

Skin & Soft Tissue Infections & Wound Care in Age of Xylazine

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- Participants who complete and return the evaluation and stay for entire session will be awarded 1.0 contact hours
- None of the planners or speakers have a financial relationships to disclose with ineligible companies

Conflicts of Interest & Support

Conflicts of Interest

- Murray: consulting for the Federal government, MA Department of Public Health, and several municipal governments around the country

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DISCLAIMER

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The multiple slides contains photographs of patients with injection drug use related wounds that might disturb some of you. All images were obtained and presented with patient consent.



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Learning objectives

1. Identify common skin and soft tissue manifestations associated with injection drug use and xylazine
2. Review management strategies for skin infections and wounds for persons using drugs.
3. Discuss harm reduction strategies for skin infections and wounds for persons using drugs.

Xylazine (zie-luh-zeen)

- NON-OPIOID sedative, analgesic and muscle relaxant properties
- Discovered as an antihypertensive agent
- FDA approved as a veterinary tranquilizer
- Central α_2 adrenergic receptor agonist
- Names:
 - AnaSed, Rompun, XylaMed, Sedazine, and Chanazine
 - **Tranq**, sleep-cut, *Anastesia de caballo*



Greene S et al. J Vet. pharm and therapeutics 1988

Rising prevalence of xylazine

DEA Forensic Laboratory Identifications of Xylazine in exhibits by U.S. region

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

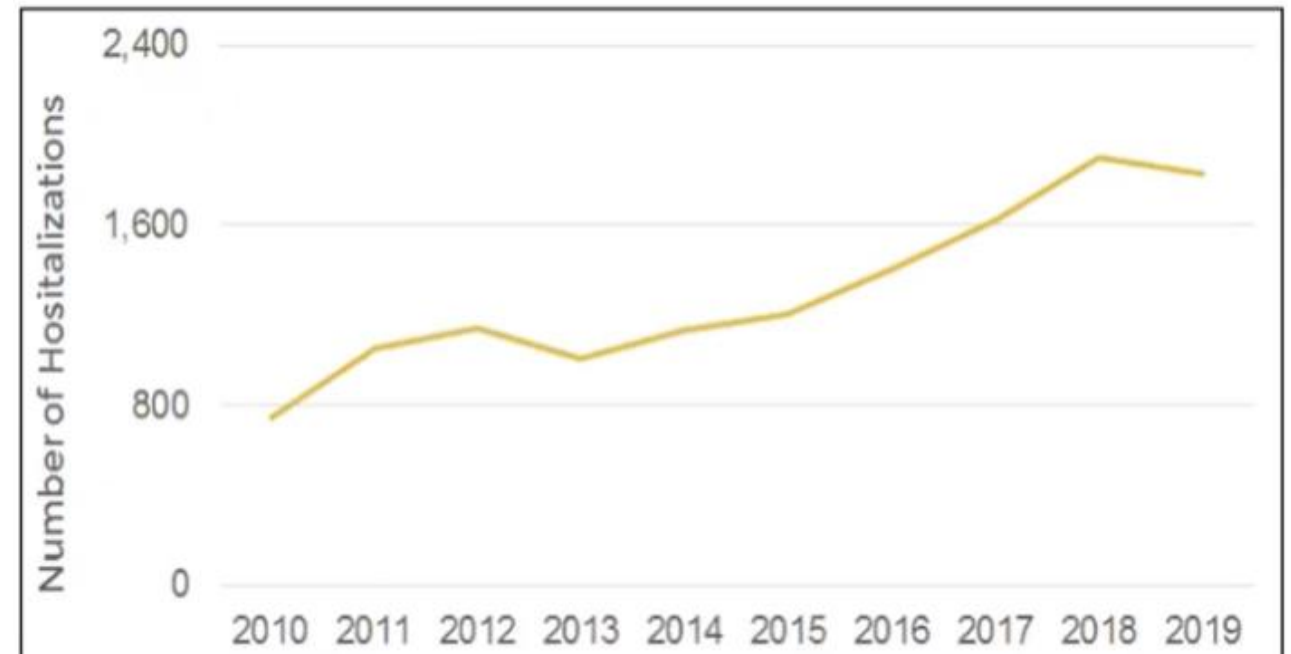
"Xylazine is making the deadliest drug threat our country has every faced, fentanyl, even deadlier," said Administrator Milgram. "DEA has seized xylazine and fentanyl mixtures in 48 of 50 States." The DEA Laboratory System is reporting that in 2022 approximately 23% of fentanyl powder and 7% of fentanyl pills seized by the DEA contained xylazine."

