

4/28/23

### Summary

The Indiana Department of Health (IDOH) is alerting law enforcement, first responders, clinicians, and public health professionals about an emerging drug called xylazine, a non-opioid tranquilizer used in veterinary medicine that produces sedative like effects. It is also known as *tranq*, *tranq dope*, *sleep-cut*, *Philly dope*, and *zombie drug*. Xylazine is being mixed with illicit substances, such as heroin, fentanyl, meth and cocaine. IDOH has previously shared information through the Division of Trauma and Injury Prevention's [Trauma Times](#) and [Drug Overdose Prevention](#) newsletters.

### Background

The White House has declared the powerful synthetic opioid fentanyl combined with xylazine – an animal tranquilizer that's increasingly being used in illicit drugs – is an "[emerging threat](#)" facing the United States due to its role in the ongoing opioid crisis.

Xylazine is a non-opioid medication that was first approved by the Food and Drug Administration (FDA) in 1972, for use in veterinary medicine. The chemical structure of xylazine is similar to levamisole, clonidine, and tizanidine, which are used for various purposes, such as to treat hypertension or as muscle relaxants (U.S. FDA 2022). Xylazine is not approved for use in humans and can be extremely harmful, with doses of 40 mg to 2400 mg causing toxicity in humans (Shuda & Lam, 2022). The drug can be ingested in a number of ways - smoking, snorting, and injecting. Human use of xylazine can result in the development of skin ulcers and wounds, regardless of use type, but more commonly found when users are injecting the drug (U.S. FDA, 2022).

While xylazine has long been noted in street drugs in Puerto Rico, it has been emerging more the past decade in the United States, with almost a 20-fold increase from 2015-2020 in overdose deaths involving xylazine, in the regions where xylazine testing is being done (Friedman et al., 2022). The highest xylazine prevalence in autopsies has been observed in Philadelphia (involved in 25.8% of deaths), followed by Maryland (19.3%), and Connecticut (10.2%) (Friedman et al., 2022). Illicitly manufactured fentanyl (IMF) was present in 98.4% of overdose deaths involving xylazine (Friedman et al., 2022). Another increase came in 2021, with US regions laboratories seeing major increases in xylazine identifications The South saw a 193% increase, the West a 112%, and the Midwest (Indiana included) only saw a 7% increase (U.S. DEA, 2022).

Both the FDA And DEA have sent out public health alerts to the general public and health care providers to increase awareness of the presence of xylazine (U.S. DEA, 2022). Multiple states, such as Maryland and New York, have implemented new testing measures and harm reduction strategies in response to increases in xylazine involved overdoses (Vestal, 2023). Xylazine test strips have been created, but do not yet have FDA approval for distribution.

## Relevant Data

### **DEA**

- The DEA has seized xylazine and fentanyl mixtures in 48 of 50 states (U.S. DEA, n.d.)
- The DEA Laboratory System also reported that 23% of fentanyl powders and 7% of fentanyl pills seized contained xylazine in 2022 (U.S. DEA, n.d.)

### **Indiana Toxicology**

- There have been 322 decedents in Indiana that have had positive toxicology results for xylazine since 2020.

### **ED data from ESSENCE**

- Prior to April 2023, xylazine was not appearing in ED ESSENCE data, but there has since been at least one identification of the drug in an overdose event.

## Overdose Signs and Symptoms

Because xylazine is not an opioid, naloxone administration may not be as effective at fully reversing a xylazine involved overdose; however, naloxone should always be administered when an overdose is suspected as multiple substances may be present.

Signs and symptoms of a xylazine involved overdose may include dry mouth, blackouts/amnesia, respiratory depression, slow heart rate, and muscle relaxation.

Signs and symptoms of an opioid involved overdose may include troubled breathing; small pupils; unconsciousness or unresponsiveness; snoring, choking, or gurgling; cold or clammy skin; pale or blue skin; and discolored lips or fingernails.

If an overdose is suspected, call 911 and administer naloxone right away, if available.

## Obtaining Naloxone

The Indiana Department of Health (IDOH) currently has two grant opportunities open for qualified agencies to receive Opioid Rescue Kits in the form of Narcan nasal spray.

