

# Xylazine 101

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Opioid  
Response  
Network

# Working with communities.

- ✧ The SAMHSA-funded *Opioid Response Network (ORN)* assists states, organizations and individuals by providing the resources and technical assistance they need locally to address the opioid crisis and stimulant use.
- ✧ Technical assistance is available to support the evidence-based prevention, treatment and recovery of opioid use disorders and stimulant use disorders.

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# Working with communities.

- ✧ The *Opioid Response Network (ORN)* provides local, experienced consultants in prevention, treatment and recovery to communities and organizations to help address this opioid crisis and stimulant use.
- ✧ *ORN* accepts requests for education and training.
- ✧ Each state/territory has a designated team, led by a regional Technology Transfer Specialist (TTS), who is an expert in implementing evidence-based practices.



# Disclosures

✦ Presenter has no disclosures.



# Learning Objectives

- ✧ Appreciate appropriate use of xylazine and why it is not used in humans
- ✧ Learn the “street names” of xylazine
- ✧ Explore the prevalence of xylazine in Maine
- ✧ Understand how to talk to your clients about xylazine
- ✧ Appreciate the subtle differences of what a xylazine overdose response should look like (specifically, when to use Naloxone and rescue breathing)
- ✧ Discuss wound care and safe injection practices to reduce harms from xylazine



# Credits

✧ Many slides are taken from 1/2023 presentation:



## Zeroing in on Xylazine

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# XYLAZINE IN THE DRUG SUPPLY

## NATIONAL HARM REDUCTION COALITION

### XYLAZINE (ZIE-LUH-ZEEN)

#### NAMES

Tranq  
AnaSed  
Rompún  
Horse tranquilizer  
Anestesia de caballo

- It's found in powder heroin/fentanyl mostly, and sometimes coke and meth
- It's not an opioid. It's a deep sedative, like clonidine or ketamine. It starts quickly and makes you fall out hard for about the first hour if you're not used to it
- Xylazine can give fentanyl legs so you're not sick again in two hours, but can be very dangerous when it shows up in dope unexpectedly
- If you have skin wounds that are not healing, it may be because of xylazine

### THE BAD STUFF

Xylazine causes really bad skin ulcers when injected, even beyond the site of injection, like anywhere with a bite or cut. Missed shots can make skin ulcers worse

Xylazine may cause a life-threatening drop in your blood's ability to carry oxygen to tissues (low blood iron, but we don't know a lot about this yet)

Other symptoms may include: High blood sugar; less bladder control; tired all the time; slower reflexes; trouble swallowing; really dry mouth

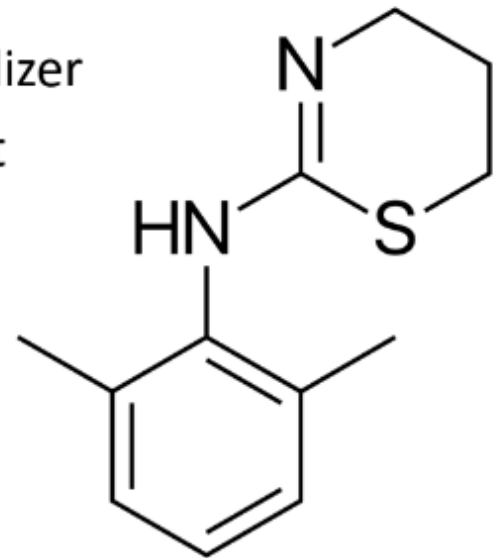
### HARM REDUCTION TIPS

- It is best to avoid dope with xylazine in it if you can
- Get your drugs tested at a harm reduction program if you can
- Don't use alone. Because of the heavy sedation, be aware of your surroundings and your possessions, especially if you're somewhere that's not secure

- Some harm reductionists think it may be safer to sniff/smoke/booty-bump dope with xylazine, but we don't know what other harms this can cause
- Try to be in a comfortable seated position, it's important to be in a position that doesn't cut off circulation to arms or legs
- Eat foods high in iron if xylazine is in your drug supply. Harm reduction programs can consider testing participants for hemoglobin using handheld devices

# Xylazine (zie-luh-zeen)

- Discovered 1962 as an antihypertensive agent
- Noted to have hazardous side effects of sedation, hypotension and bradycardia
- Currently FDA approved as a common veterinary tranquilizer
- NON-OPIOID sedative with analgesic and muscle relaxant properties
- NOT a controlled substance
- Names:
  - AnaSed, Rompun, XylaMed, Sedazine, and Chanazine
  - **TRANQ**, sleep-cut, *Anastesia de caballo* [horse tranquilizer]







# Xylazine: What Clinicians Need to Know

## **Xylazine Source and Preparation and Route of Administration:**

- Xylazine comes as a liquid solution for injection in 20 mg/mL, 100 mg/mL, and 300 mg/mL strengths for veterinary use. The liquid solution can be salted or dried into a powder. In the illicit drug supply, it can appear as a white or brown powder. Because it can be mixed into other powders or pressed into pills, it can be difficult to identify based on appearance.
- The routes of administration include intravenous, intramuscular, intranasal, and oral; there is currently no information on vaping or smoking.
- It has rapid onset within minutes and can last 8 hours or longer depending upon the dose, the way it was taken, and whether it was mixed with an opioid or other drug(s).<sup>iv</sup>



