



**Pacific Southwest**

RURAL OPIOID TECHNICAL  
ASSISTANCE REGIONAL CENTER

# Healthy Living, Sustainable Recovery Fact Sheets Webinar

## *Part 2: The “Weight” of Recovery: Living in a Diet Culture*

Presented by: Annie Lindsay, PhD, FACSM

November 14, 2024



# The “Weight” of Recovery: Living in a Diet Culture

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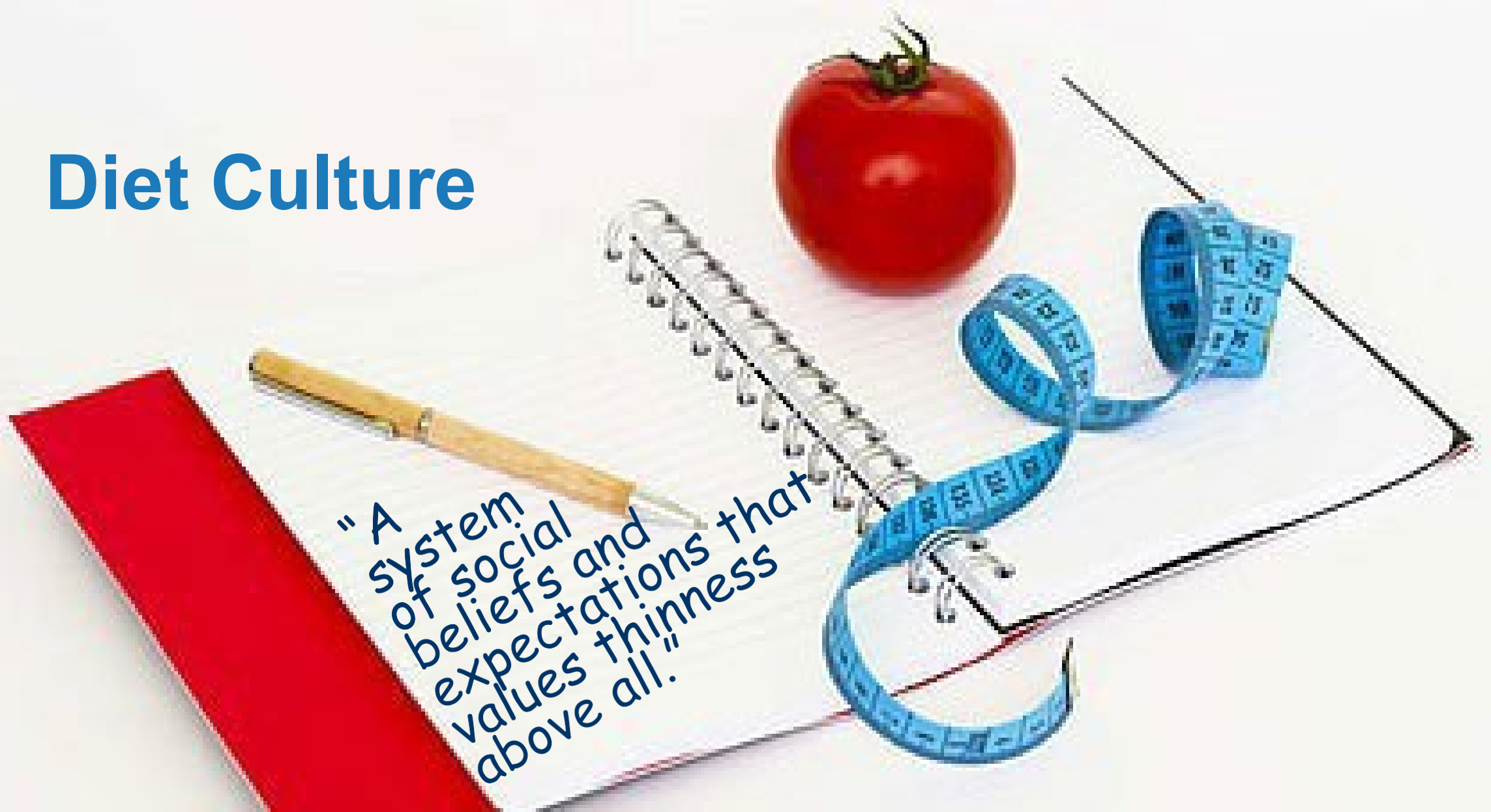
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# Diet Culture



" A system of social beliefs and expectations that values thinness above all."



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Emily Tauschek, RDN, CN, Equip Health

