

Slow Heart Rate May Signal Xylazine Involvement in Opioid Overdoses

— This marks the first time that researchers have tied this symptom to the novel adulterant

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Key Takeaways

- An observational study of patients with opioid overdose suggested that bradycardia on initial vital signs was associated with a higher likelihood of xylazine detection.
- Most hospitals cannot detect xylazine in real time with a blood test.
- While a previous study suggested that patients with opioid overdose exposed to xylazine had less severe outcomes versus those not exposed, xylazine remains a concern due to other harmful outcomes, such as serious skin wounds.

Bradycardia on arrival at the emergency department (ED) appeared to be a positive predictor of xylazine detection among patients with opioid overdose, an observational study suggested.

Among patients with opioid overdose, bradycardia on initial vital signs was associated with a higher likelihood of xylazine detection (adjusted OR 2.11, 95% CI 1.06-4.06), reported Jennifer S. Love, MD, of the Icahn School of Medicine at Mount Sinai in New York City, and co-authors in *Addiction*.

This marks the first time that researchers have tied this symptom to the novel adulterant, also known as "tranq."

While the association was small, Love noted that "if clinicians can see that a patient is having this low heart rate after an overdose, it gives them a clue to engage the patient in conversation before they leave the emergency department about their own substance use, their knowledge of some of the adulterants that are in the supply, [and] their access to harm-reduction resources like drug-checking test strips or naloxone [Narcan]."

Those conversations can sometimes open the door to engaging patients in treatment, which is the ultimate goal, Love told *MedPage Today*.

Xylazine is a powerful sedative and pain reliever only approved for use in animals. Most hospitals cannot detect xylazine in real time with a blood test, Love said, and naloxone has no effect on xylazine.

Notably, fentanyl was detected in 98.3% of patients with xylazine exposure, which means naloxone remains important, Love noted. "There's always going to be adulterants in the drug supply ... but the way that you save somebody's life in this situation is by giving naloxone."

While a previous study from Love and colleagues suggested that patients with opioid overdose exposed to xylazine had [less severe outcomes](#) compared with those not exposed, Love noted that xylazine remains a concern due to other harmful outcomes, such as serious skin wounds, which sometimes require surgical intervention and increase stigma for an already highly stigmatized population.

Xylazine can also cause "pretty profound sedation," she added, making people more vulnerable to falls, or assault and theft, particularly for the unhoused. Love said that she encourages people who use drugs to use them in a safe area and "make sure there's somebody else watching out for you."

For this study, the authors used data from the prospective Toxicology Investigators Consortium Fentalog Study. They included 1,289 adults treated in EDs for opioid overdoses at 10 institutions across nine states in the Northeast, Southeast, Midwest, and West from September 2020 to September 2023.

Patients were eligible for the study if they had a suspected opioid overdose and if a sample of their waste blood was available for analysis. Samples were de-identified and sent for toxicology testing at specialized labs. Samples with xylazine and an illicit opioid were compared to those in which only illicit opioids were detected.

Among the 1,289 patients, 22.6% had xylazine detected, 75% of whom were located in the Northeast. Patients with xylazine detection were older (mean age 44.8 vs 41.5). Most patients exposed to xylazine were male (78%), white (48%), and non-Hispanic (82%).

Mortality did not significantly differ between those with and without xylazine detection. However, intensive care unit (ICU) disposition from the ED significantly differed between the two groups: 17.4% of patients with opioids alone were admitted to the ICU versus 10.9% of patients with xylazine detected ($P=0.02$).

A limitation of the study was that detection was qualitative -- detecting only the presence or absence of xylazine, Love said.

She noted that her team has nearly completed a study of quantitative measures that looked for a relationship between the concentration of adulterant and treatment received, as well as death, hospitalizations, and ICU admissions.



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Disclosures

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