# Where did it come from?

- In 2000s was described as an additive in the unregulated drug supply of Puerto Rico
- Usually found in conjunction with opioids
- Early 2010: Increasing knowledge PWUD in especially Puerto Rican community of Philadelphia

Torruella Substance Abuse Treatment, Prevention, and Policy 2011, 6:7  
<http://www.substanceabusepolicy.com/content/6/1/7>



## SHORT REPORT

Open Access

### Xylazine (veterinary sedative) use in Puerto Rico

Rafael A Torruella

#### Abstract

Human xylazine use in Puerto Rico merits particular attention for its unprecedented scale and depth. Although Puerto Rican injecting drug users (IDUs) have reported using this drug since the early 2000s, little is being done in the research and service delivery sectors as it is claimed that xylazine severely impacts the health of its users. This report provides information on xylazine use and its associated harms. Data from one semi-structured interview collected in New York City (2007-2008) as part of a larger research study with migrant Puerto Rican drug users is presented as a case study. Xylazine, a veterinary sedative, is an adulterant and complement to other drugs and its chronic use is reported to be associated with physical deterioration. Because human xylazine use has been reported in other locations outside of Puerto Rico, this substance could also emerge as an adulterant in other markets to the levels currently experienced in Puerto Rico. Research and interventions are needed to provide adequate services on the island, better understand how the use of xylazine affects its users, and to reduce the possibility of increased xylazine use on the state-side.

Torruella, R. Substance Abuse Treatment, Prevention, Policy, 2011  
Rodriguez et. al. Drug and Alcohol Dependence, 2008  
Wong et al., Journal of Forensic Science, 2008  
Friedman et al. PLOS ONE, 2019



“Zeroing in on Xylazine” slideset

# States/Jurisdictions reporting xylazine



Region	2020	2021	% Increase
Northeast	346	556	61%
South	198	580	193%
Midwest	110	118	7%
West	77	163	112%

**Xylazine is detected in  
91% of fentanyl/heroin  
samples in Philadelphia**

DEA. Joint intelligence Report October 2022  
Adapted from D'Orazio. Toxicity of Xylazine. COBRE on Opioids and Overdose. 2022  
Friedman et al. Drug and Alcohol Dependence 2022





## Xylazine: What Clinicians Need to Know

### Xylazine Trends:

- Xylazine has long been noted in the street opioid supply of Puerto Rico. In the late 2000s, it emerged in Philadelphia and has been found more recently in many regions, including New York State (NYS).
- While the full national scope of overdose deaths involving xylazine is unknown, research and testing have shown that overdose deaths involving xylazine rose nearly 20 fold between 2015 and 2020 in all major US regions where xylazine testing was being conducted.
- 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%). Illicitly manufactured fentanyl (IMF) was present in 98.4% of overdose deaths involving xylazine.<sup>v</sup>
- In 2021, 91% of samples of purported heroin or fentanyl from Philadelphia also contained xylazine, making it the most common adulterant in the local drug supply.<sup>vi</sup>
- Data are forthcoming from NYS, but there are reports of the presence of xylazine in the local drug supplies in various parts of the state, including NYC, Onondaga County, Monroe County, and Long Island. It is thought to be an increasing presence.



# Xylazine diagnostic testing challenges

- Xylazine can be detected in serum and urine, can be part of a send out test to specialty lab
  - Thin layer chromatography (TLC)
  - Gas chromatography mass spectrometry (GC-MS)
  - Liquid chromatography mass spectrometry (LC-MS)
- Point-of-care urine immunoassay not available at this time
- Xylazine test strips are in the works as federal health agencies are prioritizing this as an emerging drug threat

Reed M. K. et al. DAD 2022

“Zeroing in on Xylazine” slide set



# Pharmacology

- Non-opioid sedative, pain-reliever, and muscle relaxant
- Agonist at central alpha-2 adrenergic receptor
  - Sedation
  - May blunt the response to hypoxia
- Anticholinergic effects
- Similar effects to clonidine





# Pharmacokinetics

- Time to effect 1-2 minutes
- Time to drug effect peaks 30 minutes
- Duration of effect up to 4 hours
- Seems to be synergistic with opioids (from veterinary data):  
can improve euphoria and prolong the duration of fentanyl

**“See, the tranq like extends the high, it gives the dope more of a heroin effect, it’s a good rush with the heroin-like effect”**

**“Tranq seems to give fentanyl legs”**

Friedman et al. Drug and Alcohol Dependence 2022

Adapted from D’Orazio: Toxicity of Xylazine. COBRE on Opioids and Overdose. 2022



# Xylazine toxidrome and effects

## ACUTE EFFECTS:

- **Profound sedation**
- Blurred vision
- Super dry mouth
- Low blood pressure
- Bradycardia
- Weak reflexes
- Respiratory depression
- Disorientation
- Drowsiness
- Slurred speech
- **Risk of Overdose**

### **CNS toxicity:**

Areflexia, asthenia, ataxia, blurred vision, **coma**, **disorientation**, dizziness, dysarthria, faintness, hyporeflexia, miosis, **seizure**, slurred speech, **somnolence**, staggering

### **Respiratory:**

**Apnea**, shallow breathing

### **Skin:**

Ulcerations



### **Cardiovascular:**

**Bradycardia**, **hypotension**, PVCs, ST segment changes, tachycardia

### **Endocrine:**

**Hyperglycemia**

## CHRONIC EFFECTS

- **Severe skin wounds**
- Dysglycemia (high/low blood sugar)
- Anemia

CriticalCareNow.com 2022.