# Principles of Diet Culture

**Thin**

**Larger bodies**

**Dieting**

**=**

**Healthy**

**Unhealthy**

**Normal**



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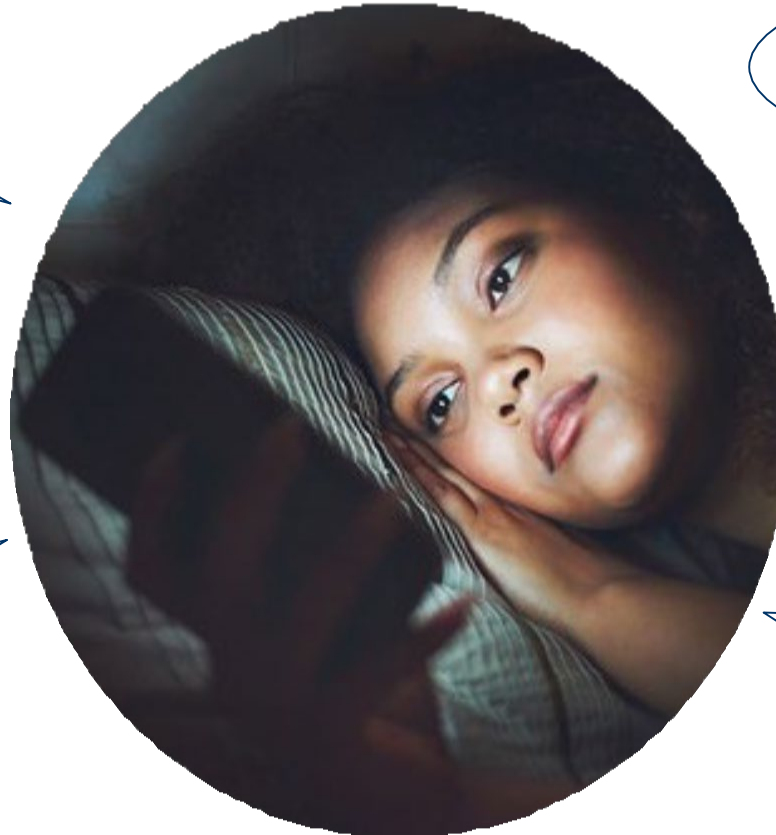
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# Living in a Diet Culture

**Self-deprecating language**

**Self-judgement**

**Social media**



**Compensatory thinking**

**Fad diets**

**Dangerous health practices**



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# Social & Human Capital

- ✓ Lower socioeconomic status
- ✓ Often unemployed, lower pay
- ✓ Less education
- ✓ Reproductive age complications
- ✓ Home care and family responsibilities
- ✓ Social and legal fears (loss of children)
- ✓ Lack of child support
- ✓ Childcare expensive
- ✓ Lack of family support
- ✓ Decreased self-efficacy
- ✓ Greater health consequences from SUD
- ✓ History of trauma



Ashley - UNR Extension ©

<https://www.youtube.com/watch?v=sXmLpmOnDfM>



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# Women & Substance Use

- Females *use different drugs* than males
- Females *respond differently* to drugs than males
- Females use drugs *for different reasons* than males
- Females *relapse for different reasons* than males



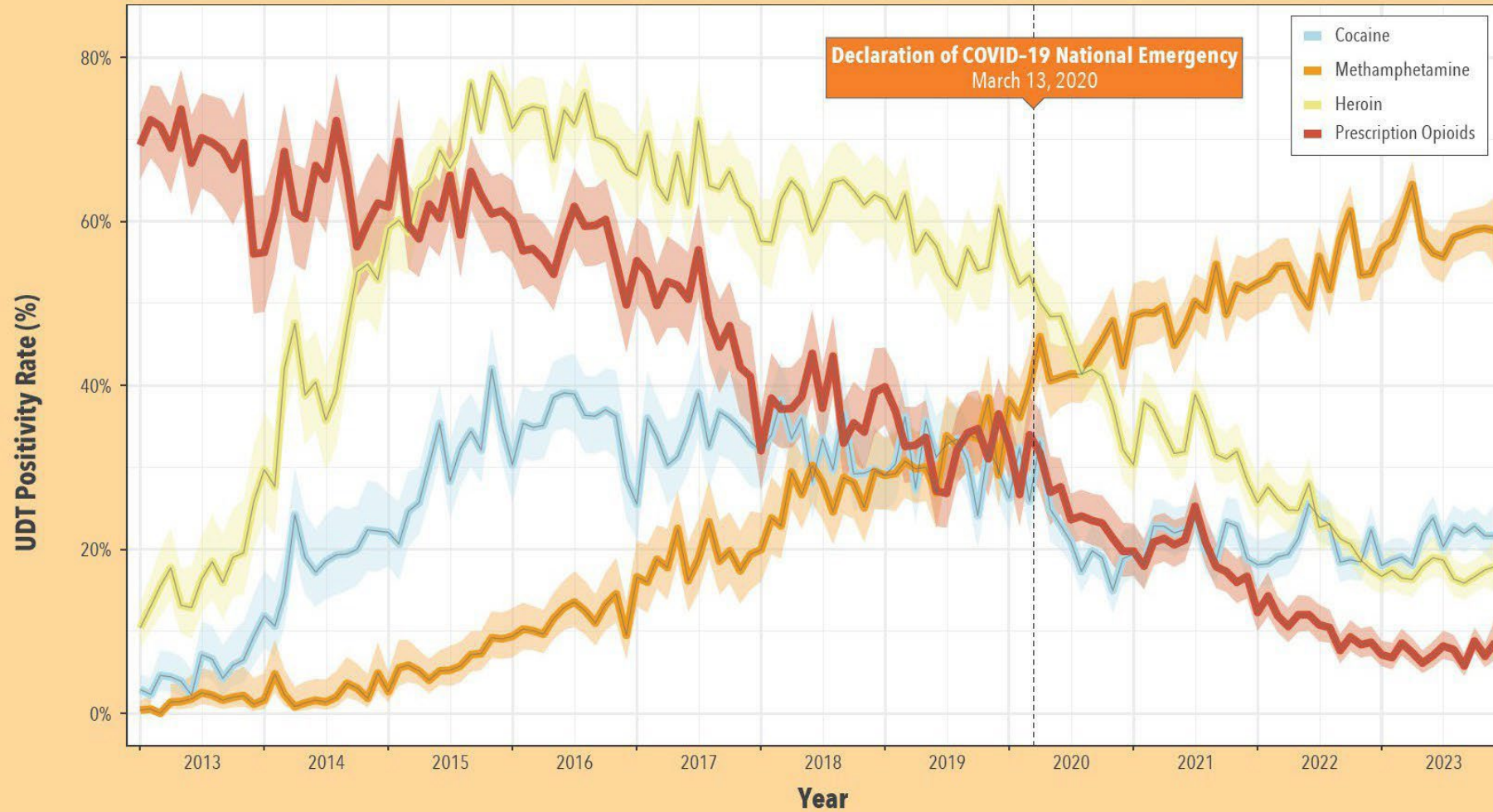
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National Institute of Drug Abuse



