in the drug supply

- An adulterant commonly encountered with illicitly manufactured fentanyl (IMF), but found in other mixtures (meth, cocaine).
- Increases profit for drug traffickers as xylazine's psychoactive effects allows them to reduce the amount of fentanyl in a mixture.
- Sometimes in mixture without user's knowledge, other times they seek it out-prolongs the high.

History and Pattern of Abuse

- Forensic toxicology casework since **1980s**.
- Puerto Rico since **early 2000s**.
- **Philadelphia** since **2006** and **NYC** since **2007-08**.
- DEA: increased beyond the Northeast markets since then, now **in all four census regions**.
- **South showed largest percent increase in forensic lab samples from 2020 to 2021.**
- DEA: **23% of fentanyl powder in 2022 contained xylazine.**

DEA Forensic Laboratory Identifications of Xylazine by Region

Region	2020	2021	% Increase
Northeast	631	1,281	103%
South	116	1,423	1,127%
Midwest	57	351	516%
West	4	34	750%

Xylazine Involved Deaths in SC

- **379% increase** in xylazine involved deaths in SC from 2020 to 2021.
- Trend has continued with **almost twice as many deaths in 2022** (provisional data) compared to 2021.
- Xylazine involved **fatal and nonfatal overdoses are very underreported**, resulting in falsely low counts.
 - Standard toxicology screen does not test for xylazine.
 - Many entities cannot afford additional testing.

Xylazine Involved Deaths in SC

Year	All Deaths Involving Xylazine	Cumulative Frequency
2019	11	11
2020	19	30
2021	91	121
2022*	177	298
2023*†	84	382

**2022 and 2023 numbers are provisional and subject to change.*

†2023 preliminary data as of October 23, 2023.

Effects of Xylazine in People

- Clinical trials in humans in 1960s were stopped early due to it **causing significant low blood pressure and central nervous system depression.**
- Further info on effects in people are **primarily from drug users** because of limited clinical trials.
- Physical dependence in people repeatedly exposed to it → **severe withdrawal symptoms.**
 - **No medication to treat** withdrawal symptoms.
 - Medications to treat opioid withdrawal **do not treat withdrawal from xylazine.**

Effects of Xylazine in People

Adverse effects include:

- Dry mouth
- Hyperglycemia
- Hypothermia
- Drowsiness and sedation
- Hypotension
- **Bradycardia & arrhythmias**
- **Respiratory depression**
- **Coma**
- **Death**



Emergency Response

- Look for Unresponsiveness, Poor or no breathing, and Constricted pupils (pinpoint)
- [COPE Narcan Administration Video](#)
- Peel, Place, Push
- Hands on only CPR is appropriate if the person is not breathing
- [Hands Only CPR](#) (Not a replacement for proper training)

Emergency Response

- Narcan does not work on all drug overdoses
- Narcan has no effect on Xylazine
- You can administer Narcan anyway
- Xylazine is often mixed into drugs such as Heroin or Fentanyl
- Continue CPR if not breathing until EMS arrives

Chronic Wounds

- **Skin & soft tissue damage** in people who repeatedly use xylazine leads to **acute and chronic wounds and necrotic (dead) tissue requiring significant debridement and sometimes even amputation.**
- **Wounds can occur anywhere on the body,** not necessarily at injection sites.
- **May get superinfection of the wound.**
- **Hypothesis:** drug, as an α_2 agonist, causes vasoconstriction → poor skin & soft tissue perfusion → lower oxygen delivery to tissue → necrosis → continued poor perfusion prevents healing → chronic wound.