DEA. Joint intelligence Report October 2022
Torruella, R. Substance Abuse Treatment, Prevention, Policy, 2011
Friedman et al. PLOS ONE, 2019
Friedman et al. Drug and Alcohol Dependence 2022

Injection drug use associated skin infections are ↑

“When it comes down to it, a lot of the times that I need to get medical attention, I put it off and put it off and put it off, because I don’t want to face the embarrassment that they make me feel, and that’s not fair. It’s not.”

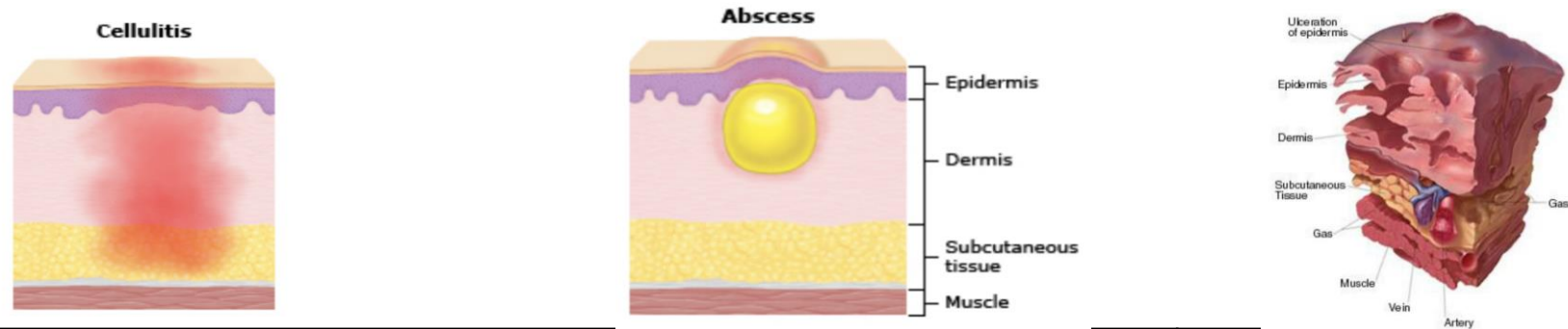
Number of Injection drug use Skin infection hospitalizations in Philadelphia, PA 2010-2019



Biancarelli et al. DAD. 2019.

Courtesy of Jewel Johnson. PA Healthcare Cost Containment Council

Skin infection treatment consideration



Signs and symptoms	Non-purulent	Purulent	Complicated Skin infections
Mild = NO systemic symptoms	Cephalexin 500mg q6h OR Cefadroxil 500mg q12 Bactrim 2DS BID (beta-lactam allergy, watch out for sulfa allergy)	Doxycycline 100mg BID OR Bactrim 2DS BID	IV ANTIBIOTICS!

*Remember erythema may worsen initially after starting antibiotics

*Duration of treatment depends: 5-10 days

Skin infection management

Harm Reduction Considerations

Venue:

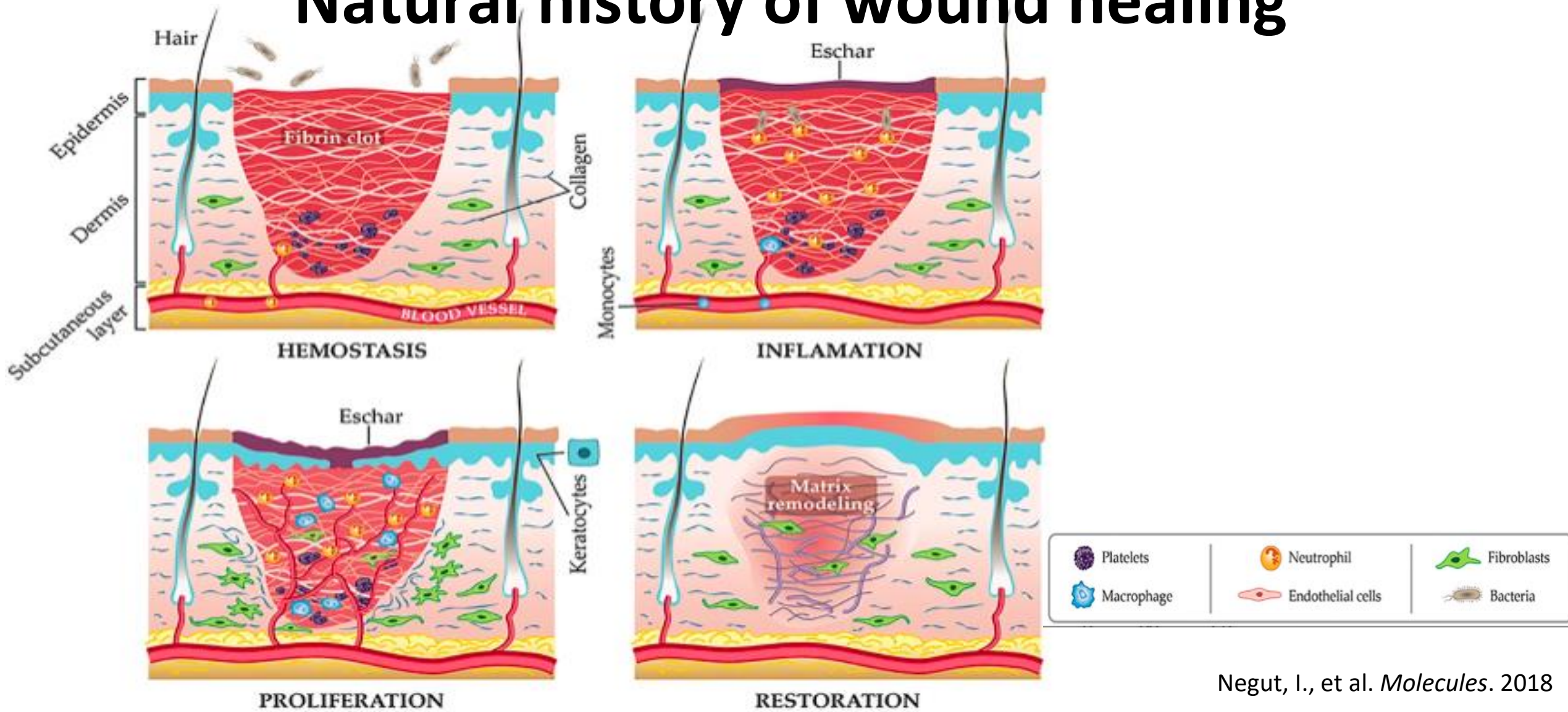
- Consider having antibiotics on-site
- Safe storage/container for antibiotics (badge holder)
- Shorter courses and dose frequency of antibiotics

Patients:

- Educate of signs and symptoms of skin infections and red flag symptoms
- Measure and mark borders of skin infection
- Stress importance of limb elevation + warm packs



Natural history of wound healing



Negut, I., et al. *Molecules*. 2018



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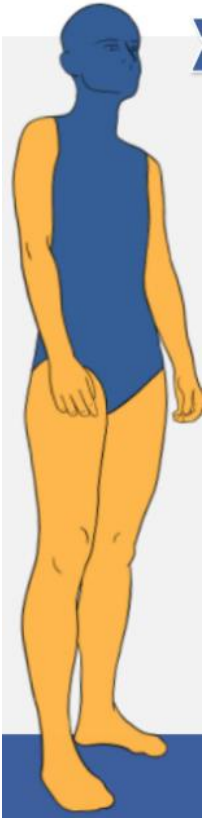