### Figure 2. National Co-Detection of Prescription Opioids, Heroin, Methamphetamine, and Cocaine in Fentanyl-Positive Specimens



Monthly UDT positivity rates and 95% confidence interval (CI) values for cocaine (light blue line), methamphetamine (orange line), heroin (yellow line), and prescription opioids (i.e., hydrocodone, hydromorphone, oxycodone and oxymorphone without a reported prescription, red line) in fentanyl-positive specimens collected from 2013-2023. Positivity rates were estimated using logistic regression (see Methods).

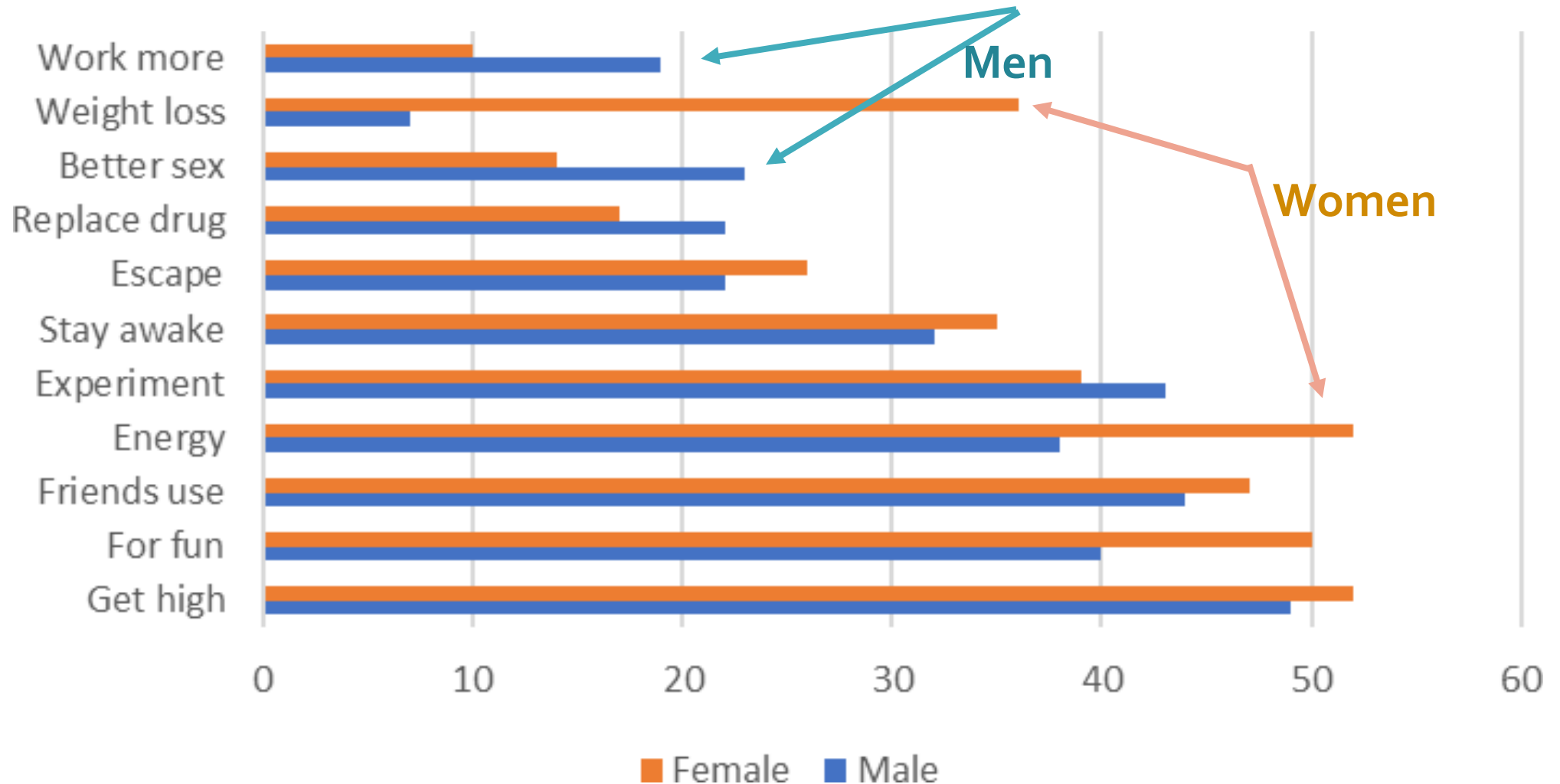


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Millennium Health, 2024

# Motivators for Methamphetamine Use



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Brecht, 2004

# Study: (2012)

## 297 Adult Women in Treatment for SUD in NV

### Weight-related concerns with substance use

Started using drugs (in part) to lose weight?	33%
Concerned about weight while in recovery?	71%
Concerned that gaining weight could trigger relapse?	45%

