Methamphetamine Use Disorder

Diagnosis, treatment, and a focus on harm reduction.

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she/they
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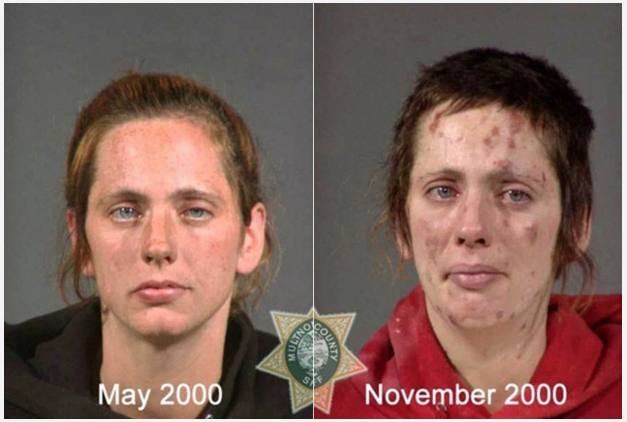
2000
2007


2003
2007


2007
2008


2001
2008


January 2008
August 2008


May 2000
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Methamphetamine

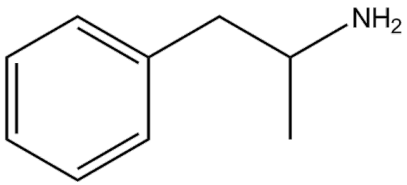
Drug class: stimulant

Route of Use: injection (IV, subQ, intradermal/skin popping), inhaled, intranasal, rectal “boofing/booty bumping”

