

Medication Assisted Treatment for Methamphetamine Use Disorder

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Disclosures

- ▶ None
- ▶ Slides developed in collaboration with Justin Stamschror, MD - Addiction Psychiatry Fellow, University of Washington

Goals and Objectives

- ▶ Review general criteria for Methamphetamine Use Disorder
- ▶ Review medication assisted treatments for Methamphetamine

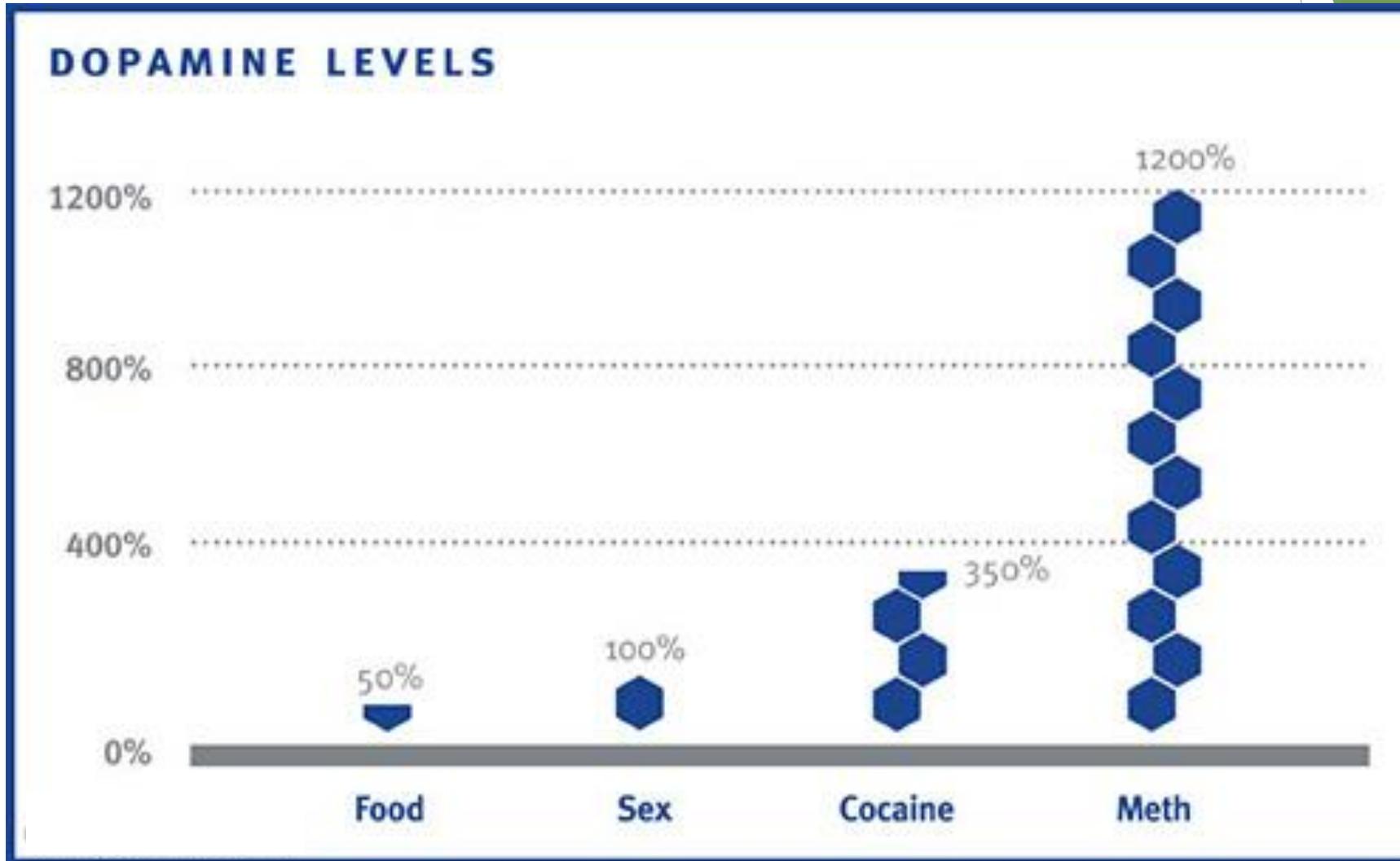
Stimulant Use disorder Criteria

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

Methamphetamine Reward Pathway

- ▶ <https://learn.genetics.utah.edu/content/addiction/mouse/>

Methamphetamine reward



Adapted from Di Chiara et al. Neuroscience 1999

Medication Assisted Treatments: Limitations

- ▶ Veterans Administration: Evidence-Based Synthesis Program
 - ▶ Pharmacotherapy for Stimulant Use Disorders: A systematic review August 2018
 - ▶ Only 14 Randomized Control Trials and 1 systematic review published to date
 - ▶ Small studies which are underpowered
 - ▶ Inconsistent outcome measures and study design

Medication Assisted Treatments: Based on VA Systematic Review, Previous Systematic Reviews and Previous RCTs

▶ Medications showing no consistent appreciable benefit

- ▶ Sertraline
- ▶ Abilify
- ▶ Modafanil
- ▶ Baclofen
- ▶ Gabapentin
- ▶ Bupropion
- ▶ Naltrexone

▶ Medications that have some promise

- ▶ Mirtazapine
- ▶ Topiramate
- ▶ Methylphenidate

Topiramate

- ▶ No systematic reviews
- ▶ 1 RCT (140 participants)
 - ▶ Reduced the amount of methamphetamine taken
 - ▶ Reduced relapse rates in those who were already abstinent
 - ▶ Did not improve abstinence rates

Elkashef et al. 2012

Mirtazapine

- ▶ RCT of Men who have sex with Men (60 participants)
 - ▶ More negative Urine Analysis in the Mirtazapine group
 - ▶ NNT = 3.1 for abstinence from methamphetamine
 - ▶ No difference in retention in treatment

Methylphenidate - Systematic Review

- ▶ 6 Randomized Control Trials
 - ▶ 3 of 4 studies found reduction in methamphetamine use while on methylphenidate
 - ▶ 5 trials showed no difference in retention
- ▶ Notable limitations and future directions
 - ▶ Low doses of methylphenidate used
 - ▶ Lead in abstinence/detoxification prior to treatment
 - ▶ Investigation of interface between ADHD and methamphetamine use disorder

Bhatt et al. 2016

Co-Occurring Disorders

- ▶ 28.6% with a primary psychotic disorder
- ▶ 32.3% with a primary mood disorder
- ▶ 26.5% with a primary anxiety disorder
- ▶ 33-40% with a lifetime history of ADHD

References

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