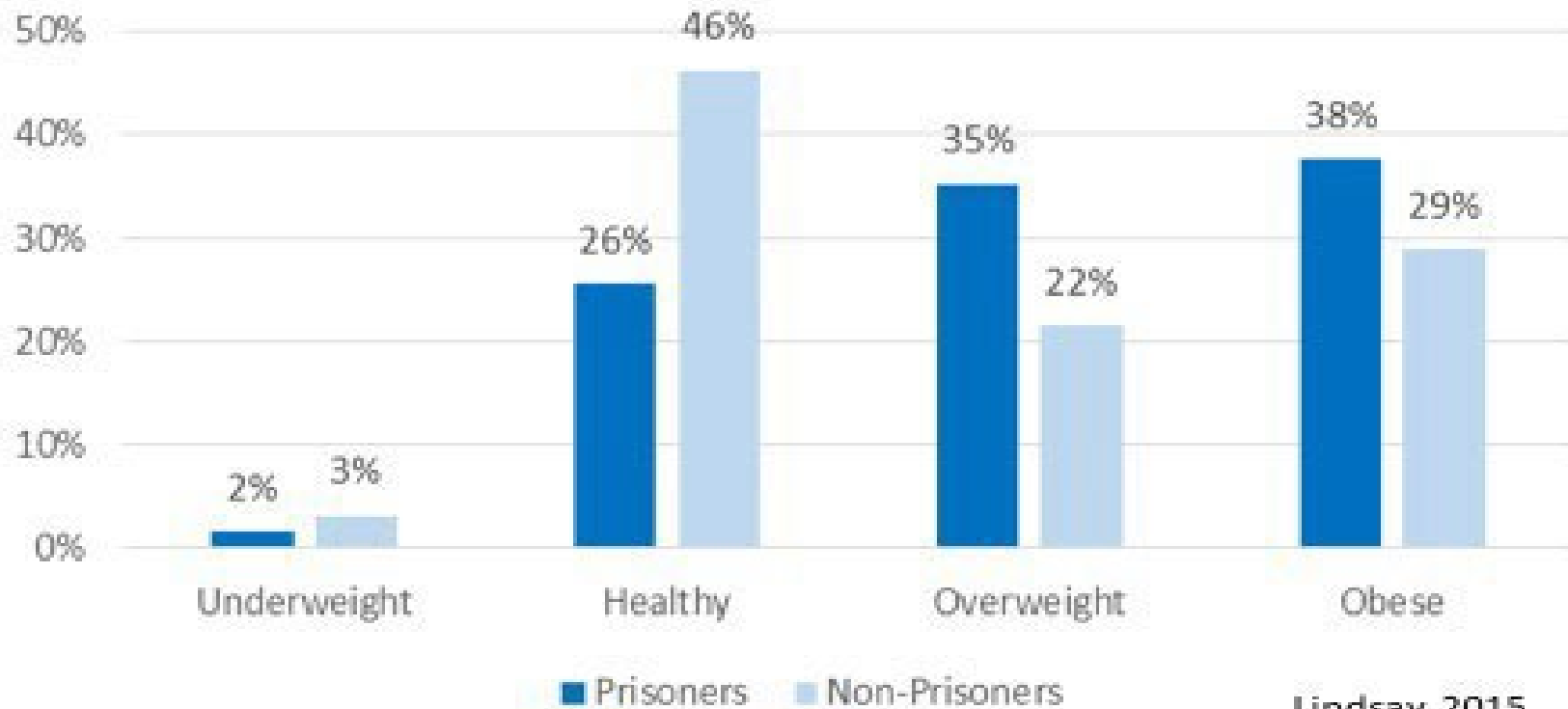


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Warren, Lindsay et al, 2012

## BMI Categories (CDC)



Lindsay, 2015

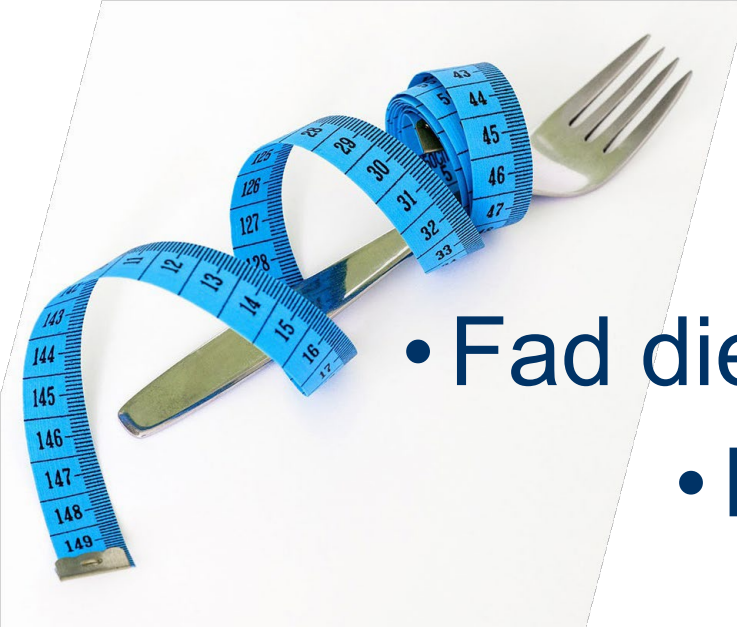
**Study: (2015)**  
**125**  
**Adult Women**  
**Nevada Prison**



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Lindsay, 2015



# Dieting is self-medication

- Fad diets, dieting products, dieting supplements
  - Restrictive eating, skipping meals, fasting
    - Orthorexia, “clean” eating, cleansing
- Energy products, energy drinks and caffeine

*These can alter metabolism and lead to further weight gain as well as mental health issues*



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## Methods Used for Weight Loss

### Prison Study / Tx Center

<i>Diet pills</i>	(36%)	<b>38%</b> (110)
<i>Smoking</i>	<b>(44%)</b>	<b>30%</b> (87)
<i>Starvation</i>	(30%)	<b>26%</b> (74)
<i>Energy drink</i>	<b>(49%)</b>	23% (66)
<i>Energy suppl</i>	<b>(42%)</b>	22% (65)
<i>Vomiting</i>	(14%)	14% (39)
<i>Laxatives</i>	(14%)	8% (23)
<i>Enema</i>	(5%)	4% (10)
[Methamphetamine 51%]		



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Warren et al, 2012

Lindsay, 2015

# Recognizing Dieting Symptoms

- Preoccupation with calcs carbs, fat (e.g., excessively counting/tracking)
- Skipping meals or fasting (for nonmedical/religious purposes)
- Restricting calories or consuming unusually small portions at meals
- Avoiding foods or entire groups of food
- Exercising to “burn off” or “earn” calories
- Using diet and energy drinks, supplements, other products regularly
- Initiating conversations about popular diets and dieting methods
- Weight cycling (gaining, losing, gaining, losing, etc.)
- Avoiding social activities involving food



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# Dangers of a Diet Culture

1. Dieters regain weight, higher than started
2. Fuel multi-billion-dollar industry (gets rich off people's failures)
3. Dieting leads to nutrient-deficiency, heart disease, poor health
4. Dieting leads to depression, anxiety, shame, guilt, mistrust, etc.
5. Dieters often develop eating disorders, disordered eating



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# Effective Communication (diet concerns)

Validate concerns, provide support, teach patience & healthy, sustainable options:

- Promote a *dynamic* energy balance model (e.g., diet quality, muscle mass, active lifestyle, less stress) rather than a *static* model simply based on calories in and calories out
- Promote variety and the importance of a balanced diet
- Encourage high-nutrient, high-fiber foods that help the body feel fuller longer
- Teach how to add healthy foods to their diet (whole grains, fruits and vegetables), instead of eliminating foods
- Educate what a *reasonable amount* is using MyPlate [myplate.gov](http://myplate.gov) and ensure adequate calories are consumed (especially for females ages 9+, not less than 1,600 calories/day)
- Encourage individuals to eat more regularly instead of skipping meals
- Promote joyful movement and moderate physical activity with the goal of overall health



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# Body Dissatisfaction

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Body dissatisfaction, defined as disliking one's physical appearance, is one of the strongest predictors of eating pathology and can precipitate **extreme measures** to decrease body weight

Parkes, et al., 2008; Stice & Shaw, 2003

# Body Image Disturbance

## Rampant in USA

- 30-90% report some body dissatisfaction
  - 5,868 women: 91% smaller ideal than current (Runfola et al., 2013)
  - Review 126 studies; adolescents 10-19 (San Martini et al., 2023)
    - Found weight dissatisfaction: 19.2-83.8% girls and 10.8-82.5% in boys



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Runfola et al., 2013; San Martini et al., 2023

# **Study: (2005 ) 290 Adult Women in a Nevada Prison**

**Body image disturbance and  
preoccupation with thinness were  
associated with a history of substance use**



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Olson, Lindsay, Golding, 2005

# Study: (2015)

## 125 Adult Women in a Nevada Prison (comparisons group n=94)

1. Increased body dissatisfaction
2. Showed significantly higher body shape preoccupation based on societal standards of attractiveness (desire and behavioral attempts to attain the thin-ideal)
3. Endorsed substantial concerns and negative beliefs and attitudes related to body image, eating pathologies, weight, dieting and drug use for the purpose of weight loss

Measure	Prisoners <sub>M (SD)</sub>	Non-prisoners <sub>M (SD)</sub>
SATAQ-3 INT-GEN	26.5 (7.08) (p<0.01)	25.74 (5.36)
BSQ	49.89 (23.38)**	42.76 (17.95)

\* Lower score indicates a more negative effect  
 \*\* Significant <0.001 (except where specified)