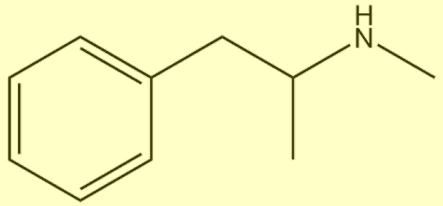
Metabolism: mostly renally excreted

Effect time: 7-24 hours, peak high within minutes

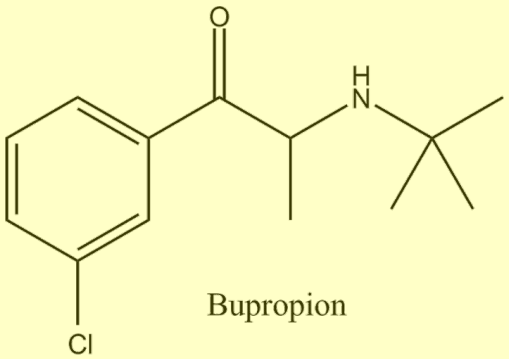
Urine tox: 3-5 days from last use



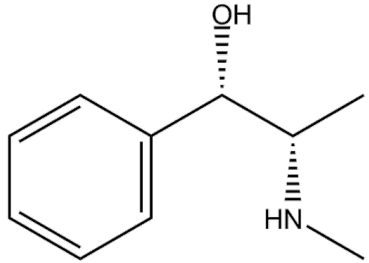
Amphetamine



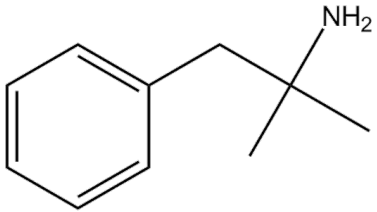
Methamphetamine



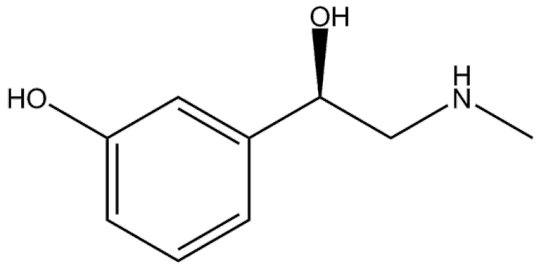
Bupropion



Pseudoephedrine



Phentermine

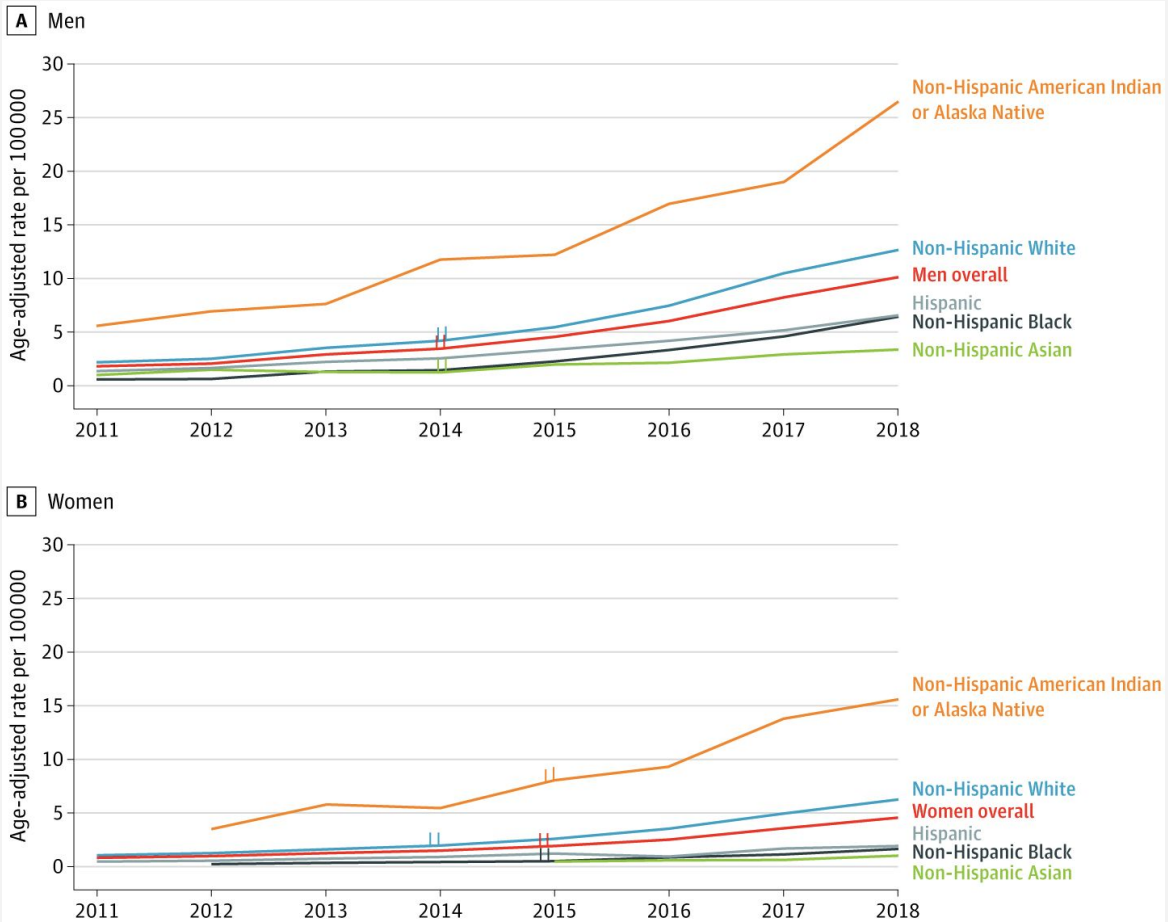


Phenylephrine

Other common names for methamphetamine:

