



# *Drugs in the ER*

Paul Nystrom, MD  
Faculty, Hennepin County Medical Center Department of Emergency  
Medicine  
Assistant Chief Medical Director, Hennepin EMS  
Medical Director, Edina Fire & Police  
Medical Director & Officer, Plymouth Police  
Medical Director, Brooklyn Park Police  
Assistant Professor, University of Minnesota Department of Emergency



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# Disclaimer

These opinions and ideas are mine and do not represent the opinions or policies of HCMC or PPD.



# What we see...

MVC with extrication



Special Care  
during 0500  
rounds







Fall off a roof



# Train vs. Ped

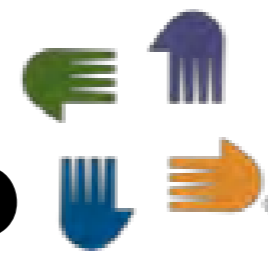


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# Drugs in the ER

- Opioids
- THC
- Meth
- Cocaine
- PCP/LSD
- K2/Synthetics

## Opioid Toxidrome

Pinpoint pupils  
Respiratory depression  
CNS depression

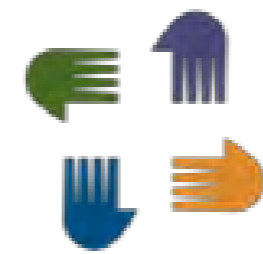
Cocktail/grab bag du jour

Classic toxidromes are less common

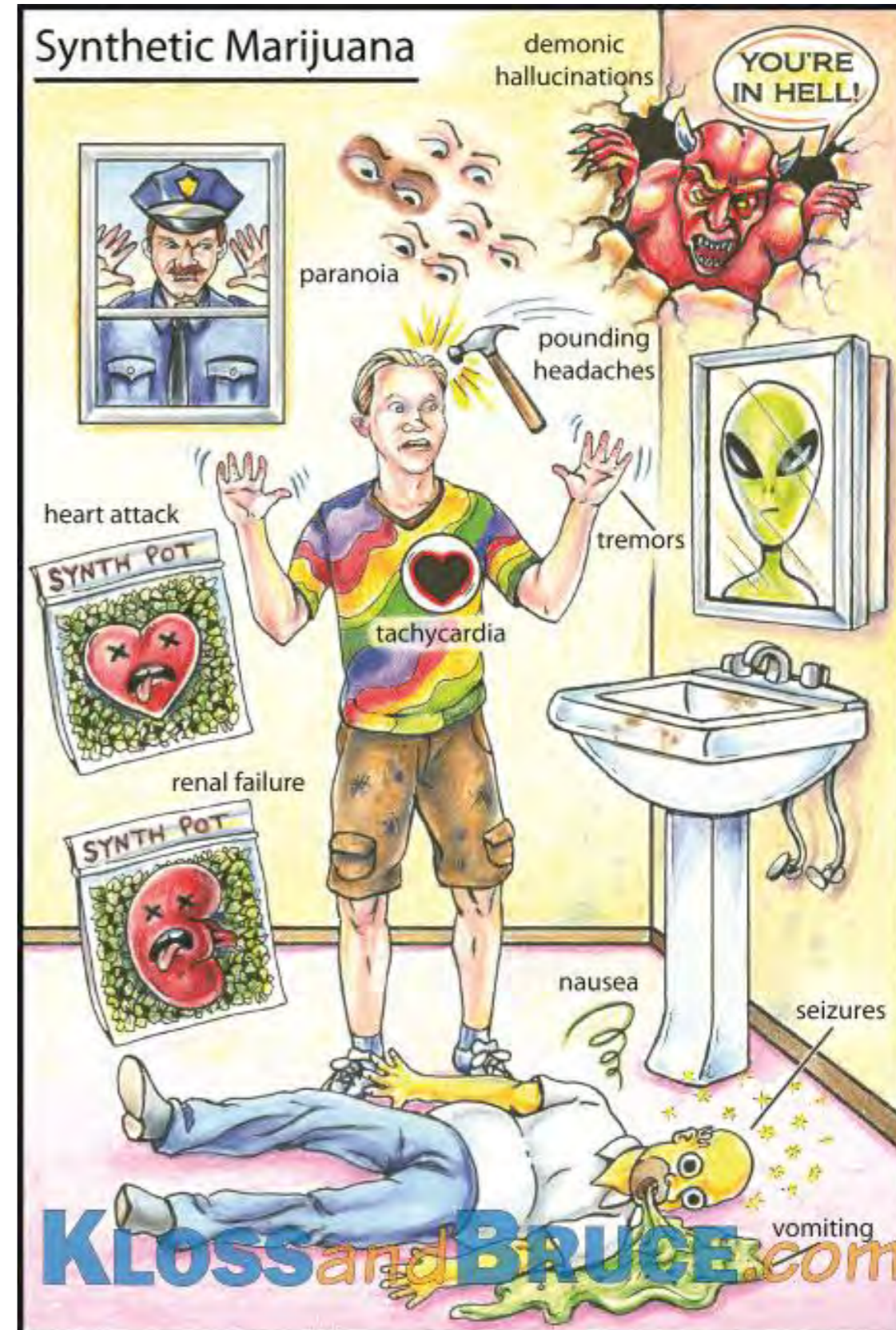
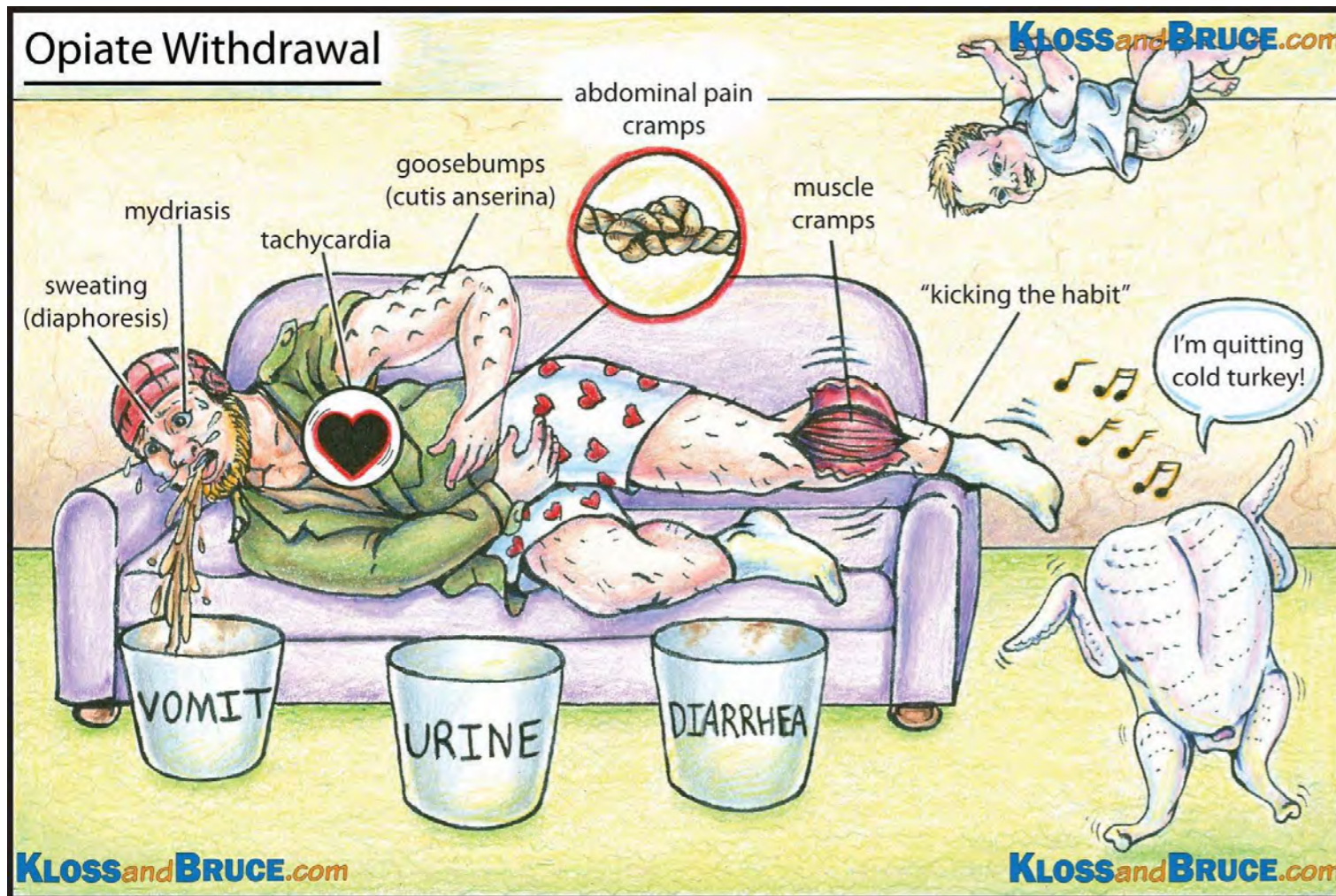




# Too Much or Too Little?



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# ER Treatment

- Based on symptoms and presentation
- Not the drug
- Except specific ingestions:
  - Opioids
  - Tylenol
  - Beta blockers





# ER Treatment

## Summarized



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- If you're up, we put you down.
- Our safety matters
- And let you metabolize to freedom.
  
