

Nebraska Department of Health and Human Services

# Health Alert Network

## ADVISORY

June 26, 2023

### Xylazine-related Overdose Warning

On March 20, 2023, the U.S. Drug Enforcement Agency (DEA) issued an alert regarding overdose deaths in the US linked to xylazine, a non-opioid central nervous system depressant, known by the street names “tranq” or “tranq dope.” Xylazine is an alpha-2 adrenergic agonist that is structurally similar to clonidine and dexmedetomidine. It causes a rapid onset and prolonged duration of sedation and central nervous system depression. It is used as a sedative, anesthetic, muscle relaxant, and analgesic in veterinary medicine and has not been approved for use in humans, so is not classified as a controlled substance under the U.S. Controlled Substance Act. Xylazine is usually mixed with other illicit drugs, like fentanyl, because it causes the effects of opioids to last longer. The DEA has seized xylazine and fentanyl mixtures in 48 states. Some people use cocaine in addition to xylazine to minimize the effects of the stimulant. It is typically administered by injecting, snorting, swallowing, or inhaling. Because xylazine is not an opioid, naloxone (Narcan) does not reverse its effects. Over the last two years (2021 and 2022), Nebraska identified 4 total instances of fatal overdoses involving xylazine through the postmortem toxicology testing program.

#### Recommendations for Clinicians

- Overdose signs and symptoms: xylazine has profound sedating effects that, depending on route of administration, begin to occur 1-2 minutes after use and may continue for up to 8 hours. Look for the following signs and symptoms in a patient with suspected xylazine-involved overdose: drowsiness, slowed breathing, lethargy, apnea, dry mouth, hypertension, and tachycardia followed by hypotension and bradycardia, hyperglycemia, hypothermia, coma, dysrhythmia, and death.
- Treatment for suspected overdose
  - If a xylazine overdose is suspected, it is still recommended to administer naloxone to try and reverse the overdose, due to the frequent use of xylazine with opioids.
  - Breathing and airway should continue to be monitored as sedation effects could lead to suffocation. Additional doses may be needed as effects from naloxone may wear off before the sedation effects of opioids and xylazine wear off.
  - Naloxone may appear ineffective in xylazine-involved overdoses. There is no reversal agent for xylazine that is safe for use in humans.
  - Supportive care is recommended, including rescue breathing. Blood pressure may be unstable and require monitoring or intervention.
- Complications of xylazine use: look for the following complications in a patient with repeated use of xylazine (whether used by itself or mixed with other substances)
  - Soft tissue injuries (skin ulcers, abscesses) that can necrotize. Wound care is crucial to avoid further complications. Wounds are atypical, often present in sites other than the injection site, and appear to worsen more quickly than other injection-related soft tissue damage.
  - Xylazine withdrawal is not a well-defined syndrome. Xylazine withdrawal may include objective symptoms such as hypertension, tachycardia, and diaphoresis as well as agitation, irritability,

anxiety, and restlessness. Non-specific anxiety is the primary symptom. Other withdrawal symptoms are similar to withdrawal symptoms associated with other alpha-2 adrenergic agonists such as clonidine and dexmedetomidine. There are no significant vital sign abnormalities or seizures associated with xylazine withdrawal. The duration of xylazine withdrawal typically lasts several days but may be protracted lasting several weeks.

- Xylazine withdrawal has been treated with benzodiazepines and/or alpha-2 adrenergic agonists, clonidine, dexmedetomidine, tizanidine, guanfacine.
- Detection
  - Xylazine is not included in routine immunoassay toxicology screens and therefore may be under-detected.
  - Even with appropriate testing, xylazine may not be detected due to its rapid elimination from the body, with a half-life of 23-50 minutes.
  - Xylazine test strips have been researched and are currently available commercially. Initial findings indicate their validity and utility.
- Opportunities for health agencies
  - Increased community awareness of xylazine presence and risk associated with use
  - Ensure/expand access to naloxone and harm reduction supplies
  - Expand access to evidence-based treatment for substance use disorders (SUDs) including medication for opioid use disorder (MOUD)
  - Use of opioid settlement funds or SOR grants to implement/support wound care
  - Health departments with partnerships with toxicology laboratories should ensure xylazine is part of routine toxicology tests
  - Increase access to xylazine test strips for point of care drug testing programs,
  - Increase education around xylazine use and overdose risks, in hospitals, emergency departments and ambulatory care centers.

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