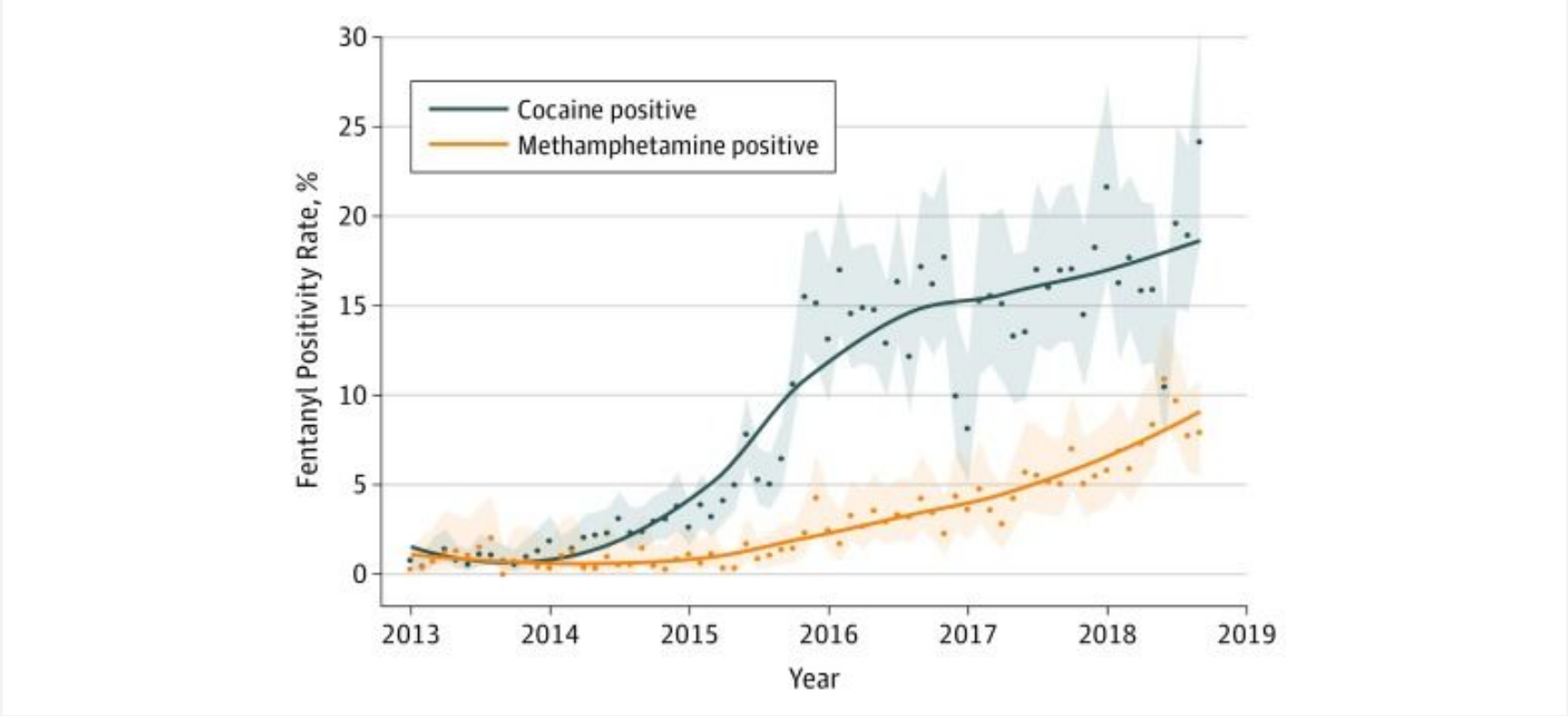
Meth, Tina, Crystal, T, Crank, Speed

Methamphetamine-related overdose deaths are increasing



JAMA Psychiatry. 2021;78(5):564-567. doi:10.1001/jamapsychiatry.2020.4321

Fentanyl is responsible for overdose deaths



LaRue et. al. Rate of Fentanyl Positivity Among Urine Drug Test Results Positive for Cocaine or Methamphetamine. JAMA Netw Open. 2019 Apr 5;2(4):e192851. doi: 10.1001/jamanetworkopen.2019.2851.

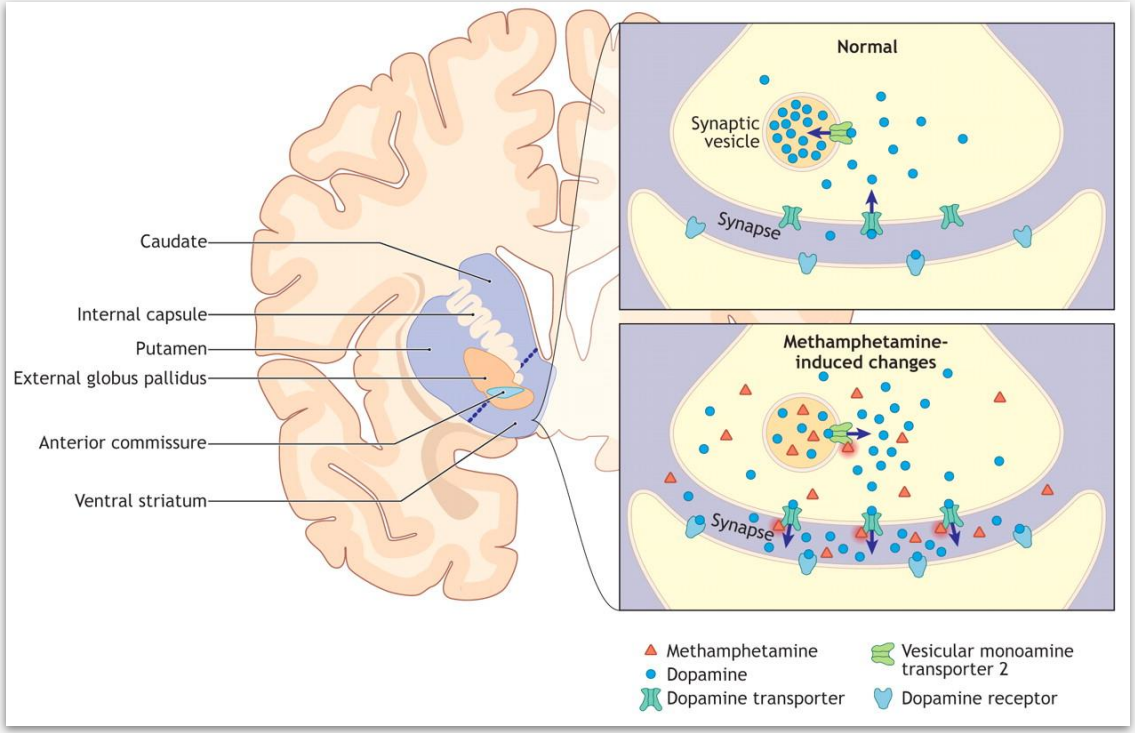
Case 1

35 yo cisgender M (he/him) presents to the ED with chest pain that began 1 hour ago. Says pain is “crushing”, radiating to his left arm, severity 10/10. He is noticeably diaphoretic, tachycardic, and responding to internal stimuli. He tells you “someone is out to get me!” His urine drug screen is positive for amphetamines.

