

**XYLAZINE**

Xylazine, also known as “Tranq” or “horse anesthetic”, is an alpha-2 adrenergic agonist that is FDA-approved for use in exclusively animals as a sedative, muscle relaxant, and pain reliever.<sup>1</sup> Xylazine works by reducing the release of the neurotransmitters dopamine and norepinephrine to achieve its tranquilizing effects.

Xylazine hydrochloride comes as a liquid injectable solution for veterinary use and is distributed under the brand names Rompun®, Anased®, Sedazine™, Xylamed™, and Chanazine®.<sup>2</sup> In the unregulated market, xylazine can be dried into a powder or pressed into a pill formulation. Xylazine can be taken orally, smoked, snorted, or injected intravenously.<sup>3</sup>



*Photo via <https://www.cdph.ca.gov/>*

Xylazine is frequently combined with or used to adulterate opioids, primarily fentanyl, in the illicit drug supply. Individuals may be unintentionally exposed while using other illicit substances that have been laced with xylazine.<sup>4,5</sup> Xylazine has also been found to be used in conjunction with several other illicit drugs including heroin, cocaine, methamphetamine, and benzodiazepines. Signs a patient may have been exposed to xylazine include sedation and dry mouth as well as decreased breathing, heart rate, and blood pressure.<sup>2</sup>

Xylazine is not safe for use in humans and can lead to extreme complications such as skin ulcers, blood clots, physical dependence, overdose, and even death.<sup>2,6</sup> The characteristic skin ulcers observed in chronic xylazine exposure are not confined to the injection site and can occur anywhere on the body. These wounds have a high risk of infection and tissue death.<sup>7</sup> The risk of life-threatening complications is increased when xylazine is used concurrently with central nervous system depressants such as alcohol, benzodiazepines, and opioids.<sup>4</sup> Naloxone will not reverse a xylazine overdose but is still recommended to be used in any suspected overdose due to the frequency in which xylazine is paired with opioids.<sup>8</sup>

Precision Diagnostics offers definitive LC-MS urine drug testing for xylazine and its metabolite 4-hydroxyxylazine. Xylazine has a typical detection window of less than 24 hours and 4-hydroxyxylazine has a detection window of 24 hours after exposure.

**A Precision Diagnostics trained Clinical Support Specialist can  
assist with further review of your patient's results**

**(800) 635-6901 Option 2**

References:

1. Ruiz-Colón, K.; Chavez-Arias, C.; Díaz-Alcalá, J. E.; Martínez, M. A. 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. <https://doi.org/10.1016/j.forsciint.2014.03.015>.
2. Papudesi, B. N.; Malayala, S. V.; Regina, A. C. Xylazine Toxicity. In *StatPearls*; StatPearls Publishing: Treasure Island (FL), 2023.
3. Elejalde, J. I.; Louis, C. J.; Elcuaz, R.; Pinillos, M. A. Drug Abuse with Inhaled Xylazine. *Eur. J. Emerg. Med.* **2003**, 10 (3), 252.
4. Friedman, J.; Montero, F.; Bourgois, P.; Wahbi, R.; Dye, D.; Goodman-Meza, D.; Shover, C. Xylazine Spreads across the US: A Growing Component of the Increasingly Synthetic and Polysubstance Overdose Crisis. *Drug Alcohol Depend.* **2022**, 233, 109380. <https://doi.org/10.1016/j.drugalcdep.2022.109380>.
5. *Xylazine Adulteration of the Heroin–Fentanyl Drug Supply: A Narrative Review: Annals of Internal Medicine: Vol 176, No 10.* <https://www.acpjournals.org/doi/abs/10.7326/M23-2001> (accessed 2023-11-09).
6. Malayala, S. V.; Papudesi, B. N.; Bobb, R.; Wimbush, A. Xylazine-Induced Skin Ulcers in a Person Who Injects Drugs in Philadelphia, Pennsylvania, USA. *Cureus* **2022**, 14 (8). <https://doi.org/10.7759/cureus.28160>.
7. Warp, P. V.; Hauschild, M.; Tookes, H. E.; Ciraldo, K.; Serota, D. P.; Cruz, I. A Confirmed Case of Xylazine-Induced Skin Ulcers in a Person Who Injects Drugs in Miami, Florida, USA. *Res. Sq.* **2023**, rs.3.rs-3194876. <https://doi.org/10.21203/rs.3.rs-3194876/v1>.
8. *What You Should Know About Xylazine | Drug Overdose | CDC Injury Center.* <https://www.cdc.gov/drugoverdose/deaths/other-drugs/xylazine/faq.html> (accessed 2023-11-09).

---

Precision Diagnostics is a leader in clinical laboratory testing and medication adherence monitoring. Specializing in qualitative and quantitative drug testing, our innovative state-of-the art technology provides new levels of data visibility and pricing transparency.

Precision's role is to ensure each participant, from the patient to the provider and the payer, benefits from our continued commitment to the principles of value-based care and medically necessary test utilization.

**Precision Diagnostics**

4215 Sorrento Valley Blvd.

Suite 100

San Diego, CA 92121

(800) 635-6901

[info@precisiondxlab.com](mailto:info@precisiondxlab.com)

[precisiondxlab.com](https://precisiondxlab.com)



innovation



integrity



insights



outcomes