



### NYS OASAS Medical Advisory Panel (MAP) Xylazine Guidance: In Brief

Xylazine, a non-opioid sedative commonly used in veterinary medicine, has become increasingly prevalent in the unregulated drug supply in the United States. Although found in combination with other substances, xylazine is found in the unregulated drug supply most commonly with illicitly manufactured fentanyl (“fentanyl”).<sup>1-2</sup> Xylazine is an alpha-2 adrenergic agonist that causes profound sedation and central nervous system (CNS) depression. This can contribute to a blunted response to airway occlusion much like the effects from other sedatives such as benzodiazepines and barbiturates. Because of xylazine’s co-occurrence with fentanyl, the sedation that it causes has synergistic effects with the respiratory depression caused by opioids, contributing to increases in overdose mortality.<sup>3</sup> In 2021, xylazine was involved in 19% of the opioid-involved overdose deaths in NYC.<sup>4</sup>

Xylazine can cause complex wounds that often occur at skin sites associated with injection, but it’s possible for them to occur at skin sites that are not associated with injection and in individuals who don’t inject substances.<sup>5</sup> Xylazine wounds often begin as small superficial lesions. Early recognition and providing low-threshold access to wound care education and supplies can slow the progression of these skin wounds and prevent them from developing into severe necrotic skin ulcerations. Because xylazine wounds can become secondarily infected with bacteria, access to clean water and hygiene facilities for people who use drugs (PWUD) to be able to keep their hands and wounds clean is also important.

#### Harm Reduction Strategies for Xylazine

Harm reduction strategies for people who may be using xylazine need to be tailored to address the profound sedating effects that occur from this substance, especially in the first 20-30 minutes after use. These strategies include<sup>6</sup>

- Keep naloxone nearby and have someone with you when using or use the [Never Use Alone Hotline](https://www.8004843731.com/) (800-484-3731) so that someone can respond with naloxone and call EMS if there is an overdose
- Start low and go slow
- Try to use in a safe location, with belongings securely stored
- Try to use in a comfortable seated position that doesn’t cut off circulation to the arms or legs
- Test your substances using fentanyl test strips and xylazine test strips (FTS/XTS)
  - All New Yorkers are now eligible to receive free FTS/XTS through the MATTERS network, to request test strips please visit <https://mattersnetwork.org/harmreduction/>

#### Preventing and Addressing Xylazine-Related Skin Wounds

There is an increased risk for developing skin wounds when using substances that contain xylazine. To prevent wounds, PWUD should have access to safer injection kits that include clean syringes, cookers, cottons, fentanyl test strips, xylazine test strips, alcohol pads, sterile water vials, gauze, soap or hand sanitizer (to keep hands clean), and tourniquets. Early intervention in treating xylazine-related skin wounds can prevent them from progressing into severe necrotic skin ulcerations. There are three basic tenets of wound care: keep the wound moist, stable in temperature, and covered. Xylazine-related wound care [strategies](#) include:

- Wash hands before tending to wounds
- **Clean:** Keep the wound clean with soap and sterile water, chlorhexidine solution, Dakin’s half-strength solution, 1% acetic acid, or BZK antiseptic wipes
- **Dress:** Apply ointment to the affected areas using a Q-tip, gauze, or with a gloved or clean hand
  - *Recommended ointments: A&D, petroleum or petrolatum jelly, medical honey, xeroform, or Adaptec*
- **Absorb:** Cover the wound with an absorbent pad and a non-adherent dressing to absorb secretions from the wound.
  - *Recommended pads: ABD pads, sponge, or gauze*
- **Secure and protect:** Securely wrap the area to keep the dressing in place and protect the wound

○ **Recommended wraps: Coban or gauze wrap (kerlix)**

- Continue to check the wound for a secondary bacterial infection and seek medical attention if any symptoms of infection begin to develop

More information on xylazine-caused wound care can be found at [NASTAD](#) and [The Harm Reduction Nurses Association](#)  
**Adapting Overdose Recognition and Response to Include Xylazine and Other Sedatives**

1. **Call EMS** when responding to any suspected overdose.
2. **Administer naloxone:** Xylazine is often mixed in with fentanyl, therefore administering naloxone is still the first recommended step in responding to any suspected overdose. Once naloxone is administered, wait at least two minutes before giving an additional naloxone dose.
3. **Start rescue breathing:** If a person is not responding to 1-2 doses of naloxone, and EMS has not been activated, suspect that the overdose is caused by more than one substance, with possible xylazine involvement, call EMS, and begin rescue breathing.