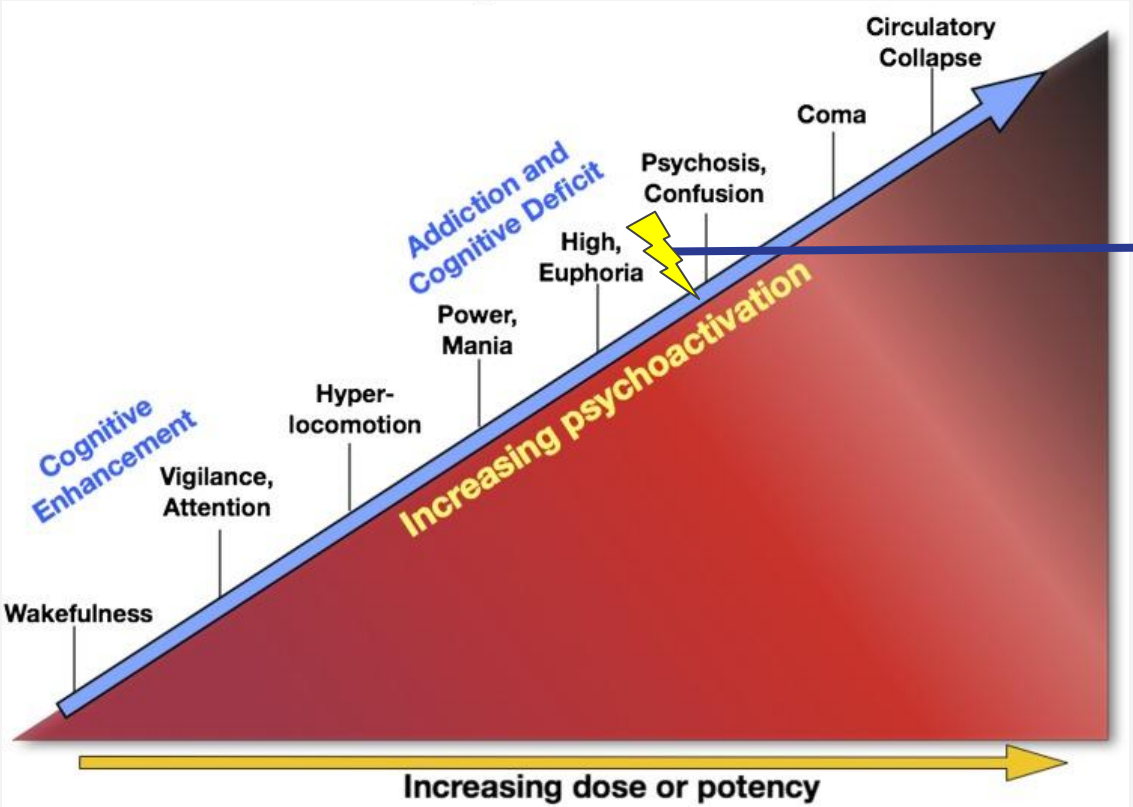
Stimulant Intoxication

Methamphetamine **increases dopamine levels** in synapse → dopamine is excitatory → improved cognition and wakefulness

Prolonged use → overamping → eventually neurons down-regulate dopamine receptors → tolerance develops → susceptible to MA-use disorder



What is overamping?



- Overamping starts when someone experiences **euphoria for an extended period of time**, or uses a dose exceeding the level of desired euphoria
- Agitation, confusion, and **psychosis** are seen in overamping

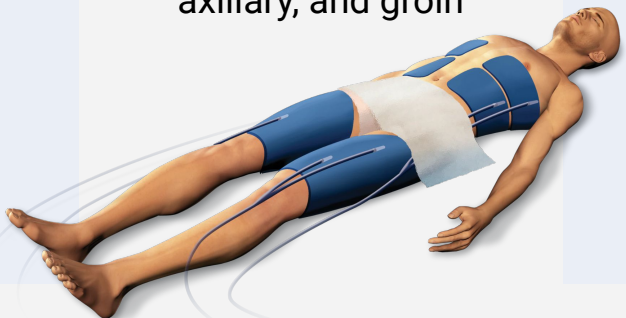
Treating Acute Stimulant Complications

Hypertension

- Vasodilators including nitroglycerin
- Nicardipine (if severe and persistent)

Hyperthermia

- Cooling device, the Arctic Sun ©
- If unavailable, ice works too! Focus on the neck, axillary, and groin



Rhabdomyolysis

- IV fluids
- Supportive care
- Monitor for additional complications (electrolyte imbalances and cardiac dysfunction)