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Skin wounds associated with xylazine use



- Skin wounds reported in Puerto Rico 2012
- Can start as purple/red blister → may progress to areas of necrosis
- Risk seems to be irrespective of route of administration
- Unclear pathophysiology
- Wounds are at risk of secondary bacterial infection



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

Lopez et al. Addiction science and Clinical Practice 2015

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

Malayala et al. Cureus. 2022

Friedman, J et al. DAD 2022



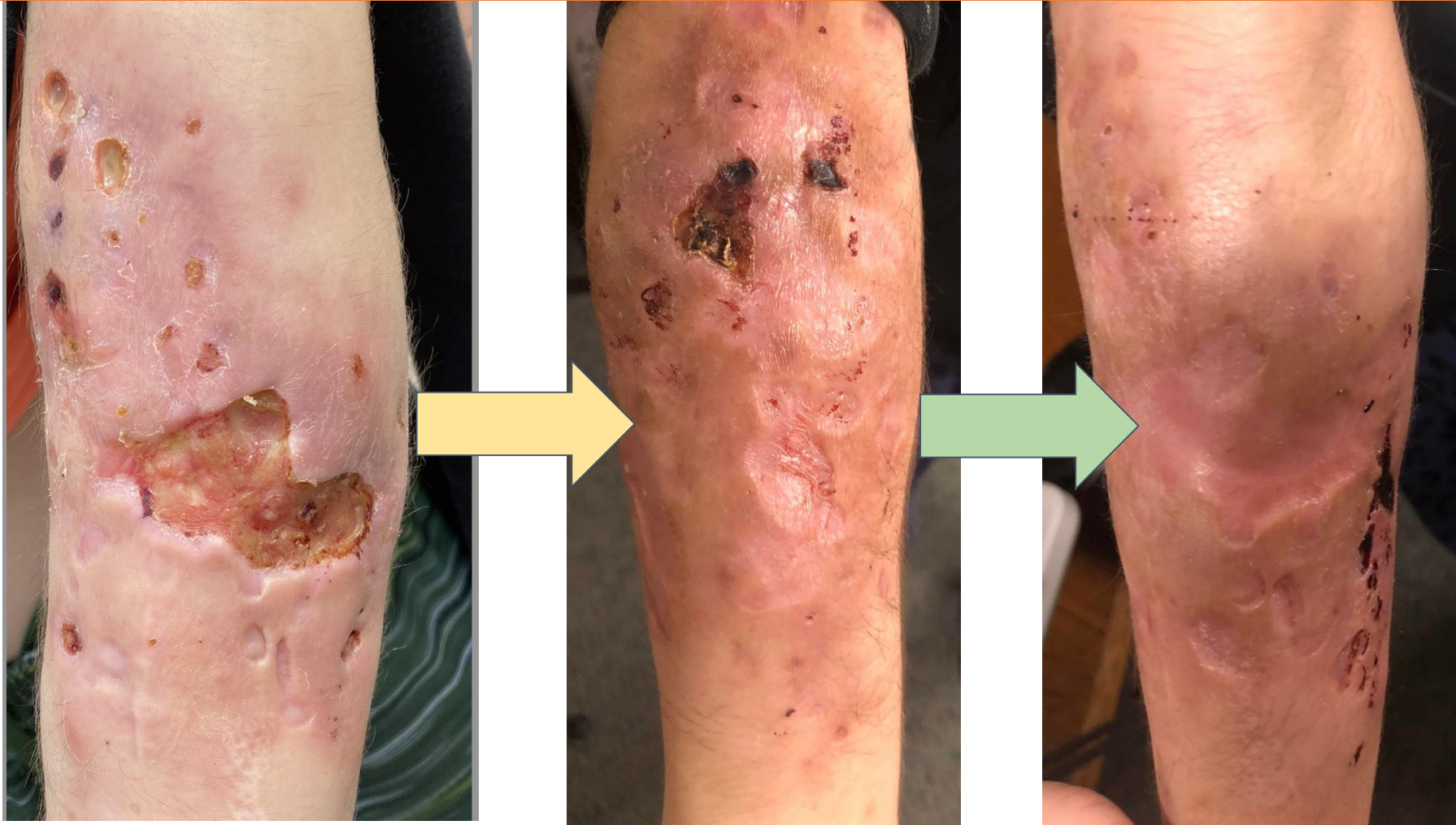
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Xylazine associated wounds can heal over time