Urgent Medical Attention Needed

- Significant dead (black) tissue
- Uncontrolled bleeding
- Exposed bone
- Concern for infection
- Rapidly worsening

Warning Signs for Infection

- Fever (100.4°F or greater)
- Purulence (pus)
- Redness, warmth, and/or swelling of surrounding skin
- Significantly increased drainage

Wound Care Basics

- Keep it clean – soap and water!
 - No peroxide, rubbing alcohol, etc.
- Cover with clean bandage*
 - Change bandage daily (can do twice a day if difficult to keep clean)
 - Type of bandage varies by severity of wound

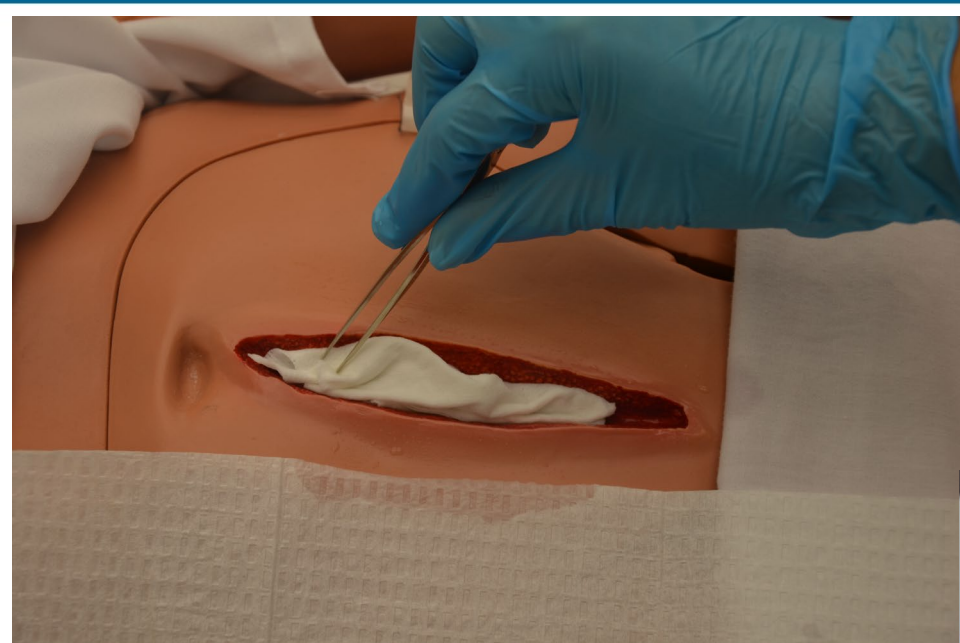
* If given different wound care instructions by a medical provider, follow those!

Wound Dressings

- No tissue defect: clean, dry bandage
 - Caution with Neosporin (many people's skin reacts poorly to a part of it)
 - Caution with tape (skin irritation)
- Tissue defect: wet-to-dry dressing
 - Clean gauze soaked in saline (or as sterile/clean of water as is available)- gently put in the hole of missing tissue, trying to avoid too much overlap with intact skin
 - Cover with clean, dry bandage (may need thick bandage or several layers)



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Recommendations

1. Know the signs and symptoms of xylazine consumption and intervene early.
 - If a person is using fentanyl, heroin or other substances, consider whether they have been exposed to xylazine and examine for infections or wounds.
 - If infection, wounds or necrosis are observed without clear causes, consider screening the individual for substance use.

Recommendations

2. Improve detection of xylazine

- Test for Xylazine in clinical drug screens and toxicology panels.
- Pursuant to Public Health Order 2023-10-25, all laboratories, healthcare facilities, and providers are required to report all positive test results of Xylazine and any associated metabolites to DHEC starting on Monday, November 27, 2023.

Recommendations

3. Educate patients and community members about Xylazine

- Xylazine may be in the drug mixture without the user's knowledge
- Has been found in fake pills
 - Reiterate messages that any medication not obtained from a doctor or pharmacy **is deadly**

Recommendations

4. Expand the provision and use of naloxone and overdose prevention education

- Although naloxone will not reverse xylazine, naloxone will reverse the effects of any opioid present.
- Raise awareness about the critical need for bystanders to have naloxone on hand.



Recommendations

5. Link patients to treatment for substance use disorder.

- Utilize Screening, Brief Intervention, and Referral to Treatment (SBIRT) model.
- Provide Medications for Opioid Use Disorder (MOUD).



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Q and A



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