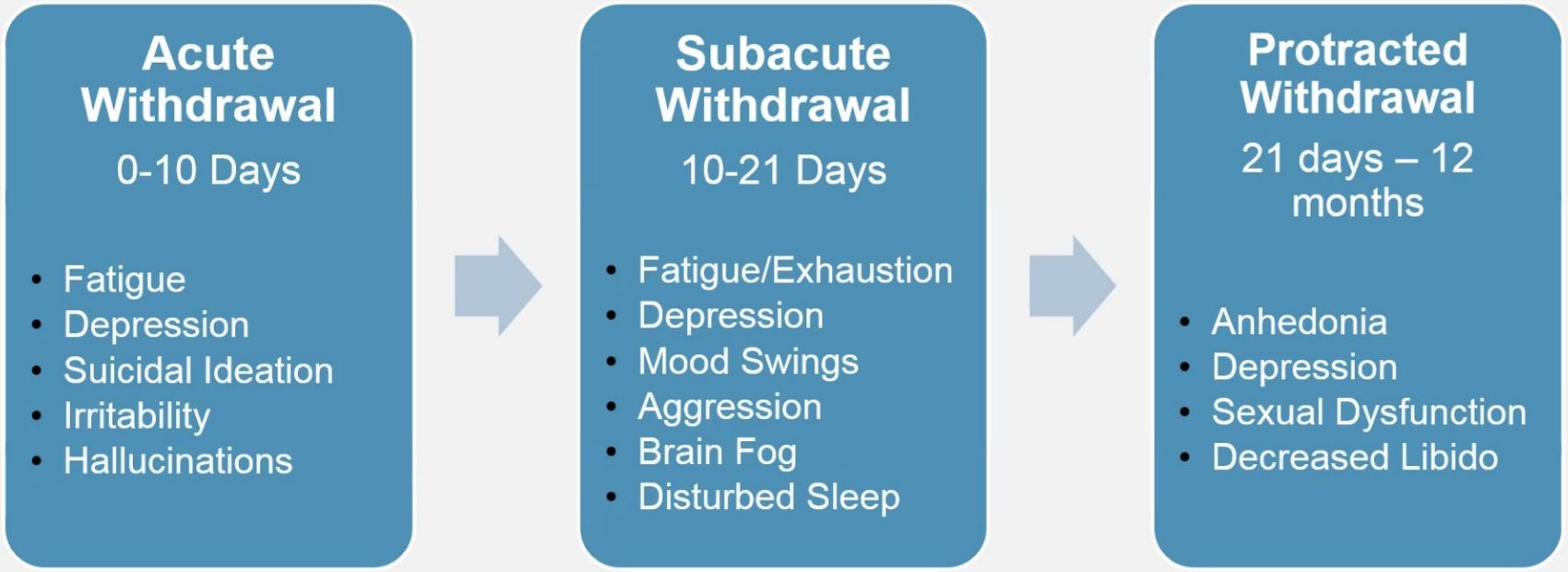
Psychosis

- 1st line: Benzos
- 2nd line: Antipsychotics
- 3rd line: Ketamine

De-escalation

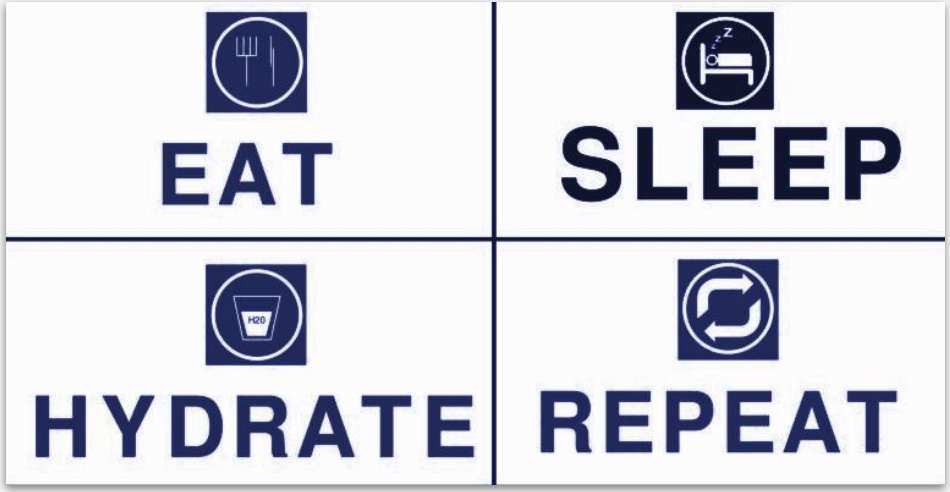
A	G	R	O	+
Assess	**Gauge**	**Respond**	**Observe**	**Positive Reinforcement**
Using patient-centered focus, asses cause of patient's agitation. CALMLY engage the patient in conversation.	How are you feeling? Be mindful of the feelings you may be projecting, which may escalate or de-escalate the patient.	Be calm yet firm in your interactions. Use open ended questions and empathetic listening to respond to patient's concerns.	Observe verbal and non-verbal cues. Is this working?	As patient starts to de-escalate, offer them something, such as a place to sit, a glass of water, a snack.

Methamphetamine Withdrawal Spectrum



Managing Withdrawal

- Eat, Sleep, Hydrate, REPEAT!!!!!
- In certain circumstances, consider stimulant medications (modafinil, mixed amphetamine salts)



Case 2

40 yo transgender female (pronouns she/hers) presents to Paradise Medical Office with a dog bite to her left hand. The bite occurred 1 week ago. She is only presenting now because she does not have reliable transportation. She is experiencing homelessness and hasn't really eaten much in 3 days. You ask about any drug use and she admits to smoking methamphetamine. She has tried quitting several times unsuccessfully.

Case 2

What is the difference between methamphetamine use and methamphetamine use disorder?

