

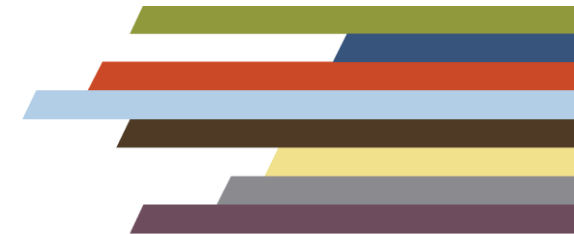
# Women and Stimulant Use

## Healthy Steps to Freedom

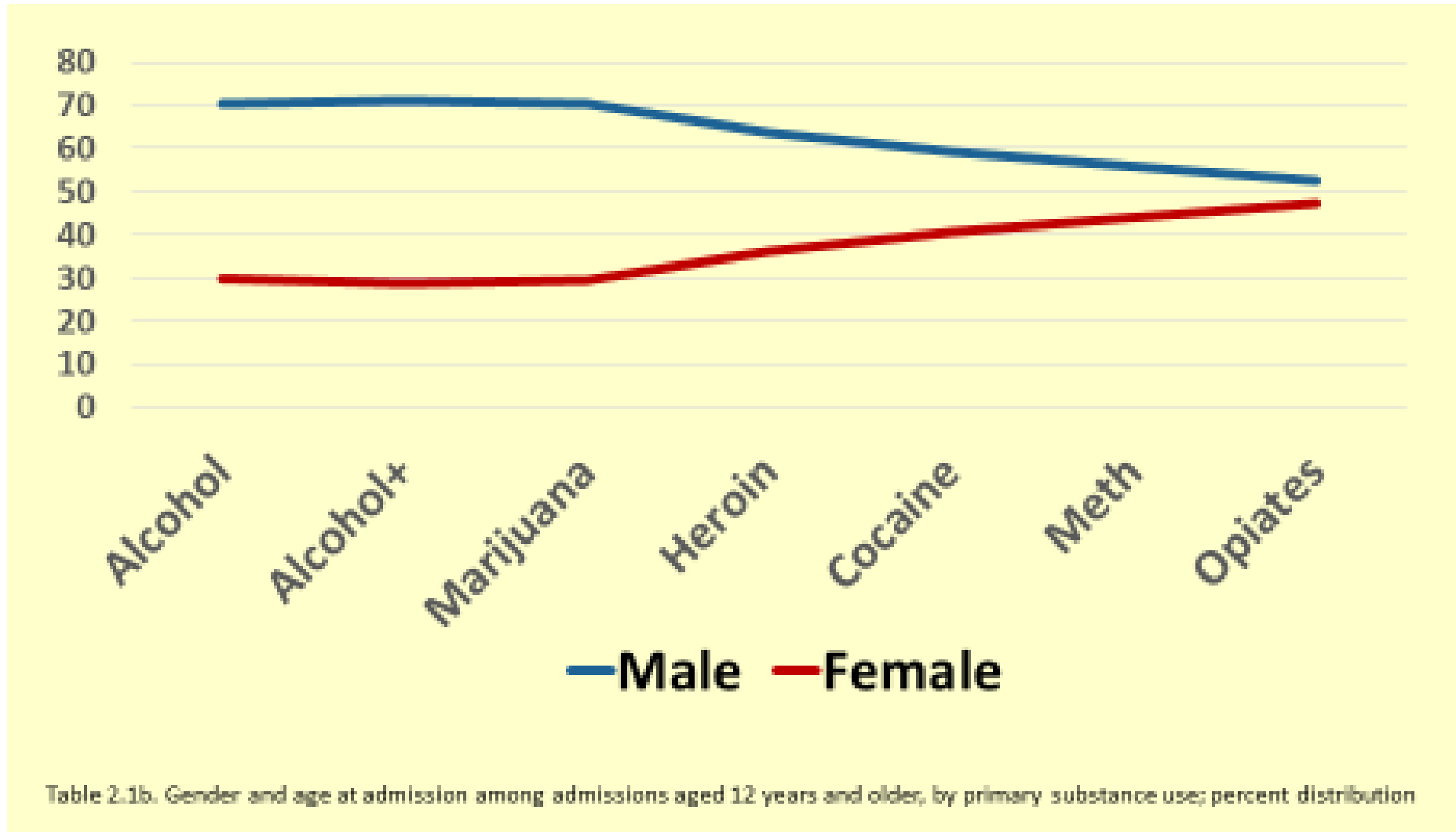
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University of Nevada, Reno