# Xylazine withdrawal

- Not well-defined syndrome, can overlap with opioid withdrawal syndrome
- Can present with hypertension, anxiety, irritability, restlessness
- May require inpatient monitoring for vital sign instability
- Emerging literature on treatment protocols, but likely can be treated similar with sedative hypnotic withdrawal syndromes

Bettigole, et al, "Xylazine (Tranq) Exposure Among People Who Use Substances in Philadelphia."  
Ehrman-Dupre, R. et al. Journal Addiction Medicine 2022.



# Xylazine pros & cons

- Opioid-xylazine extends duration of intoxication and delays withdrawal
- Affordability

- No control over xylazine and other adulterants
- Exposure to poly-substances
- Disliking sensation of mixture of substances
- Worry of tranquilizer dependence
- Higher risk of assault or injury when sedated

Reed, M.R. et al. DAD 2022.



# Profound sedation and loss of awareness

*"I'm having more problems with the tranq then I am with the fentanyl down here. I have basically blackouts from the tranq. I lose days at a time. Like I'll lose four, five, six hours, and then when I come out of the blackout..."*

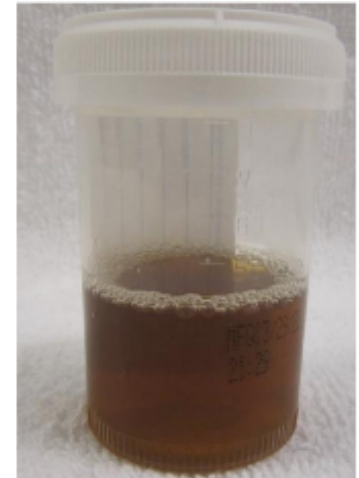
M.K. Reed, N.S. Imperato, J.M. Bowles et al. DAD 2022



"Zeroing in on Xylazine" slide set

# Profound Sedation: Complications

- Extended immobility increases the risk for:
  - Blood clots and soft tissue breakdown (decubitus ulcers)
  - Imped blood flow (if in hyper-flexed or unusual positions)
  - Muscle and nerve damage
  - Rhabdomyolysis (muscle breakdown → kidney damage)
- If combined with other sedating drugs, ↑ central nervous system depression, and ↑ risk of overdose



Adapted from Claire Zagorski, MSc, LP- Be Well Texas ECHO 2022





# **Xylazine in the Maine Drug Supply**

# A new street drug is showing up in more fatal Maine overdoses

by Kathleen O'Brien, Bangor Daily News | Tue, August 8th 2023, 8:58 AM EDT



"Given how murky the [drug] supply is, by the time things get to Maine, no one knows what's in it," said William Burns of the Portland Police Department's Behavioral Health Unit. "There's very little actual heroin around these days."

The DEA has seized xylazine and fentanyl mixtures in all but two U.S. states, and the administration's laboratory system reported that about 23 percent of fentanyl powder and 7 percent of fentanyl pills seized by the DEA in 2022 contained xylazine.

Xylazine was first detected in Maine in 2021.