DSM-5 Criteria

A problematic pattern of methamphetamine use leading to ***clinically significant impairment or distress****, as manifested by* ***two or more of the following within a 12-month period****:*

- Methamphetamine is often taken in larger amounts or over a longer period than was intended
- There is a persistent desire or unsuccessful efforts to cut down or control methamphetamine use
- A great deal of time is spent in activities necessary to obtain methamphetamine, use methamphetamine, or recover from its effects
- Craving, or a strong desire or urge to use methamphetamine
- Recurrent methamphetamine use resulting in a failure to fulfill major role obligations at work, school, or home
- Continued methamphetamine use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of methamphetamine
- Important social, occupational, or recreational activities are given up or reduced because of methamphetamine use
- Recurrent methamphetamine use in situations in which it is physically hazardous
- Continued methamphetamine use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by methamphetamine
- Tolerance
- Withdrawal

Mild: Two to three symptoms
Moderate: Four to five symptoms
Severe: Six or more symptoms

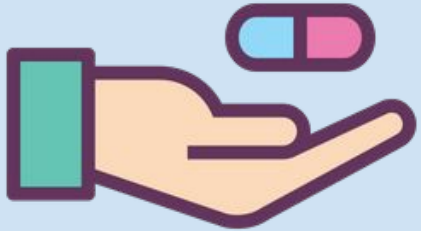
Case 2- continued

You successfully determine that the patient is motivated to quit her methamphetamine use. She wants to get her life back on track, get off the streets, and reunite with her family after not speaking with them for several years.

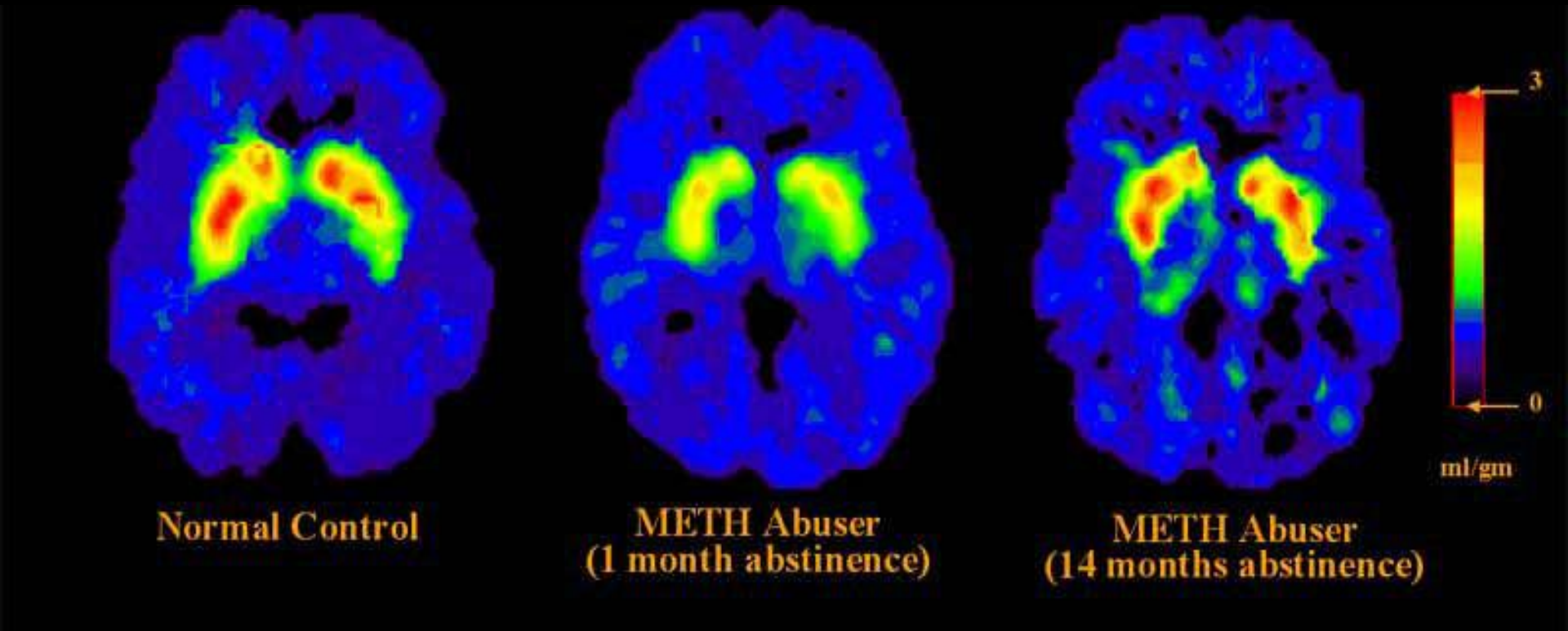
What treatments can you offer her?