Wei JJ, et al. JAAD Case Reports. 2023. In Press

Shared with patient permission Healthy Streets Outreach Program



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Skin wounds patient education

- Talk to your patients about xylazine in illicit drug supply
- ASK about atypical wounds
- Consider use of local drug checking or Xylazine test strips
- If positive, advise to seek alternate batch

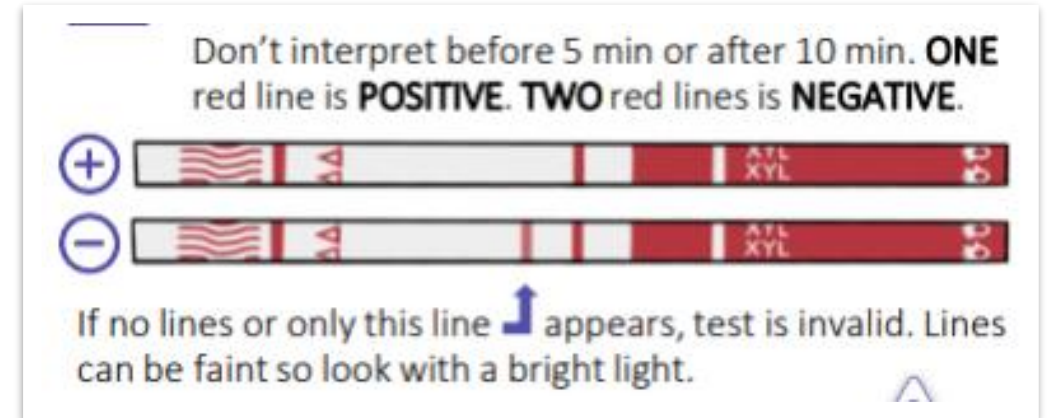
Drug checking programs

DrugsData.org

Massachusetts Drug Supply Data Stream (MADDS)

UNC Street Drug Analysis Lab

Maryland Center for Harm Reduction Services RAD



Universal best practices for wound prevention

- Hand and injection site hygiene
- Use sterile injection equipment with every use
- Use tourniquet/vein finder/US to avoid skin popping and intramuscular injections
- Avoid injecting in **RED** areas→



Typical presentation of wounds + terminology



Non-viable tissue:

-Eschar

-Slough

Granulation Tissue

Peri-wound



GOOD to do: History, Skin temperature

NEED to do: Pulses, Sensation, Movement

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Pinpoint wound management



1) Evaluate for infection and need for systemic antibiotics

2) Cleanse



Saline, soap + water, antimicrobial cleanser, dry skin

3) Moisture (if needed!!)



Peri-wound: Vitamin A+D ointment

Wound bed: petrolatum

MAYBE medical grade honey

MAYBE topical antibiotic

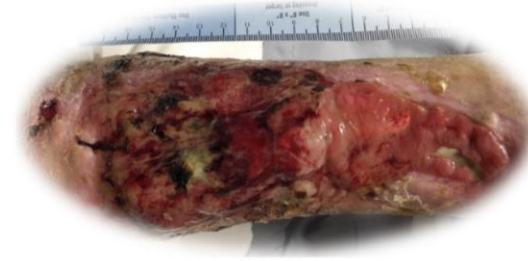
4) Cover/ wrap




1° dressing: bandage OR nonadherent cut to size
2° dressing: roll gauze lightly





Complex wound management




1) Evaluate for infection and need for systemic antibiotics

2) Cleanse  Saline, soap + water, antimicrobial cleanser, dry skin

2) Moisture/medicate  Peri-wound: Vitamin A+D ointment
Wound bed: . +/- debridement for nonviable tissue
Medical grade honey on **eschar**
Antibiotic ointment on **slough**