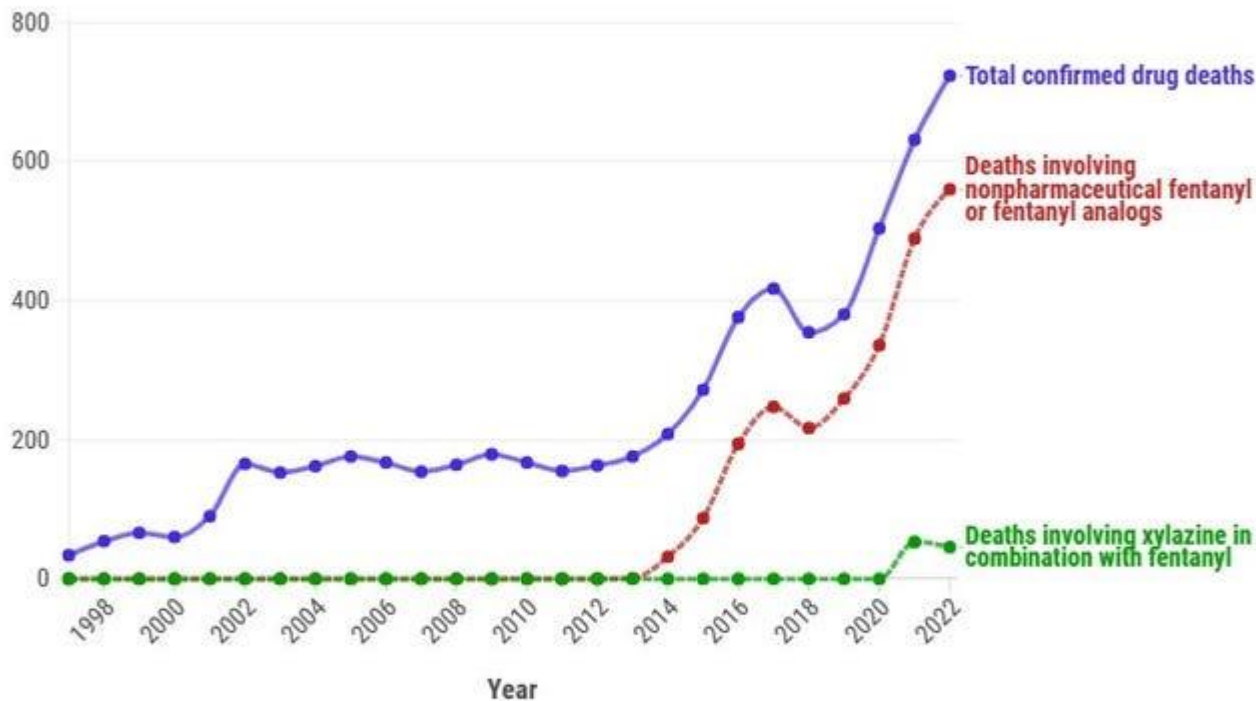
# Additional Fentanyl Complications

Overdose death toxicology reports in Maine show that fentanyl is being mixed with other potent illicit drugs, especially

- 46% with cocaine or methamphetamine, or both
- 16% with pharmaceutical opioids (most NOT prescribed)
- 10% with xylazine (new in 2021)

## Confirmed drug deaths and causes of death, 1997-2022

This chart shows total confirmed drug deaths and only deaths involving nonpharmaceutical fentanyl and/or its analogs and xylazine. It does not show all drugs or drug combinations, such as heroin, cocaine and methamphetamine. Drugs may be found alone or in combination with other drugs.



Source: [Maine Drug Data Hub](#) • Emily Bader for The Maine Monitor

From January to May of 2023, there were 205 confirmed or suspected fatal overdoses. Nonpharmaceutical fentanyl or fentanyl analogs were found in 165 (80%) of cases. Xylazine in combination with fentanyl appeared in 22 (11%) of cases.

• A Flourish chart





# Maine Drug Data Hub.com

<b>Cause of death (alone or in combination with other drugs)</b> <i>Sample size for complete cases only</i>	<b>Jan-Dec 2022</b> <b>N=723</b>	<b>Jan-Jul 2023</b> <b>N=315</b>	<b>*Jul 2023</b> <b>N=13</b>
<b>Nonpharmaceutical opioids</b>			
Fentanyl or fentanyl analogs	560..(77%)	252 (80%)	9 (69%)
Heroin	19....(3%)	9 (3%)	0 (0%)
<b>Nonpharmaceutical Stimulants</b>			
Cocaine	213.(29%)	108 (34%)	6 (46%)
.....Methamphetamine	234.(32%)	101 (32%)	5 (38%)
<b>Pharmaceutical opioids**</b>	156..(22%)	56 (18%)	4 (31%)
<b>Key combinations</b>			
Fentanyl and heroin	18....(2%)	9 (3%)	0 (0%)
Fentanyl and cocaine	171..(24%)	92 (29%)	4 (31%)
.....Fentanyl and methamphetamine	189..(26%)	83 (26%)	5 (38%)
Fentanyl and xylazine	46....(6%)	28 (9%)	2 (15%)
Fentanyl and tramadol	10....(1%)	1 (<1%)	1 (8%)



## wait.. why is it in the supply?

Xylazine or often referred to as “tranq-dope” has been found in drug supply across North America. It is mostly appearing in the fentanyl supply but also in cocaine.

✧ PreventOverdoseRI.org



Xylazine can be hard to distinguish from fentanyl and other drugs. In the drug supply, it can be white or brown powder, mixed into pills, or in other forms, making it hard to identify based on appearance.

testRI participants shared:



*“[It was] no dope. I couldn’t tell you what was in it.  
[Interviewer: What was the feeling?] Like woozy.  
**Like taking a sleeping pill or something.**” (P024)*

*“Made me feel like, **drowsy, like, I was like, sleepwalking,** I don’t know. It was weird.” (P029)*



# Harm Reduction

- ✧ NOT “anything goes”
- ✧ NOT “enabling drug use”
- ✧ DOES acknowledge the fact that drug use happens, people use drugs for a reason, and we can still help people use safer even if abstinence is not their goal right now
- ✧ Goal of safer use as a public health priority (decrease infection and overdose)

