



Geisinger

Assessment and Treatment of Methamphetamine use

Margaret Jarvis, MD DFASAM
Chief, Addiction Medicine
Department of Psychiatry
Geisinger Health System

Caring

methamphetamine



Caring

What distinguishes methamphetamine use disorder from other SUD's

Geisinger

- Intoxication and withdrawal last longer than other stimulants
- Psychosis more prominent
- Associated behaviors and co-morbidities



Geisinger

Short-term

Increased wakefulness and physical activity; decreased appetite; increased breathing, heart rate, blood pressure, temperature; irregular heartbeat.

Long-term

Anxiety, confusion, insomnia, mood problems, violent behavior, paranoia, hallucinations, delusions, weight loss, severe dental problems ("meth mouth"), intense itching leading to skin sores from scratching.

Other Health-related Issues

Pregnancy: premature delivery; separation of the placenta from the uterus; low birth weight; lethargy; heart and brain problems.

In Combination with Alcohol

Risk of HIV, hepatitis, and other infectious diseases from shared needles.

Masks the depressant effect of alcohol, increasing risk of alcohol overdose; may increase blood pressure.

Withdrawal Symptoms

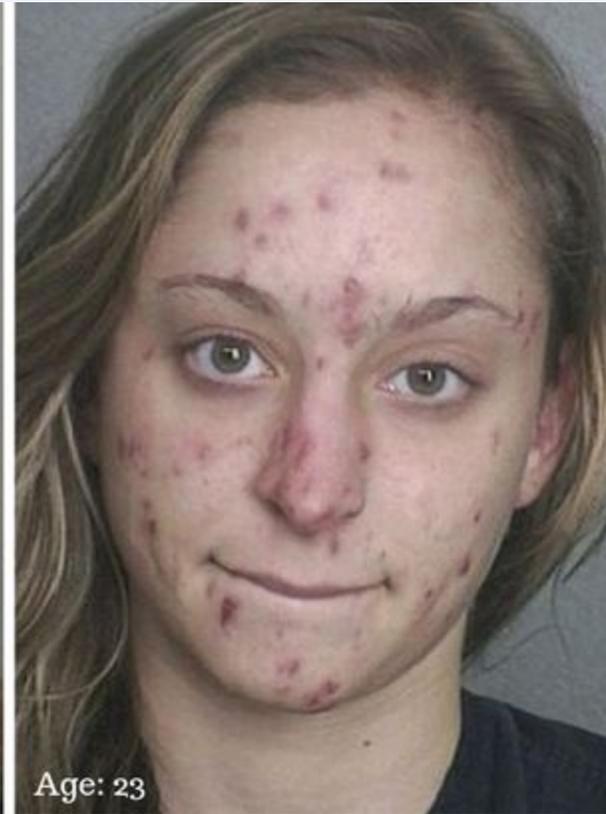
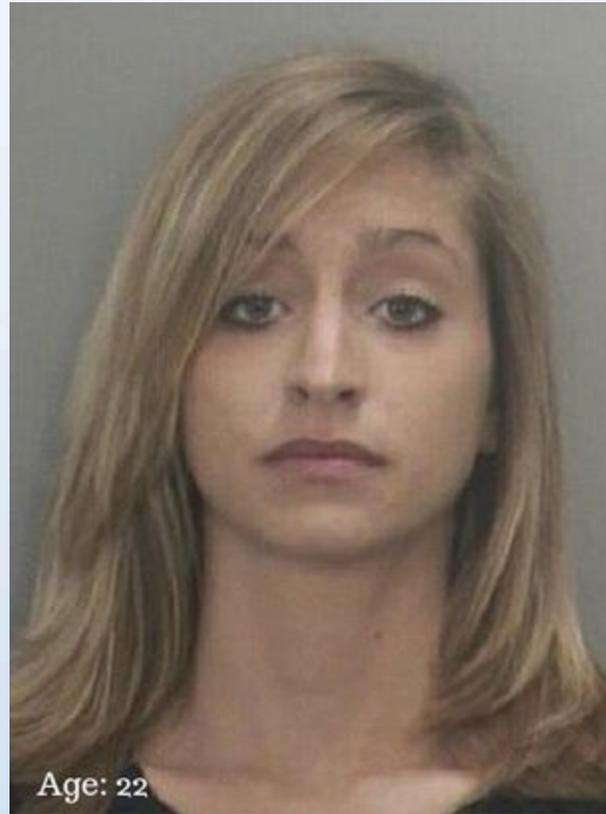
Depression, anxiety, tiredness.