3) Cover  1° dressing: Non-adherent porous matrix impregnated w/ petrolatum (Adaptic, xeroform, etc) cut to size
+/- Absorptive dressing: ABD pad if exudate

4) Wrap  2° dressing: Roll gauze + tape
Secure wrap: coban/coflex LOOSELY



Medical grade honey



Pros:

- Promotes moist wound environment
- Prevents malodor
- Facilitates natural debridement
- Some antibacterial properties: dehydrates bacteria and lowers wound pH

Cons:

- Expensive
- Sticky
- Dressings needs daily changing depending on exudate

Johnson, D. et al. JASN 2005
Roson V et al. J Advanced nursing. 2009

When to triage to higher level of care

1. Failing oral antibiotics and/or wound + constitutional symptoms
2. Unable to get reliable outpatient wound care
3. Lack resources

Things to tell patients:

- Advocate for pain management and xylazine withdrawal management
- Linkage to professional teams (identify “HR microteam” in your community)

Optimizing treatment venue

- Sink with soap, basin, chair
- Storage and inventory of supplies
- On-site antibiotics
- Tent with privacy barriers vs mobile care vs street outreach
- Areas for disposal
- Private room (co-locate in clinics or low barrier SSPs)





Photos: Stephanie Klipp (Courage Medicine, Prevention Point Philadelphia, Savage Sisters))

Next steps to consider

Infrastructure

Funding

Research

Advocacy



Street Supplies

<u>Item</u>	<u>Use</u>	<u>Price</u>
Saline bullets/0.9% NaCl solution	Cleansing	Amazon ~\$15.00/100 Airlife 1000/\$124.03 via McKesson
Gauze pads	Cleaning and drying wound, sterile	8-ply, 4*4in \$12.32/50
A+D ointment	Moisture barrier, large tube or individual	Individual ~\$13.00/ 144 via Amazon
Nonadherent pad	Non-stick over moisture, will wick away but not stick to wound, which is essential!	3*8in~\$11.00/50, can cut and put in Ziploc bag in advance 2*3in ~ \$11.00/100
Bordered dressing, nonadherent	Same use as nonadherent pad, build in adhesive edges, could cause trauma	6*6 on Amazon \$26.00/15 4*8, same
Gauze wrap	Wrap materials and area to keep covered/protect	4*4in on Amazon ~\$12.00/24
Bandage	"Pin hole" wounds, cover scars, etc	Curad 300 count varied sizes, ~\$13.00 1*3in 4.22/100



Ideal Supplies



Item	Use	Price
Saline bullets/0.9% NaCl solution	Cleansing	Amazon ~\$15.00/100 Airlife 1000/\$124.03 via McKesson
A+D ointment	Moisture barrier over dry/cracked skin	Individual ~\$13.00/ 144 via Amazon 13 oz Jar \$4.98 via McKesson
Medihoney	Autolytic debridement via moist environment, with provider discretion, on eschar or slough	\$21.95/1.5 oz tube via Amazon \$43.47/ 3.5 oz tube via McKesson
Xeroform	Non-stick impregnated gauze with Bismuth tribromophenate and petroleum, can cut, drier wound	5*9in \$49.59/50 pieces, can cut in advance and separate in plastic zip bag 4*4in \$31.36/25 pieces
Adaptic	Non-stick impregnated cellulose acetate with petroleum, can cut, ok for wet or dry wound	3*8in \$52.58/ 24 via McKesson
ABD pad	Absorbent for heavy draining wounds, can cut	6*6in via Amazon \$26.00/15 pads 5*9in \$122.70/400 pieces
Gauze wrap/roll gauze	Protection, cushion	4in*4yd via Amazon ~\$12.00/24 \$70.42/96 via McKesson
Coban	Closes/ protects over entire dressing, compressive so need to wrap LOOSELY	\$65.36/18 rolls (Alternatives include Tubi-grip, \$\$\$ but loose)