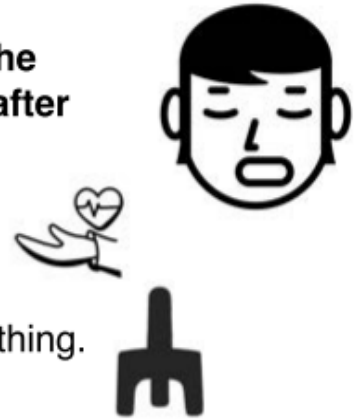


## harm reduction & xylazine

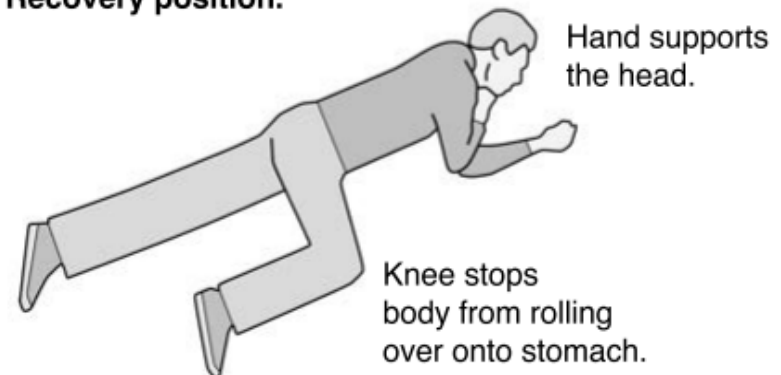
Xylazine is relatively new to the supply and harm reduction is constantly evolving, below are some initial ways to mitigate risk when using drugs possibly contaminated with xylazine.

**If xylazine is involved in an overdose the person may still appear sedated even after breathing returns.**

- Check for normal breathing and pulse.
- Use naloxone if slowed or stopped breathing.
- Recovery position to keep the airway clear (place on side, hand supports the head, knee stops body from rolling onto stomach) rescue breaths are important if slowed or stopped breathing after naloxone



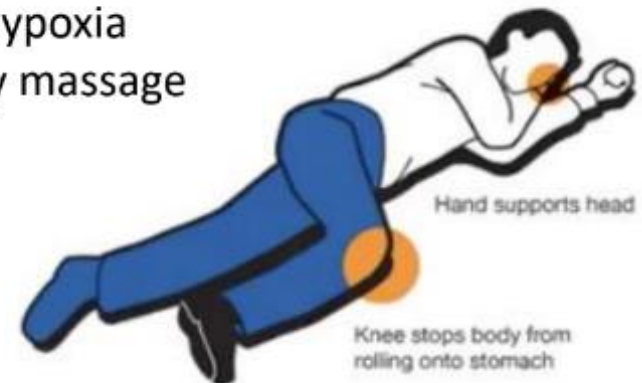
### **Recovery position.**



# Risk of Overdose

## Harm reduction strategies for patients

- Place in recovery position
- Administer naloxone!!
- Keep checking pulse and breathing
- Supportive management until drug wears off and sedation resolves
  - Keep people's airways open
  - Provide rescue breathing
  - Continuous pulse oximetry, supplemental oxygen if hypoxia
  - Reposition every 2 hours, roll to opposite side, gently massage



Bettigole, et al, "Xylazine (Tranq) Exposure Among People Who Use Substances in Philadelphia."





**Rescue  
breathing is very  
important!**

# Profound Sedation:

## Harm reduction strategies for patients

- Be aware of the presence of xylazine
  - Sit or lay down in a safe place after using
  - Never use alone
- 
- Watch for patients who are sedated or unconscious longer than usual
  - Make sure to check that breathing and heart rate are adequate
  - Put people in recovery position, avoid atypical positions
  - Roll from one side to another every 1-2 hours
  - Place padding under boney areas (heels, hip, shoulder ankles, etc.)



# Risk of Overdose

- Xylazine may be synergistic with opioid agonists and ↑↑ overdose risk
- Naloxone may not fully reverse overdose symptoms from opioid-xylazine formulation
- Individuals may continue to have period of profound sedation after naloxone is administered

**Xylazine and naloxone:  
Xylazine can contribute  
to oversedation  
alongside opioids.  
Naloxone WILL NOT  
reverse the effects of  
xylazine, but ALWAYS  
administer naloxone in  
a suspected overdose.  
Naloxone will reverse  
the effects of any opioids  
present. The person may  
remain unresponsive  
if xylazine is present.  
Give rescue breaths to  
support their breathing.**

Johnson et al. BMJ Injury Prevention 2021  
Nunez et al., Am. J. Forensic Med. Pathol. 2021





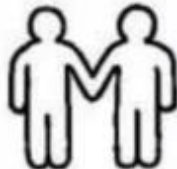
# Universal Overdose Prevention



carry  
(naloxone)



start low and  
go slow



tell someone  
you're using

## **Never Use Alone**

English hotline: 800-484-3731

Spanish hotline: 800-928-5330

## **The Brave App**

download in the app store

Costa, J WBUR 2022



“Zeroing in on Xylazine” slide set

# Xylazine Skin Wounds

Skin wounds reported in PR 2012

Early data of xylazine + heroin users → higher risk injection behaviors

Severe, difficult to treat

Can involve loss of fingers/toes

Risk of secondary bacterial infection

Reyes J. et al. Journal of Urban Health. 2012

Lopez et al. Addiction science and Clinical Practice 2015



# WARNING

The following slides contains graphic content about injection drug use related wounds that might disturb some of you.