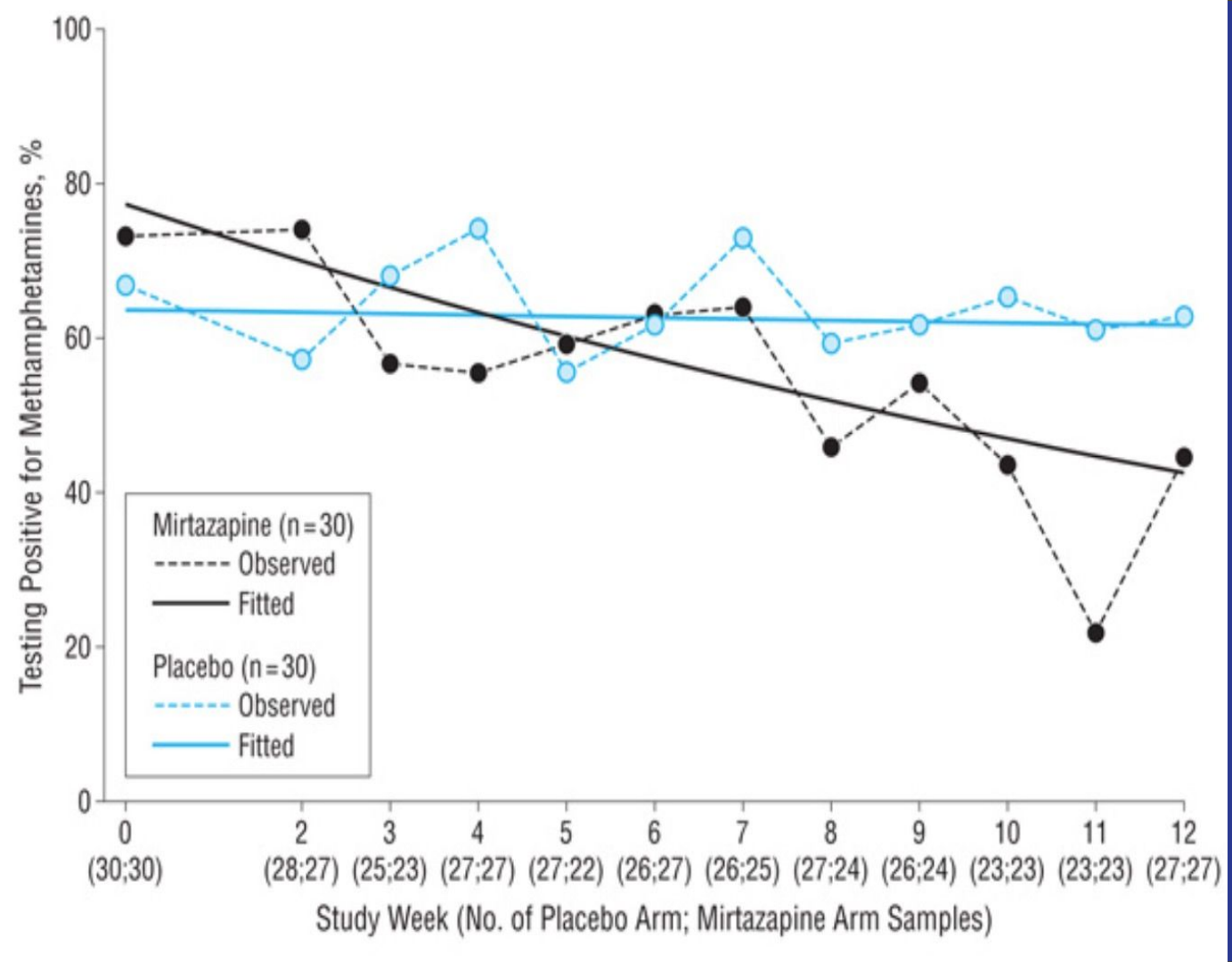
Available Treatments

- Contingency management
- Exercise
- NA/AA meetings
- Non-FDA approved medications
- Harm reduction



Partial recovery of dopamine transporters after protracted abstinence





Non-FDA Approved Medications

- **Mirtazapine** 30mg qHS
- **Topiramate** 300 mg divided BID
- **Bupropion + IM Naltrexone**

HARM REDUCTION

1) A set of practical strategies and ideas aimed at reducing negative consequences associated with substance use.

2) Also a movement for social justice built on a belief in, and respect for, the rights of people who use substances.

NATIONAL HARM REDUCTION COALITION

FIND NALOXONE | FIND SYRINGES

THE MOVEMENT | WHO WE ARE | WHAT WE DO | RESOURCE CENTER | TAKE ACTION

PRINCIPLES OF HARM REDUCTION

NEXT Distro
STAY ALIVE, STAY SAFE.

DANCESAFE

HOW TO TEST YOUR DRUGS FOR FENTANYL

1. Dilute your drugs in water.
2. Dip the strip into the liquid.
3. Look for one or two red lines.

DILUTE CORRECTLY. READ AND FOLLOW THE DETAILED INSTRUCTIONS INSIDE.