“meth mouth”



Geisinger

Skin picking



Geisinger

Caring

cellulitis



Caring

Geisinger

**Major association between
methamphetamine use and
sexual behaviors**

When I say
PNP,
I mean this.

**PARTY
AND
PLAY**

Elevated HIV and STI Prevalence and Incidence among Methamphetamine-using Men who Have Sex with Men in Los Angeles County

Cathy J. Reback, Ph.D.^{1,2} and Jesse B. Fletcher, Ph.D

AIDS Educ Prev . 2018 August ; 30(4): 350–356

286 MSM who had used methamphetamine in last 3 months, were not in treatment, and had at least one incident of unprotected sex

HIV and other STI's assessed at baseline, 3, 6, 9 months

HIV prevalence was > 2x MSM in general

HIV incidence was 7x MSM who do not use methamphetamine

High incidence/prevalence of other STI's

Increased Methamphetamine, Injection Drug, and Heroin Use Among Women and Heterosexual Men with Primary and Secondary Syphilis

Kidd SE, Grey JA, Torrone EA, Weinstock HS.

— United States, 2013–2017. *MMWR Morb Mortal Wkly Rep* 2019;68:144–148.

What is already known about this topic?

During 2013–2017, the primary and secondary (P&S) syphilis rate increased 72.7% nationally and 155.6% among women.

What is added by this report?

During 2013–2017, reported methamphetamine, injection drug, and heroin use increased substantially among women and heterosexual men with P&S syphilis.

What are the implications for public health practice?

Heterosexual syphilis transmission and drug use, particularly methamphetamine use, are intersecting epidemics. Collaboration between sexually transmitted disease control programs and substance use disorder services providers will be essential to address recent increases in heterosexual syphilis transmission. Linking syphilis patients with substance use disorders to behavioral health services and providing syphilis screening for persons receiving substance use disorder services are needed to address these co-occurring conditions.

What do we learn from this?

Screen for methamphetamine use in people who:

- Exchange sex for drugs
- MSM
- Have sex with people who inject drugs
- Are diagnosed with new STI's

Geisinger

Caring

**Stimulant use causes
weight loss; this may be
entrance for women**



Geisinger

Treatment Options

Medications

Behavioral Therapies

There are no FDA-approved medications to treat methamphetamine addiction.

- Cognitive-behavioral therapy (CBT)
- Contingency management, or motivational incentives
- The Matrix Model
- 12-Step facilitation therapy
- Mobile medical application: reSET®

Matrix Model –originally described in Los Angeles early 1990's

Manualized outpatient treatment

16 weeks

Elements of:

- CBT (36 sessions)
- Family education (12 sessions)
- Individual counseling (4 sessions)
- 12-step facilitation (4 sessions)
- Toxicologies

A multi-site comparison of psychosocial approaches for the treatment of methamphetamine dependence

R.A. Rawson, et al.

Addiction 99 pp. 708-717 2004

8 sites, western US

Comparison to TAU, best available – 4-16 weeks, 1-3 sessions per week

Matrix approach showed significantly better retention in treatment than the TAU condition even when program length was controlled, except in the one site in which the TAU condition was conducted within a drug-court context participants in the Matrix condition provided significantly **more MA-negative samples** in the five 12-week programs than those in comparable TAU conditions.