# Xylazine Skin Wounds



- Can start as purple/red blisters → may progress to areas of necrosis with thick eschar
- May be at a missed injection (and non-injection sites) and prior areas with scratches
- Risk seems to be irrespective of route of administration
- Can appear as local vasculitis and range from small open sores to large ulcers, chronic osteomyelitis, gangrene resulting in limb loss

Ehrman-Dupre, R. et al. JAM. 2021





“Xylazine Related Wound Pics” slide set



“Xylazine Related Wound Pics” slide set





“Xylazine Related Wound Pics” slide set





# Slides 35-37, Pics 1-6

- ✧ Wound healing progression on the back of right hand; xylazine related
- ✧ Injected along the wound edges and wound beds only, multiple times daily
- ✧ Picture 1 is client presentation
  - Progression of healing – pictures 1-6, approximately 8 months
  - Red arrow on slide 36, picture 2, points to purple early xylazine injection wound
  - Client had a difficult time not injecting into the hand during this time



# Pathophysiology of Xylazine wounds is unknown

- ↑ tissue death and poor wound healing from local tissue hypoxemia
- Inhibits endothelial cell proliferation
- ↓ sensitivity to skin injury
- ↑ skin picking
- Injecting at wound site to alleviate the pain
- Tissue compression from extended periods of immobility
- Local effect from drug extravasation or peripheral vasoconstriction
- Obliterative vasculitis from ↑ injections (“shooter’s patch”)

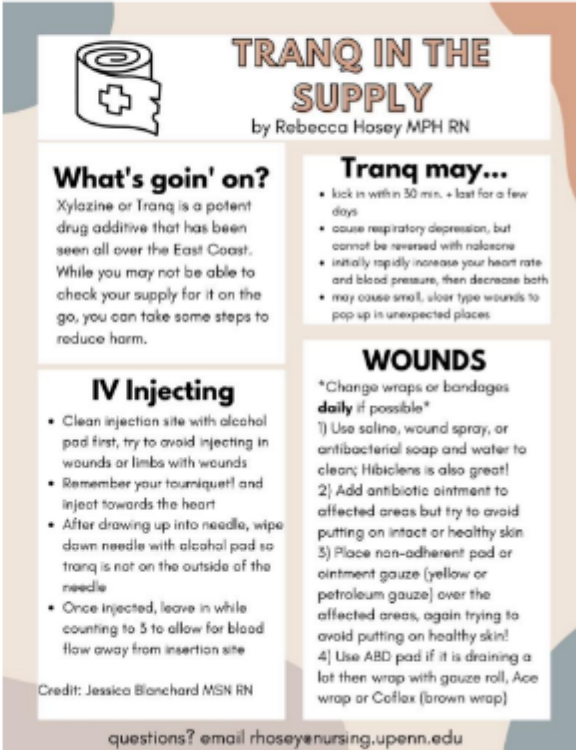
Silva-Torres, L. A. et al. Tox in Vitro. 2014



# Xylazine skin wounds prevention:

## Harm reduction strategies for patients

- EDUCATE patients about xylazine in illicit drug supply and ASK about atypical wounds!
- Advise to seek alternate batch, if possible
- Consider other route of use (we aren't sure about this one!)
- Good vein hygiene, rotating injection sites, sterile supplies, skin cleaning, vein finders
- Wipe metal needle on an alcohol pad after you pull up solution and before injecting



**TRANQ IN THE SUPPLY**  
by Rebecca Hosey MPH RN

**What's goin' on?**  
Xylazine or Tranq is a potent drug additive that has been seen all over the East Coast. While you may not be able to check your supply for it on the go, you can take some steps to reduce harm.

**Tranq may...**

- kick in within 30 min. + last for a few days
- cause respiratory depression, but cannot be reversed with naloxone
- initially rapidly increase your heart rate and blood pressure, then decrease both
- may cause small, ulcer type wounds to pop up in unexpected places

**WOUNDS**  
\*Change wraps or bandages **daily** if possible\*

- 1) Use saline, wound spray, or antibacterial soap and water to clean; Hibiclens is also great!
- 2) Add antibiotic ointment to affected areas but try to avoid putting on intact or healthy skin
- 3) Place non-adherent pad or ointment gauze (yellow or petroleum gauze) over the affected areas, again trying to avoid putting on healthy skin!
- 4) Use ABD pad if it is draining a lot then wrap with gauze roll, Ace wrap or CoFlex (brown wrap)

**IV Injecting**

- Clean injection site with alcohol pad first, try to avoid injecting in wounds or limbs with wounds
- Remember your tourniquet! and inject towards the heart
- After drawing up into needle, wipe down needle with alcohol pad so tranq is not on the outside of the needle
- Once injected, leave in while counting to 5 to allow for blood flow away from insertion site

Credit: Jessica Blanchard MSN RN

questions? email rhosey@nursing.upenn.edu

Jason Bienert. Experiences with Xylazine-related problems. Wound care nurse, Voices of Hope