THE NATIONAL HARM REDUCTION CONFERENCE IS BACK IN SAN JUAN, PR
OCTOBER 13-16, 2022

REGISTER TODAY

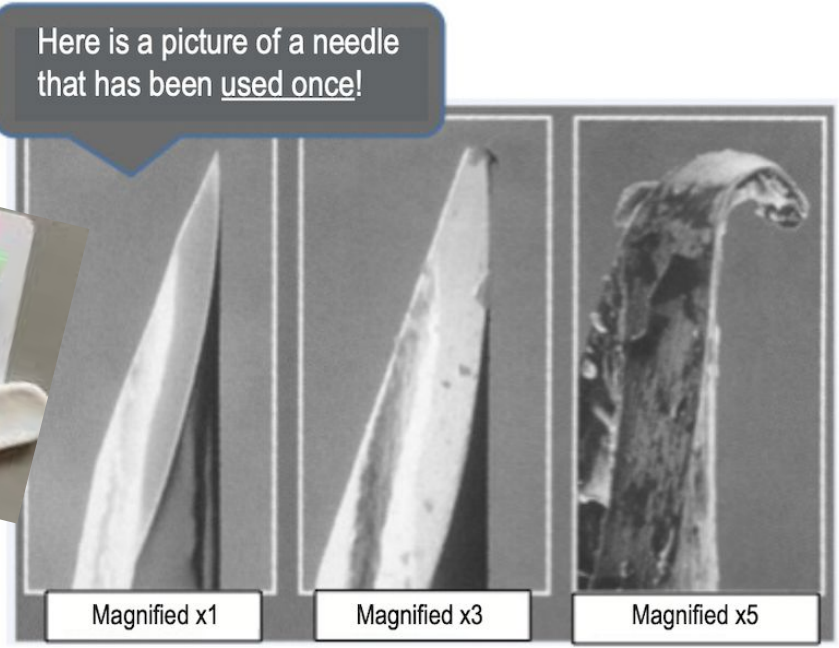
Case 3

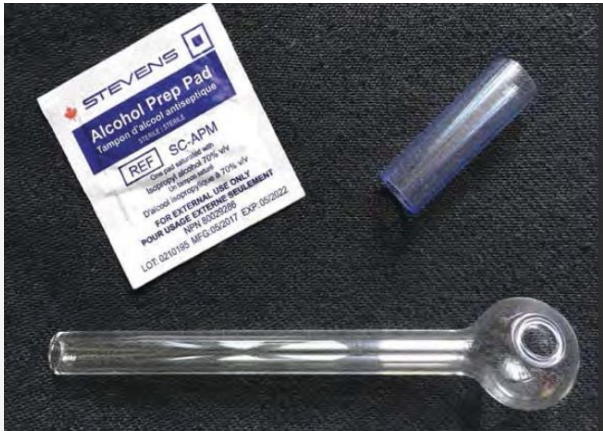
29 year old cisgender female (pronouns she/hers) has been using intravenous methamphetamine on-and-off for the past 10 years. She had stopped using for several months while with her ex-boyfriend, but they recently broke up. She is feeling depressed, anxious and is looking to use again.

Case 3

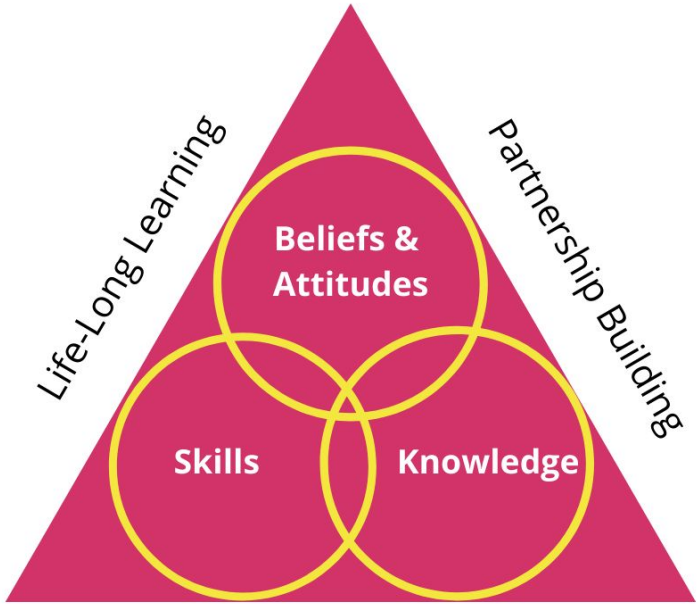
What harm reduction strategies can we offer this patient in the midst of her IV methamphetamine use?

- Sterile needles/works
- Safer smoking kits
- Safer sniffing kits
- Fentanyl test strips
- Sleep, hygiene
- Sugar-free gum
- Hydration
- Safer sex; BCM
- Set timer to take home meds
- Avoid alcohol and mixing
- Sample before slamming
- Don’t skin pop/muscle
- Screen for ID
- **Naloxone (Narcan)**





Cultural Humility



Source: Image recreated from Goforth, 2016; Tervalon & Murray-Garcia, 1998

"... Bring into check the power differentials that exist in the dynamics of physician-patient care by using patient-focused interviewing and care."

Take-home points:

- **Screen** for methamphetamine use and MA-use disorder
- **Meds are only one piece** of the recovery puzzle
- Focus on **harm reduction**
- **Give naloxone** (Narcan) to patients with stimulant use disorder
- We need **innovation**, in the fentanyl era, COVID pandemic, inequities, and increasing overdose deaths!

"The Nixon campaign in 1968, and the Nixon White House after that, had two enemies: the antiwar left and black people. You understand what I'm saying? We knew we couldn't make it illegal to be either against the war or black, but by getting the public to associate the hippies with marijuana and blacks with heroin, and then criminalizing both heavily, we could disrupt those communities. We could arrest their leaders, raid their homes, break up their meetings, and vilify them night after night on the evening news. Did we know we were lying about the drugs? Of course we did."

- John Ehrlichman, White House Domestic Affairs Advisor, Nixon Administration

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