# What Causes Body Dissatisfaction

- **Media/Entertainment** - directly viewing and internalizing cultural messages from the internet, social media, screens, etc. about beauty
- **Social Pressure/Peers** - peer pressure from friends, coaches, co-workers, and other distant or close peers. including social media and school-based trends
- **Family** - the relationship an individual's parents/caregivers have with their own body, which can be learned through familial cultural pressures
- **Unique Factors** - an individual's response to current or past physical, sexual or emotional trauma



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# Recognize the Symptoms of Body Dissatisfaction

- Heightened focus on appearance, including body checking behavior such as looking in the mirror repeatedly
- Extreme, obsessive social media use and comparing oneself to idealized images or celebrities
- Frequent conversations regarding weight and body shape
- Avoidance of social situations involving food
- Wearing excessively loose-fitting clothing or clothing not appropriate for the weather (e.g., long sleeves or pants outside during summer months)



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# Effective communication (body image concerns)

- Focus on active listening and don't judge or disregard one's body image concerns
- Practice empathy and understanding, instead of being critical, shaming or guiltting
- Recognize when individuals “buy into” social media pressures and trends
- Practice conversations that challenge self-comparisons to others or idealized weight-related comments
- Help individuals:
  - Limit obsessive self-weighing, scale watching and mirror checking – embrace their natural shape
  - Identify other unique qualities, unrelated to their body, to build self-esteem
- Promote social media and digital wellness by helping individuals:
  - Be more mindful and intentional when using social media
  - Be their own social media filter (don't expect anyone to filter for them)
  - Set limits on time, people and activities as dictated by their own mental health
  - Protect their own interests
  - Follow positive influences and unfriend/unfollow those that pose further risk
- Promote positive family communication and self-talk with clients and their children



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# Body Neutrality

I  
**HATE**  
my body

I don't  
**THINK**  
**ABOUT**  
my body

I  
**LOVE**  
my body

The goal isn't to love your body every single day  
It's to be free of thinking of how it looks every single day



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# Eating Pathology



Serious, complex and potentially life-threatening mental illnesses characterized by disturbances in behaviors, thoughts and feelings towards body weight and shape, and/or food and eating; can result in serious medical, psychiatric and psychosocial consequences

*National Eating Disorders Collaboration*



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# Eating Disorders

**Anorexia Nervosa** - an intense fear of gaining weight or becoming “fat” accompanied by persistent and severe caloric restriction and other behaviors that inhibit weight gain (e.g., excessive movement, avoidance of activities surrounding food); typically accompanied by a distorted view in self-perceived weight or shape.

**Bulimia Nervosa** - recurrent episodes of binge eating, generally defined as eating a large amount of food in a short amount of time while feeling out of control or unable to stop; binge eating is followed by compensatory behaviors to prevent weight gain and “rid themselves of the calories,” such as self-induced vomiting; misuse of laxatives, diuretics or other medications; fasting; or excessive exercise.

**Avoidant Restrictive Food Intake Disorder (ARFID)**– a disturbance in eating habits, such as a lack of interest in eating, avoidance of food due to sensory characteristics, and concern around trying new foods; this coincides with significant weight loss or difficulty gaining expected weight, nutritional deficiencies, dependence on oral nutritional supplements or feeding tubes, or interference with mental well-being.

**Other Specified Feeding and Eating Disorder (OSFED) or Disordered Eating**– characteristics of an eating disorder that cause significant distress or impairment in important areas of life. The behaviors are similar or identical to those with an eating disorder, but do not meet the full criteria to be clinically diagnosed (e.g., weight is too high, or frequency and duration of behaviors is too low; night eating; etc.)



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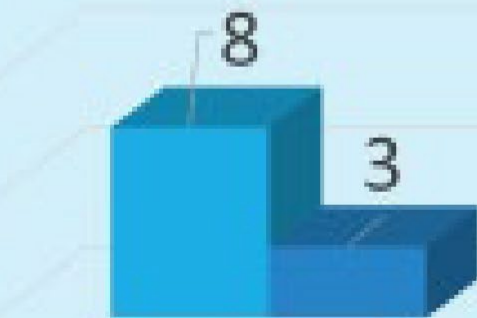
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DSM-V

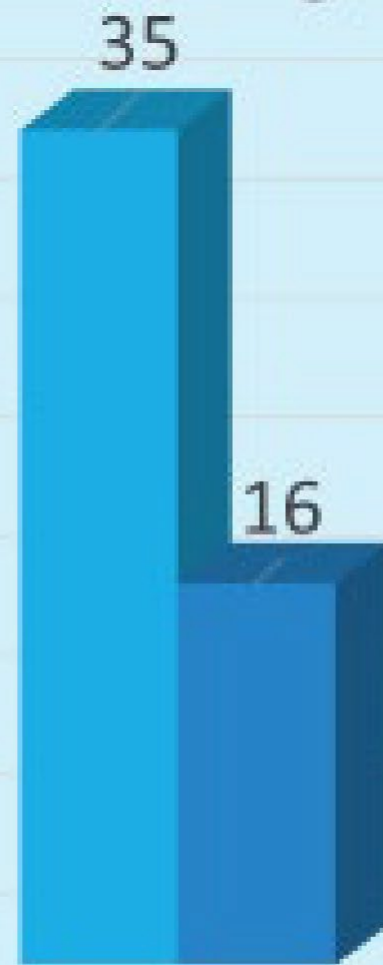
# Study: (2015) Nevada Women's Prison

## Self-Report Eating Pathology

87% prison population  
also had SU issues



Diagnosed Eating  
Disorder



Symptoms of  
Disordered Eating

Prisoners

Non-Prisoners



# Eating Pathology and SUD

- 50% of individuals with an eating disorder use alcohol or illicit drugs, compared to approximately 9% in the general population
- Up to 35% of alcohol or illicit drug users have an eating disorder, compared to up to 3 percent in the general population