“Zeroing in on Xylazine” slide set

# If a wound is present, monitor for red flag symptoms

- ✧ Don't inject into or near the wound edges
- ✧ Avoid skin picking: wear long sleeve shirts, gloves, use A+D ointment on fingertips, put dressings/band-aids over problem areas
- ✧ Not all wounds require antibiotic treatment
- ✧ Educate and monitor for red flags and early triage!
  - Signs of systemic illness
  - Painful spot with fluctuance → concern for abscess
  - Rapidly progressing change in color
  - Excruciating pain, new numbness, mottled skin, in or around infected area
  - Can see underlying bones/tendons



# Suggestions for Xylazine wound management

- ✧ Avoid alcohol and hydrogen peroxide
- ✧ Clean wounds with soap (if available) & bottled /tap water or saline
- ✧ keep skin around wound clean of drainage & moisturized (vitamin A+D ointment)
- ✧ Goal for wound bed ~MOIST (helps dead skin soften/fall on its own) OR debridement





**NEXT Distro**  
STAY ALIVE, STAY SAFE.

# XYLAZINE WOUND CARE: A GUIDE!

## XYLAZINE WOUND CARE: a guide!

Work in progress compiled with help of wound care wisdom of Tehya Johnson, Claire Zagorksi, & Bill Kinkle

### BASIC THINGS TO KNOW:

- Dressings should be changed every day, or every other day
- Treat every part of the wound separately depending on how it looks & heals
- Pale, DRY wounds, or wounds with black (necrosis) cannot heal; they need to be debrided (in other words that top pale layer or black stuff needs to be eased off!)
- “Healthy” (healing) wounds are look red, beefy, and somewhat moist → (this is called “granulation tissue” and is what we want for healing!)
- Keeping skin areas around wounds as healthy as possible is important too! Sometimes this means adding moisture & sometimes this means keeping moisture away
- Covering wounds helps ensure no outside bacteria get into them to cause infection.

### HEALTHY WOUND BED →



# How to Help Our Patients

- ✧ Education! Xylazine is here in the drug supply
  - It's hard to know what drugs have xylazine in it even if you know your dealer or it looks the same as last time
- ✧ Have to assume ALL white powder has fentanyl AND xylazine in it
- ✧ Harm reduction (any positive change)





# Summary:



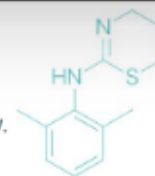
**NEXT Distro**  
STAY ALIVE, STAY SAFE.

## Xylazine Fact Sheet



**NEXT Distro**  
STAY ALIVE, STAY SAFE.

Xylazine (AKA 'Tranq') is an animal tranquilizer that's becoming a common cut in street drugs across the entire country. As of September 2022, xylazine was found in 37 states mixed with fentanyl (most common) and other street drugs like heroin, cocaine, meth. In combination with opioids or other drugs, xylazine increases sedative effects but it is **NOT an opioid**. Learning more can help you be prepared to respond to a xylazine-related emergency.



### Rescue Breathing + Overdose

- In the event of a suspected xylazine overdose, administer 1 dose of naloxone and focus on rescue breathing. If the person doesn't start breathing in 3-5 minutes, administer a 2nd dose. Continue rescue breathing until the person is breathing again.
- To avoid the risk of choking on vomit, place the unconscious person in the rescue or recovery position. Keep an eye on them until they regain consciousness in case their breathing slows down or stops. Make sure that they're in a safe place, because they can be robbed or assaulted in their state.
- Xylazine causes heavy sedation and some people have reported suddenly losing consciousness and/or blacking out for 4-6 hours at a time.
- If someone is breathing, do not administer more naloxone. They're likely unconscious due to the tranquilizing effects of xylazine.
- Most of the time, xylazine is mixed into fentanyl or other opioids, so using naloxone can reverse any opioid effect in an overdose. Naloxone will not reverse the effects of other drugs contributing to an overdose such as alcohol, benzodiazepines, and xylazine.
- Multiple and high doses of naloxone are not needed - rescue breathing is essential when responding to a xylazine overdose.

Apply the same injection practices as you would with any other drug; keep the skin clean, rotate sites, and avoid injecting into wounds (even if the vein is easier to find).

### Withdrawal / Short and Long term complications

- Xylazine has its own withdrawal symptoms but the effects of xylazine withdrawal are difficult to single out because it is almost always found and used with other drugs.
- Xylazine withdrawal can last 1-4 weeks and causes irritability, anxiety, restlessness, and dysphoria (a general unwell feeling). Symptoms of vomiting, heart palpitations, chills, and low energy or fatigue have also been reported. Most healthcare providers don't know about xylazine yet and many do not know what to give to treat xylazine withdrawal.
- For some, xylazine withdrawal can intensify withdrawal from other drugs or it can feel like an opioid or benzodiazepine withdrawal (but without seizures).
- Long-term use of xylazine can lead to reduced wound healing, leading to higher chances of infection. Long term use can progress the thinning of veins, tightening veins and blood vessels, and leading to reduced wound healing. This may be why wounds caused by xylazine have a high chance of infection and appear away from the injection site.