- The first opportunity is available to any local health department (LHD) in the state of Indiana. The application for this grant as well as the grant announcement can be found here: <https://redcap.isdh.in.gov/surveys/?s=M9T4N3A3HCN3FY3XP>.
- The second opportunity is for Rural First Responder Agencies, such as police, EMS, corrections, and/or fire departments. This grant is available to first responders in 62 of Indiana's counties. The application to this grant, including a copy of the grant announcement, can be found here: <https://redcap.isdh.in.gov/surveys/?s=KJFP4XLD4HDC74W9>.



If you have any questions about the naloxone grant opportunities at IDOH, please email the Naloxone Program Manager, Laura Hollowell at [LHollowell@health.in.gov](mailto:LHollowell@health.in.gov) .

Additionally, as of March 29, 2023, naloxone can now be purchased at all pharmacies as an over-the-counter medication. Indiana also has a standing order in place, signed by Dr. Lindsay Weaver in 2023, so all Indiana residents can purchase naloxone without a prescription.

Lastly, to obtain naloxone you may visit [OptIN.in.gov](https://optin.in.gov) and use the "Find Naloxone Entity" tab to find naloxone providers. Registered OptIN entities, such as treatment centers, overdose prevention organizations, community corrections facilities, pharmacies and local health departments, have naloxone doses available for distribution.

### Resources

Additional IDOH overdose data can be found at <https://www.in.gov/health/overdose-prevention/data/>

Additional IDOH naloxone information can be found at <https://www.in.gov/health/overdose-prevention/naloxone/>

CDC opioid resources can be found at <https://www.cdc.gov/opioids/index.html>

National Institute on Drug Abuse information on xylazine can be found at <https://nida.nih.gov/research-topics/xylazine>

### References

1. U.S. FDA. (2022) *FDA warns about the risk of xylazine exposure in humans*. <https://www.fda.gov/media/162981/download>
2. Shuda, S. A., & Lam, H. Y. (2022). *Characterization of xylazine test strips for use in drug checking*. The Center for Forensic Science Research and Education. Retrieved April 12, 2023, from [https://www.cfsre.org/images/content/reports/drug\\_checking/CFSRE\\_Xylazine\\_Report-Rev-1-18-23.pdf](https://www.cfsre.org/images/content/reports/drug_checking/CFSRE_Xylazine_Report-Rev-1-18-23.pdf)
3. Friedman, J., Montero, F., Bourgois, P., Wahbi, R., Dye, D., Goodman-Meza, D., & Shover, C. (2022). Xylazine spreads across the US: A growing component of the increasingly synthetic and polysubstance overdose crisis. *Drug and Alcohol Dependence*, 233, 109380. <https://doi.org/10.1016/j.drugalcdep.2022.109380>
4. U.S. DEA. (2022). The growing threat of xylazine and its mixture with illicit drugs. DEA.gov. <https://www.dea.gov/sites/default/files/2022-12/The%20Growing%20Threat%20of%20Xylazine%20and%20its%20Mixture%20with%20Illicit%20Drugs.pdf>
5. Vestal, C. (2023). States, Cities Scramble to combat animal 'Tranq' in street drugs. States, Cities Scramble to Combat Animal 'Tranq' in Street Drugs. The Pew Charitable Trusts. <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2023/02/08/states-cities-scramble-to-combat-animal-tranq-in-street-drugs>



6. U.S DEA. (n.d). DEA Reports Widespread Threat of Fentanyl Mixed with Xylazine. DEA.gov.  
<https://www.dea.gov/alert/dea-reports-widespread-threat-fentanyl-mixed-xylazine>

## Health Department Contacts

### **Shelby Nierman**

Overdose Surveillance Systems  
Epidemiologist  
Office of Data and Analytics  
317.233.7748 Office  
SNierman@health.in.gov

### **Allison Lake**

Drug Overdose Prevention Epidemiologist  
Division of Trauma and Injury Prevention  
317.234.9656 Office  
ALake@health.in.gov

### **Laura Hollowell**

Naloxone Program Manager  
Division of Trauma and Injury Prevention  
317.234.2811 Office  
LHollowell@health.in.gov

### **Sely-Ann Headley Johnson**

SUDORS Epidemiologist  
Division of Trauma and Injury Prevention  
317.234.6425 Office  
SHeadleyJohnson@health.in.gov