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*National Center on Addiction and Substance Abuse (CASA) at Columbia University.  
(2003). Food for Thought: Substance Abuse and Eating Disorders. New York,  
National Center on Addiction and Substance Abuse*

# Diet, Food & Exercise

## Behavioral Parallel with Substance Use

- **A chronic eating disorder is an addiction to the body's production of endogenous opioids** and therefore is identical to the physiology and psychology of substance use (*aka the auto-addiction opioid theory*)
- **Food related reward** promotes escalation of intake AND triggers symptoms associated with withdrawal
- **Strenuous exercise and starvation** activate the dopamine reward pathway of the brain



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*Marrazzi and Luby, 1986; Huebner, 1993; Adan et al., 2014; Hone-Blanchet and Fecteau, 2014; Bergh and Sodersten, 1996; Casper, 1998*

# 125 Adult Women Offenders (comparison group n=94)

## Eating Attitudes Test

Measure	Study M (SD)	Comparison M (SD)
EAT-TOTAL	12.16 (14.52)**	6.34 (7.31)
EAT-CONTROL	2.27 (4.17)**	1.18 (1.31)
EAT-BN	2.03 (3.65)**	.91 (2.23)
EAT-DIET	7.68 (8.93)**	4.59 (5.32)

\* Lower scores indicate a more negative effect

\*\* Significant <0.001 unless otherwise specified

Lindsay, 2015

EAT Cutoff Score (>20) S=20% vs C=5%; p =.002



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Lindsay, 2015

# 125 Adult Women Offenders (comparison group n=94)

Intuitive  
Eating  
Scale

Binge  
Eating  
Scale

Measure	Study M (SD)	Comparison M (SD)
IES-2 PERMISSION*	3.038 (1.48)**	3.3547 (.682)
IES-2 HUNGER/SATIETY*	3.07 (1.51)**	3.5837 (.642)
BES	13.95 (11.07)**	9.41 (7.50)

\* Lower scores indicate a more negative effect

\*\* Significant <0.001 unless otherwise specified

Lindsay, 2015

Binge eaters (>17)

S=39% vs C=16%;  $p<.001$

Severe binge eaters (>26)

S=16% vs C=5%;  $p<.001$



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Lindsay, 2015



# Recognize the Symptoms

- Compensatory behaviors that counteract effects of eating (e.g., purging, fasting, overexercising, misuse of laxatives, dieting, skipping meals, etc.)
- Notable undereating or overeating
- Cutting out certain foods for non-medical reasons
- Eating in the middle of the night
- Repeated talk @
  - Fad diets, diet pills, OTC supplements
  - Fixation on healthy eating, cleanses or use of phrases such as “clean”eating (aka: Orthorexia)
  - Forbidden foods or rigid rules around eating
- Heightened focus on appearance, mirror checking, constant scale watching
- Persistent use of social media, comparing oneself
- Extreme weight loss, cycles of gaining and losing weight



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# Effective communication (eating pathology)

- Validating weight concerns (without promoting weight loss or encouraging weight related outcomes)
- Practicing empathy, understanding and positive language
- Minimizing triggering language
  - Cutting calories/grams of sugar / fat
  - Describing foods and habits as “bad, ”good, ”or “clean”
  - Using terms such as “portion sizes” or “portion control” (e.g., say “reasonable amounts”)
  - Conversations related to fad diets or weight talk “forbidden” foods from the diet
- Discouraging frequent weighing (e.g., less than once a week)
- Discouraging restrictive eating, removing “forbidden” foods from the diet
- Promoting the value of adding healthy foods to the diet
- Focusing on balanced meals, variety and the nutrient value of food
- Promoting mindful eating and helping participants relearn internal hunger / fullness cues
- Helping individuals create boundaries and develop healthy relationships w/ food, PA, body and weight



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# Tools to help with identification and referral

- BASE 10 (Brief Assessment of Stress and Eating, Forbush) a 10-question self-assessment screening tool
- EAT-26 ([eat-26.com](http://eat-26.com)) a lengthier 26-question screening tool
- Eating Disorder Examination Questionnaire (EDE-Q) 28-item tool

The National Eating Disorder Association also provides helpful tools and educational information for practitioners