# Summary:



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## Wound Care - Xylazine

- Wounds from xylazine use are different from those caused by other drugs. These wounds are **more likely to spread and worsen quickly, stretch down to the bone and tendons, and require ongoing care. They can last several months to years. Some people have to have skin grafts, or even amputations of hands, feet, or arms/legs because of presumed xylazine wounds.** Unexplained wounds in places you haven't injected may also be related to xylazine.
- People who use xylazine have **reported developing skin ulcers and abscesses either at the injection site or even away from the injection site.** Skin ulcers with necrosis (death of body tissue) and cellulitis (bacterial skin infection) have also been reported. Serious ulcers can appear from injecting, smoking, or snorting Xylazine. This may happen with other routes of administration (like booty bumping or eating) but there are no confirmed reports so far.
- **If wounds or tissue turn black/darker (necrosis), those are signs of dangerous complications.** If the ulcer, abscess, wound, or red, swollen area gets bigger, it's highly recommended you seek medical attention as complications can be life-threatening.
- **If you develop a wound from xylazine use, do your best to keep it clean (use antibacterial soap and water), covered, and try not to apply pressure to the wound.** Antibiotics would also be helpful for treated infected wounds.
- **Please do not inject into the wound even if it is easier than finding a vein; consider other routes of administration, otherwise the wounds will not heal.**

## ID'ing Xylazine in your supply

- The only way to know that your drugs contain Xylazine is through lab testing. Drug samples can be mailed for lab testing to organizations but it is costly.
- There isn't a way to test for xylazine in your supply at this time (xylazine test strips are in development) but there are some signs to look out for. The most common effects from xylazine are excessive drowsiness or fatigue, and unexplained wounds on your legs or rest of the body (especially in an area you did not inject).
- If meth, cocaine or other drugs that are thought to be stimulants are causing excessive sleepiness, they may be cut with xylazine.
- Fentanyl test strips and other drug checking tools will not tell you if xylazine is present or confirm what was the cause of a suspected overdose. A xylazine overdose can look similar to an overdose from other sedating drugs like opioids, benzos, and alcohol.
- Xylazine may be more or less common depending on your location. In Baltimore and Philadelphia and the mid Atlantic region (West Virginia, Virginia, Maryland, and Delaware) xylazine is becoming increasingly common. In 2022, roughly 78% of fentanyl samples in Puerto Rico and Philadelphia contained xylazine.

**[www.nextdistro.org](http://www.nextdistro.org)**

**SMS/Signal 646-389-0752**

**Reddit /u/nextdistro**

**Email [info@nextdistro.org](mailto:info@nextdistro.org)**



# Recap: Harm Reduction for IV Drug Use

- ✧ Never use alone
- ✧ Don't share needles, use them once
- ✧ Use alcohol pads to clean your skin
- ✧ Use clean water
- ✧ Don't inject in your neck, groin, or wrists
- ✧ Rotate the veins you are injecting in
- ✧ Use less frequently, smaller amounts, "test your shot"
- ✧ Use Naloxone



# Contact the Opioid Response Network

✦ To ask questions or submit a request for technical assistance:

- Visit [www.OpioidResponseNetwork.org](http://www.OpioidResponseNetwork.org)
- Email [orn@aaap.org](mailto:orn@aaap.org)
- Call 401-270-5900



# References for “Zeroing in On Xylazine” Slides

## Thank You!!

Please email us your experience and questions with xylazine so we can have shared learning!

[jawar@upmc.edu](mailto:jawar@upmc.edu)  
[Stephen.murray@bmc.org](mailto:Stephen.murray@bmc.org)

- University of Pittsburgh Medical Center
- Prevention Point Pittsburgh
- Grayken Center of Addiction
- Responding to Xylazine in the Drug Supply Part 1&2. National Harm Reduction Coalition Office Hours. 4.8.2022
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- Mary Wheeler, Healthy Streets Outreach Program
- Jason Bienert. Experiences with Xylazine-related problems. From a Wound care nurse, Voices of Hope, Cecil & Hartford County, Maryland.



# Other References

- ✧ [NEXTDistro.org](https://nextdistro.org)
- ✧ New York Department of Health Xylazine Fact Sheet
- ✧ [PreventOverdoseRI.org](https://preventoverdoseri.org) (TEST RI)
- ✧ National Harm Reduction Coalition



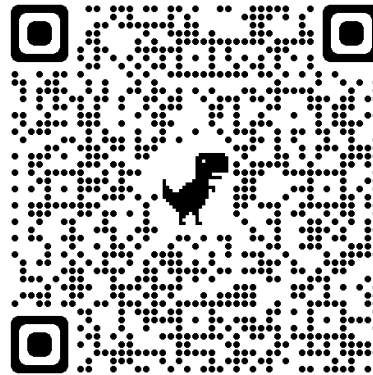
# Speaker Contact

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# ORN Evaluation Survey Link

Please scan the below QR code or use the link below to access a very brief survey.



<https://tinyurl.com/Chichester-ID-6095-Xylazine>

The survey will ask about your satisfaction with the training program you just completed as well as some basic demographic information. Your responses will help the Opioid Response Network improve the services they provide.



Thank you in advance for completing this survey!