- If you're down, we wake you up.
- Your safety matters
- And let you metabolize to freedom.



# Prehospital Treatment



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- If they're up, put them down for safety.
- Versed/Haldol/Ketamine
- If they're down, wake them up.
  - Bilateral jaw thrust
  - BVM
  - Narcan



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# 3 Cases on a Spectrum



# K2

- 47 yo M...
- EMS called to C-store
- 25 people crowding around & fighting
- 1 guy unresponsive
- Bystanders report K2



# K2

- Unresponsive en route
- Medics assisted ventilations
- Agitated shortly after arrival requiring sedation & 4-pt restraints
- Large work up:
  - CTs, labs, XR's, EKG



# K2

- BAL 0.323 but o/w negative work up
- Observed in ED for 3 hrs
- Discharged to the world





# K2

- Simple case with no bad outcome
- But we don't/can't assume simple
- “Found down” = catastrophe until proven otherwise
- Neuro, cardiac, occult trauma, sepsis...



# Recent K2 Uptick

- Usually agitated or down leading to 911
- Resolution en route
- Discharged quickly
- Rare complications (seizure, intubation)



# Meth

- 26 yo M with h/o poly-substance abuse
- Stolen car, police chase, caught after 5 hrs
- Found supine by EMS next to the highway
- Unresponsive and fast HR
- Clenched jaw, no obvious trauma



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80+ degrees



“Found patient laying face down next to the highway in the custody of law enforcement.”



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# Meth

- On arrival to the ER...
- Temp of 107.5 (41.9 C)
- Unresponsive, intubated
- Cooled with wet towels and fans
- Large work up...



# Meth

- Lactate 12
- Metabolic acidosis
- Kidney failure
- Heart damage
- Rhabdomyolysis
- Ankle fracture





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# Meth

- Meth/amphetamines on U tox
- 1 week hospitalization
- Discharged to jail
- Follow up surgery scheduled



# Meth

- Take aways:
- Similar presentation but lots of bad things
- Water & fans = effective cooling





# Meth

- 30 yo M...unknown down time
- Found on sidewalk with empty liter of rum
- Afternoon, 80+ degrees, no wind
- Unconscious and unresponsive
- Shallow respirations



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# Meth

- Eyes open
- Dry skin & mucous membranes
- Felt hot to the touch
- Axillary temp 109.1 (42.8 C)
- Wet towels and cold packs



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# Meth

- Deterioration en route
- Vomiting
- Clenched mouth
- Hypoxia
- Posturing
- Tx: nasal airway & suctioning



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# Meth

- Arrested on arrival to ER
- Copious coffee ground vomit
- CPR, intubation, IV access
- Cooled with wet towels and fans
- Cold water OG lavage



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# Meth

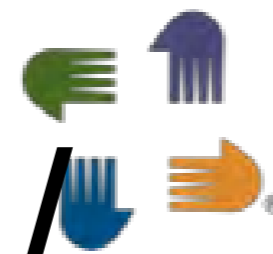
- BAL negative
- Metabolic acidosis (pH 7.1)
- Labs showed heart & kidney damage
- Case called at about 25 minutes
- Final temperature was 109.6 (43.1 C)
- Meth/amphetamines on autopsy



# Meth

- A real person...

“...struggled with mental illness and addiction for many years. He tried many times to seek wellness and improve his situation. He attended and completed many treatment programs.”



# Hyperthermia/ Heat Illness

- Hyperthermia is not Fever
- Heat stroke is heat exhaustion with CNS dysfunction
- **Medical emergency**
- Not defined by temp or sweat/no sweat



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# Hyperthermia Treatment

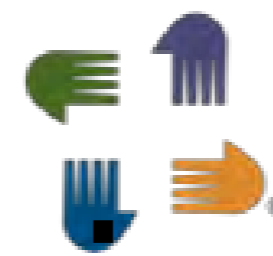
- Rapid cooling
- Water/wet towels and fans
- Supportive care





# Hyperthermia

- $>104$  (40 C) = severe hyperthermia
- Evaporation is key to cooling
  - Less effective in high humidity ( $>75\%$ )
  - Less effective when environment exceeds body temp



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# Hyperthermia

- $>108$  (42 C)
- Enzymes quit working
- Cytokine inflammatory response
- Heat shock proteins
- Increased metabolic rate
- Decreased vital organ blood flow



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# Questions?

[paulcnystrom@gmail.com](mailto:paulcnystrom@gmail.com)  
[@paulcnystrom](https://twitter.com/paulcnystrom)