

# Understanding Xylazine: An Emerging Concern

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Central East (HHS Region 3)

**ATTC**

Addiction Technology Transfer Center Network  
Funded by Substance Abuse and Mental Health Services Administration



Central East (HHS Region 3)

**PTTC**

Prevention Technology Transfer Center Network  
Funded by Substance Abuse and Mental Health Services Administration

Xylazine (“tranq”) is a non-opioid sedative and tranquilizer, often found in powder or liquid form. In the United States, it is only approved as medicine for veterinary use.<sup>1</sup> However, human consumption of xylazine—often injected in combination with opioids—is a growing trend across much of the country.<sup>2</sup> Xylazine can amplify the effects of opioids and cause an opioid high to last longer, which makes it desirable to producers, distributors, and consumers.<sup>3</sup> Xylazine presents many dangers, including increased risk of overdose, and SAMHSA has issued an alert to raise awareness of its growing use.

## KEY CONCERNS

### Overdose Risk

Xylazine can cause respiratory depression. It presents a risk of overdose when used alone and further increases the risk of overdose when used in combination with opioids.<sup>4</sup>

### Heart & Blood Pressure Problems

Xylazine is associated with hypertension, hypotension, tachycardia, bradycardia, and dysrhythmia. Other documented effects include hypothermia and hyperglycemia.<sup>5</sup>

### Skin & Tissue Damage

Xylazine can cause severe skin ulcers and necrotic tissue damage at injection sites and elsewhere on the body. One study found that almost 40% of people who inject xylazine experience skin and tissue problems.<sup>6</sup>

### Treatment Challenges

There are no medications approved to treat xylazine withdrawal.<sup>7</sup> But replacement therapy with adrenergic agonist medications has shown some effectiveness at treating withdrawal symptoms.<sup>8</sup>

### Harm Reduction Barriers

Xylazine tests exist but widespread accessibility remains limited, making detection within substances difficult.<sup>9</sup> And no overdose reversal medication exists. **Administering naloxone is recommended—as opioids are often involved.**<sup>10</sup>

### Research & Surveillance Difficulties

Xylazine is not a federally controlled substance. However, it is not approved or intended for use in humans.<sup>11</sup> Since it is unregulated, comprehensive data on xylazine use do not exist and available data are likely to be undercounts.<sup>12</sup>

## WHAT IS KNOWN ABOUT THE SCOPE OF USE



# 98%

### Seizure increase

Among DEA substance seizures involving xylazine, 2020 to 2021<sup>13</sup>

# 282%

### Fatal overdose increase

Among fatal xylazine-involved overdoses, 2020 to 2021<sup>14</sup>

# 3,089+

### Fatal overdoses

In 2021,<sup>15</sup> with epicenters including\*:

- Philadelphia: **34%**<sup>16</sup>
- Connecticut: **19%**<sup>17</sup>
- Maryland: **19%**<sup>18</sup>

\*% of all fatal overdoses involved xylazine

# 64%

### States report xylazine in outpatient screens

All five Central East states + DC (and 25 of 39 states overall) report positive xylazine urine screenings among outpatient provider clients<sup>19</sup>



## WHAT PREVENTION & TREATMENT PROFESSIONALS CAN DO

### AWARENESS

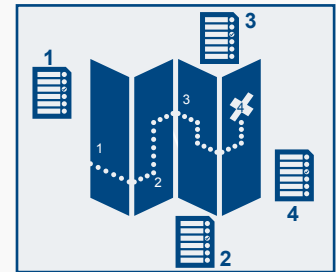


Raise awareness about xylazine use and its risks among public health stakeholders and communities

### OVERDOSE RESPONSE

Pursue a comprehensive overdose response strategy, including:

- Provide access to and training on naloxone
- Communicate that naloxone will address the opioid component of a multi substance overdose<sup>20</sup>
- Teach rescue breathing techniques and the importance of rescue breathing<sup>21</sup>
- Promote contacting emergency medical services<sup>22</sup>



### HARM REDUCTION



Share wound care information and harm reduction strategies, including:<sup>23</sup>

- Wounds start small and can appear anywhere, not only at injection sites
- Keep wounds moist with petroleum jelly or similar products
- Wrap wounds in burn dressings or similar materials
- Do not use alcohol, peroxide, or bleach to clean wounds
- Seek medical attention for wounds

## NOTES

<sup>1</sup> NIDA (n/d). Xylazine. <https://nida.nih.gov/research-topics/xylazine>

<sup>2</sup> DEA (2022). The Growing Threat of Xylazine and its Mixture with Illicit Drugs. <https://www.dea.gov/documents/2022/2022-12/2022-12-21/growing-threat-xylazine-and-its-mixture-illicit-drugs>

<sup>3</sup> Ibid

<sup>4</sup> Ibid

<sup>5</sup> Ibid

<sup>6</sup> Reyes, J.C. et al (2011). The Emerging of Xylazine as a New Drug of Abuse and its Health Consequences among Drug Users in Puerto Rico. *Journal of Urban Health* 89(3), doi:10.1007/s11524-011-9662-6

<sup>7</sup> Philadelphia Department of Public Health (2022). Health Update: Xylazine (tranq) exposure among people who use substances in Philadelphia

<sup>8</sup> Ehrman-Dupre, R. et al (2022). Management of Xylazine Withdrawal in a Hospitalized Patient: A Cases Report. *Journal of Addiction Medicine* 16(5), 595-598

<sup>9</sup> Facher, L. (2023). Newly available test strips can detect lethal 'tranq' in drug supply. *STAT news*. <https://www.statnews.com/2023/03/27/tranq-xylazine-test-strips-now-available/>

<sup>10</sup> NIDA (n/d). Xylazine. <https://nida.nih.gov/research-topics/xylazine>

<sup>11</sup> Congressional Research Service (2023). Xylazine: Considerations for Federal Control

<sup>12</sup> DEA (2022). The Growing Threat of Xylazine and its Mixture with Illicit Drugs.

<sup>13</sup> DEA (2022). The Growing Threat of Xylazine and its Mixture with Illicit Drugs.

<sup>14</sup> Ibid

<sup>15</sup> Ibid

<sup>16</sup> Philadelphia Department of Public Health (2022). Unintentional Drug Overdose Fatalities in Philadelphia, 2021. <https://www.phila.gov/media/20221026113548/CHARTv7e3.pdf>

<sup>17</sup> Connecticut Department of Public Health (2022). Drug Overdose Monthly Report.

<sup>18</sup> Friedman, J. et al (2022). Xylazine spreads across the US: A Growing Component of the Increasingly Synthetic and Polysubstance Overdose Crisis. *Drug and Alcohol Dependence* 233 <https://doi.org/10.1016/j.drugalcdep.2022.109380>

<sup>19</sup> Holt, A. et al (2022). Widespread Distribution of Xylazine Detected Throughout the United States in Healthcare Patient Samples. *Journal of Addiction Medicine* DOI: 10.1097/ADM.0000000000001132

<sup>20</sup> NIDA (n/d). Xylazine. <https://nida.nih.gov/research-topics/xylazine>

<sup>21</sup> Brandeis University (n/d). Street Narcotics Alert: Xylazine.

<sup>22</sup> Delaware Health and Social Services (2023). Delaware Partner Information Bulletin: Xylazine

<sup>23</sup> Beinert, J. (2023). Webinar: Beyond the Alerts: Practical Guidance for Responding to Xylazine. <https://nastad.org/events/webinar-beyond-alerts-practical-guidance-responding-xylazine>