A multi-site comparison of psychosocial approaches for the treatment of methamphetamine dependence

R.A. Rawson, et al.

Addiction 99 pp. 708-717 2004

in-treatment superiority of the Matrix approach was not demonstrated at post-treatment measurement points.

Psychosocial interventions for psychostimulant misuse

Minozzi, Silvia; Saulle, Rosella; De Crescenzo, Franco; Amato, Laura

Cochrane Database of Systematic Reviews

Issue: Volume (9), 2016

The most studied and the most promising psychosocial approach to be added to treatment as usual is probably contingency management.

When compared to TAU, any psychosocial treatment may improve adherence, but it may not improve abstinence at the end of treatment or the longest period of abstinence.

Contingency management: schedule effects.

John M. Roll, Steve Shoptaw.

Psychiatry Research 144 (2006) pp. 91-93

Escalation of incentive with **reset** associated with more extended periods of abstinence than schedules without reset.

A comparison of contingency management and cognitive-behavioral approaches for stimulant dependent individuals

Richard A. Rawson, Michael J. McCann, Frank Flammio, Steven Shoptaw, Karen Miotto, Chris Reiber

& Walter Ling

Addiction, 101 , 267–274, 2006

CBT and CM compared separately and together

CM consisted of escalating value vouchers (\$2.50 to \$20) with bonus for 3 consecutive UDT with no unexpected results. Unexpected results caused a reset.

Treatment conditions lasted 16 weeks.

Follow up at 17, 26, 52 weeks

A comparison of contingency management and cognitive-behavioral approaches for stimulant dependent individuals

Richard A. Rawson, Michael J. McCann, Frank Flammio, Steven Shoptaw, Karen Miotto, Chris Reiber

& Walter Ling

Addiction, 101 , 267–274, 2006

CM procedures produced better retention and lower rates of stimulant use during the study period. Self-reported stimulant use was reduced from baseline levels at all follow-up points for all groups and urinalysis data did not differ between groups at follow-up. While CM produced robust evidence of efficacy during treatment application, CBT produced comparable longer-term outcomes. There was no evidence of an additive effect when the two treatments were combined.

Drug testing

Substances or Conditions which can cause false positives

Ephedrine, pseudoephedrine, propylephedrine, phenylephrine, or desoxyephedrine
(Nyquil, Contact, Sudafed, Allerest, Tavist-D, Dimetapp, etc)

Phenegan-D, Robitussin Cold and Flu, Vicks Nyquil

Over-the-counter diet aids with phenylpropanolamine (Dexatrim, Accutrim)

Over-the-counter nasal sprays (Vicks inhaler, Afrin)

Asthma medications (Marax, Bronkaid tablets, Primatine Tablets)

Prescription medications (Amfepramone, Cathne, Etafeddiabe, Morazone,

...phendimetrazine, phenmetrazine, benzphetamine, fenfluramine, dexfenfluramine,

...dexdenfluramine, Redux, mephentermine, Mesocarb, methoxyphenamine, phentermine,

... amineptine, Pholedrine, hydroymethamphetamine, Dexedrine, amifepramone,

clobenzorex,

...fenproporex, mefenorex, fenelylline, Didrex, dextroamphetamine, methphenidate, Ritalin,

...pemoline, Cylert, selegiline, Deprenyl, Eldepryl, Famprofazone)

Kidney infection, kidney disease

Liver disease, diabetes

BE CAUTIOUS INTERPRETING TESTING

Geisinger

No medication, yet

Have tried (not exhaustive):

- Bupropion
- Modafinil
- Sertraline
- Xr naltrexone
- Announcement about trial with oxytocin and MI
 - Stauffer CS; Moschetto JM; McKernan SM; Hsiang E; Borsari B; JD Wolley. *Trials* [Electronic Resource]. 20(1):145, 2019 Feb 21