<https://www.nationaleatingdisorders.org>



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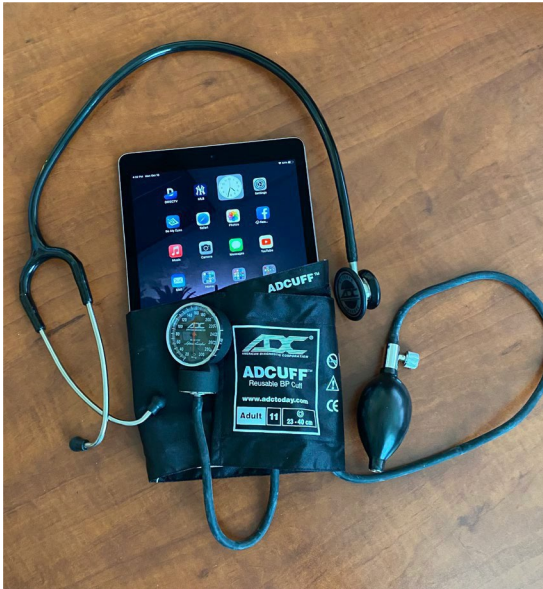
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Ditch the Label ©; Used w/Permission  
<https://youtu.be/0EFHbruKEmw>

# Digital Wellness

*Be careful what you see*  
*Be careful where you go*



- ✓ Be your own filter (algorithm)
- ✓ Be mindful & be intentional
- ✓ Minimize social loitering & set time limits
- ✓ Follow positivity
- ✓ Unfriend/unfollow negativity
- ✓ Know your privacy options
- ✓ Know and check your preferences
- ✓ Report dangerous content (via the app and by telling an adult) and don't interact at all

*Remember the digital footprint!*



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# *Healthy Steps to Freedom (HSF)*

a gender-responsive health and nutrition education program designed to improve physical activity and nutrition-related behaviors, psychosocial factors and associations between weight concerns and drug reoccurrence for women in recovery

- 10-week (90 min x 1/wk)



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Lindsay, Warren, Velasquez, 2012;  
Lindsay et al, UNR Extension 2009, 2024

**Methods:** HSF was implemented (2014-2022) in minimum- and maximum-security prison(s), inpatient, and outpatient treatment centers serving women with substance use

***Paired t-test, pre- and post- intervention***

- *The Eating Attitudes Test (EAT-26)*
- *Intuitive Eating Scales (IES2)*
- *Binge Eating Scale (BES)*
- *Body Shape Questionnaire (BSQ)*
- *Social Attitudes Towards Appearance Scale (SATAQ3)*
- *International Physical Activity Questionnaire (IPAQ)*
- *12-item health behavior and thoughts survey (HBT)*
- *Concerns related to weight gain and triggers*



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Lindsay, Warren, Heleman, 2024;  
Preliminary Results



# Results (Prelim):

Women ( $n = 1,986$ )

participated in HSF  
all history of substance use

- $\mu$  age = 35 ( $\pm 9$ )
- 78% Non-Hispanic
- 77.5% White
- 5% Pregnant
- 77% Children under 18 (range 1-15;  $\mu = 2.11$  children)
- 24% Less than HS education, 54% HS diploma or GED
- 72% Reported use of stimulants
- $\mu$  body fat = 30.6% (BMI = 28.9)



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Lindsay, Warren, Heleman, 2024;  
Preliminary Results

# Results (Prelim):

Participants completing the program  
 $n = 1,149$  (58% completion rate)

- Treatment center participants (60%)  
 $n = 607$  (50.4% completion rate)
- Prison participants (40%)  
 $n = 542$  (69.3% completion rate)





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Lindsay, Warren, Heleman, 2024;  
Preliminary Results

## Results (Prelim): After the program:

- Eating attitudes (EAT-26) ( $t=4.623$ ,  $p < .001$ ,  $d=.157$ )
- Intuitive eating (IES2) ( $t=-7.265$ ,  $p < .001$ ,  $d=-.241$ )
- Binge eating behavior (BES) ( $t=3.821$ ,  $p < .001$ ,  $d=.128$ )
- **Body shape concerns (BSQ) ( $t=-12.566$ ,  $p < .001$ ,  $d=.396$ )**
- **Social attitudes towards appearance (SATAQ3) ( $t=8.150$ ,  $p < .001$ ,  $d=.268$ )**
- **Comfortable Weight ( $t=-10.671$ ,  $p < .001$ ,  $d=-.326$ ) / 4.4 pounds**
- Nutrition behaviors (HBT) ( $t=-23.580$ ,  $p < .001$ ,  $d=-.762$ )
- PA MET minutes (IPAQ) ( $t=-8.345$ ,  $p < .001$ ,  $d=.280$ )
- Sitting time ( $t=4.204$ ,  $p < .001$ ,  $d=.144$ ) / .66 hrs

***Participants also indicated significantly less concern that weight gain could be a trigger for “relapse” ( $t=-4.301$ ,  $p < .001$ ,  $d=.129$ )***

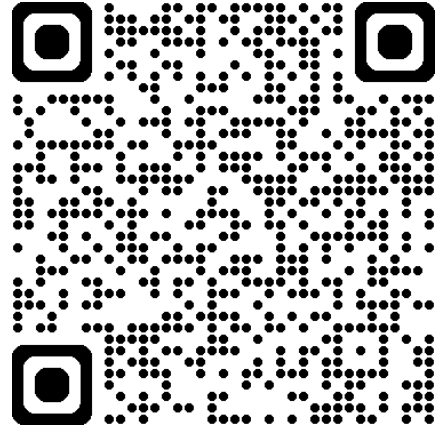


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Lindsay, Warren, Heleman, 2024;  
Preliminary Results

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