In addition to checking for breathing, check for a pulse. If there is no pulse, the recommendation is to perform chest compressions or full CPR, if trained to do so. If not trained to perform CPR, await EMS responders.

4. When EMS respond, continuous pulse oximetry and airway monitoring/control using bag valve masks (e.g., Ambu bags), oral and nasal airways, or intubation and ventilator support may be needed. There currently are no medications approved for use in humans that will reverse xylazine's effects in the event of an overdose.

**Clinically Recognizing Xylazine Use and Providing Supportive Care**

The effects of xylazine are similar to other alpha-2 agonists such as clonidine, dexmedetomidine, oxymetazoline, tetrahydrozoline, tizanidine, and lofexidine. Xylazine causes profound sedation, but there is conflicting data on whether it contributes to hypotension or bradycardia. Individuals should be monitored for vital sign abnormalities. Because xylazine often is mixed in with fentanyl, xylazine withdrawal symptoms can occur simultaneously with and appear like opioid withdrawal syndrome (OWS). If a person is not experiencing relief from OWS management, consider xylazine involvement and modify the treatment to address both OWS and xylazine withdrawal. Case reports suggest there are benefits to using other alpha-2 agonists like clonidine, tizanidine, and dexmedetomidine for managing xylazine withdrawal symptoms.<sup>7</sup> Negative experiences with poorly managed or untreated withdrawal symptoms can result in future health care avoidance, later presentations of medical problems, more complicated care, and worse medical outcomes.<sup>8</sup>

**References**

1. Holt, AC, Schwoppe, DM, Le, K, Schrecker, JP, Heltsley, R. Widespread Distribution of Xylazine Detected Throughout the United States in Healthcare Patient Samples. *Journal of Addiction Medicine* 2023;10.1097/ADM.0000000000001132. doi: 10.1097/ADM.0000000000001132
2. Friedman J, Montero F, Bourgois P, et al. Xylazine spreads across the US: A growing component of the increasingly synthetic and polysubstance overdose crisis. *Drug Alcohol Depend.* 2022;233:109380. doi:10.1016/j.drugalcdep.2022.109380
3. Ruiz-Colón K, Chavez-Arias C, Díaz-Alcalá JE, Martínez MA. Xylazine intoxication in humans and its importance as an emerging adulterant in abused drugs: A comprehensive review of the literature. *Forensic Sci Int.* 2014;240:1- 8. doi:10.1016/j.forsciint.2014.03.015
5. New York City Department of Health and Mental Hygiene. Xylazine and Fentanyl in the New York City (NYC) Drug Supply. December 27, 2022. <https://www.nyc.gov/assets/doh/downloads/pdf/han/advisory/2022/xylazine-andfentanyl.pdf>
4. Torruella RA. Xylazine (veterinary sedative) use in Puerto Rico. *Subst Abuse Treat Prev Policy.* 2011; 6:7. Published 2011 Apr 11. doi:10.1186/1747-597X-6-7
6. National Harm Reduction Coalition. Xylazine (zie-luh-zeen). <https://harmreduction.org/issues/xylazine/>
7. Philadelphia Department of Public Health Commissioner's Office. Health Alert Risks of Xylazine Use and Withdrawal in People who Use Drugs in Philadelphia. March 16, 2022. [https://hip.phila.gov/document/2524/PDPH-HAN\\_Alert\\_1\\_Xylazine\\_03.16.2022.pdf/](https://hip.phila.gov/document/2524/PDPH-HAN_Alert_1_Xylazine_03.16.2022.pdf/)
8. Ehrman-Dupre R, Kaigh C, Salzman M, Haroz R, Peterson LK, Schmidt R. Management of Xylazine Withdrawal in a Hospitalized Patient: A Case Report. *J Addict Med.* 2022;16(5):595-598. doi:10.1097/ADM.0000000000000955

**More information and resources on xylazine can be found at: [oasas.ny.gov/xylazine](https://oasas.ny.gov/xylazine)**

501 7<sup>th</sup> Avenue | New York, New York 10018-5903 | [oasas.ny.gov](https://oasas.ny.gov) | 646-728-4760

1450 Western Avenue | Albany, New York 12203-3526 | [oasas.ny.gov](https://oasas.ny.gov) | 518-473-3460