WOUND CARE SUPPLIES



SELF-CARE STEPS

- 1 Clean hands with soap & water or hand sanitizer before touching wounds
- 2 Gently wash wound with soap & water or with saline at least every 2-3 days
- 3 Place xeroform on entire wound. If unavailable, put ointment on gauze. Cover with more dry gauze
- 4 Wrap wound with kerlix and secure with medical tape. Make sure wrap is not too tight
- 5 Cover dressing with ACE wrap or coban or with long sleeves/pants if no other option
- 6 Change dressing every 1-3 days. Watch for red flags

XYLAZINE

// zai · luh · zeen //

AKA “Tranq” or “Tranq Dope”

A veterinary sedative making its way into the drug supply. Xylazine increases the risk of sedation, overdose, and wounds that are hard to heal.

This guide focuses on xylazine wounds >>>

Last updated: 04/2023; Design by: Maggie Shang MD

XYLAZINE WOUNDS



Xylazine wounds can appear anywhere on the body regardless of where you are injecting, particularly in **YELLOW** areas.

Check these areas regularly for any wounds that may develop.

Wounds can occur even if you're just snorting or smoking.

RED FLAGS to SEEK MEDICAL CARE

- Fever or chills
- Skin turns dark or black
- Skin is red, hard, & hot to touch
- Thick, smelly yellow or green drainage
- Severe or worsening pain at wound site
- Pain & decreased ability to move joint
- Pieces of tissue falling off
- Exposed bone or tendon
- New numbness



Xylazine wounds can look like a combination of:

- Blisters
- Large ulcers
- Small scabs
- Eschar (dark/black pieces of dead tissue)



HELPFUL TIPS

- Keep your skin moisturized with A+D ointment
- Avoid using alcohol/hydrogen peroxide on wounds
- Keep wounds covered with a clean bandage
- Wear long sleeves, pants, socks, and gloves to prevent yourself from scratching your skin
- Eat protein & stay hydrated to help with healing
- Avoid injecting into or around your wounds
- Use new supplies every time and avoid sharing
- Not every wound is infected. Avoid taking non-prescribed antibiotics

You should still give naloxone in an overdose with xylazine as opioids are often present. Avoid giving more naloxone if the person is breathing again even if still unconscious.



Thank You!!

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

- University of Pittsburgh
- Grayken Center of Addiction
- Dr. Ashish Thakrar, Dr. Maggie Shang, Dr. Nabarun Dasgupta, Dr. Jenny Wei
- Prevention Point Pittsburgh and Prevention Point Philadelphia Wound Care Clinic (Kristi Petrillo, Sara Wallace-Keeshen, Rachel McFadden, Keara McNulty, Rachel Neuschatz)
- Responding to Xylazine in the Drug Supply Part 1&2. National Harm Reduction Coalition Office Hours. 4/8/2022
- Sara Wallace-Keeshen, BSN, RN, Rachel McFadden, BSN, RN, CEN, & Rebecca Hosey, MPH, BSN, RN. Basics of Wound Care. Substance Use Response Guidance and Education. 9/2022.
- Raagini Jawa. Xylazine and How it Harms People Who Use Drugs. PCSS. 4/11/23
- Claire Zagorski, MSc, LP. What we need to know about Xylazine. Be Well Texas ECHO. 10/6/22
- Dr. Joseph D'Orazio. Toxicity of Xylazine and How it impacts treatment for people who use drugs. COBRE on Opioids and Overdose. 6/16/22
- NASTAD Beyond the Alerts: Practical Guidance for Responding to Xylazine webinar. 2/21/2023
- Dr Ramsey. Learning Thursdays: Xylazine. NYS OASAS. 2/10/2023
- Jason Bienert. Experiences with Xylazine-related problems. From a Wound care nurse, Voices of Hope, Cecil & Hartford County, Maryland.
- Rebecca Hosey. Xylazine effects on wounds: Why and how we care. HRNA AIIRM. 1/10/2023