University Nevada Cooperative Extension



# TEDS 2017 Primary Substance by Gender



# Opioids Overdose Deaths by Gender (**Females**)

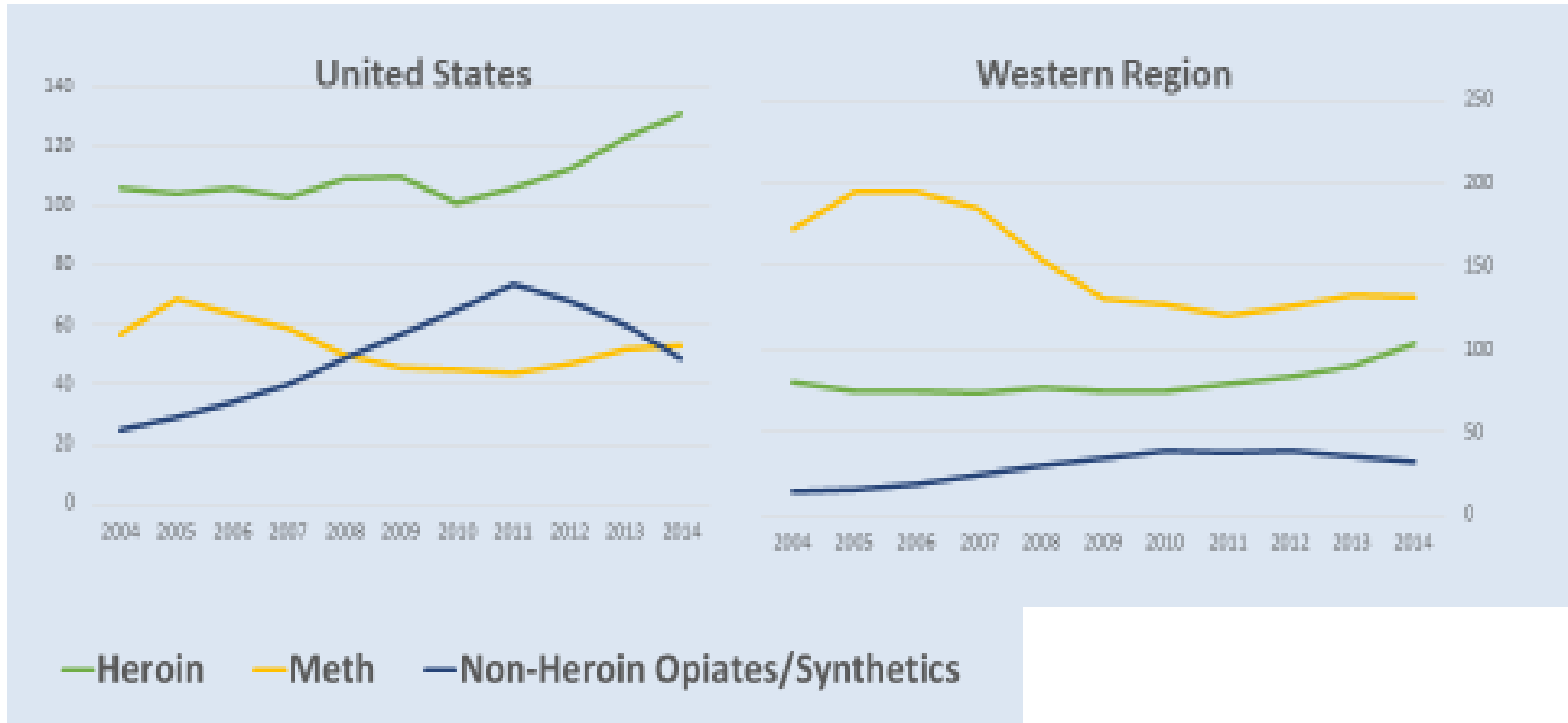
Location	Male	Female
United States	65%	35%
Idaho	53%	47%
Kansas	51%	49%
Nevada	54%	46%
Oklahoma	53%	47%
Wyoming	48%	52%

# Opioids Overdose Deaths *Young* Women

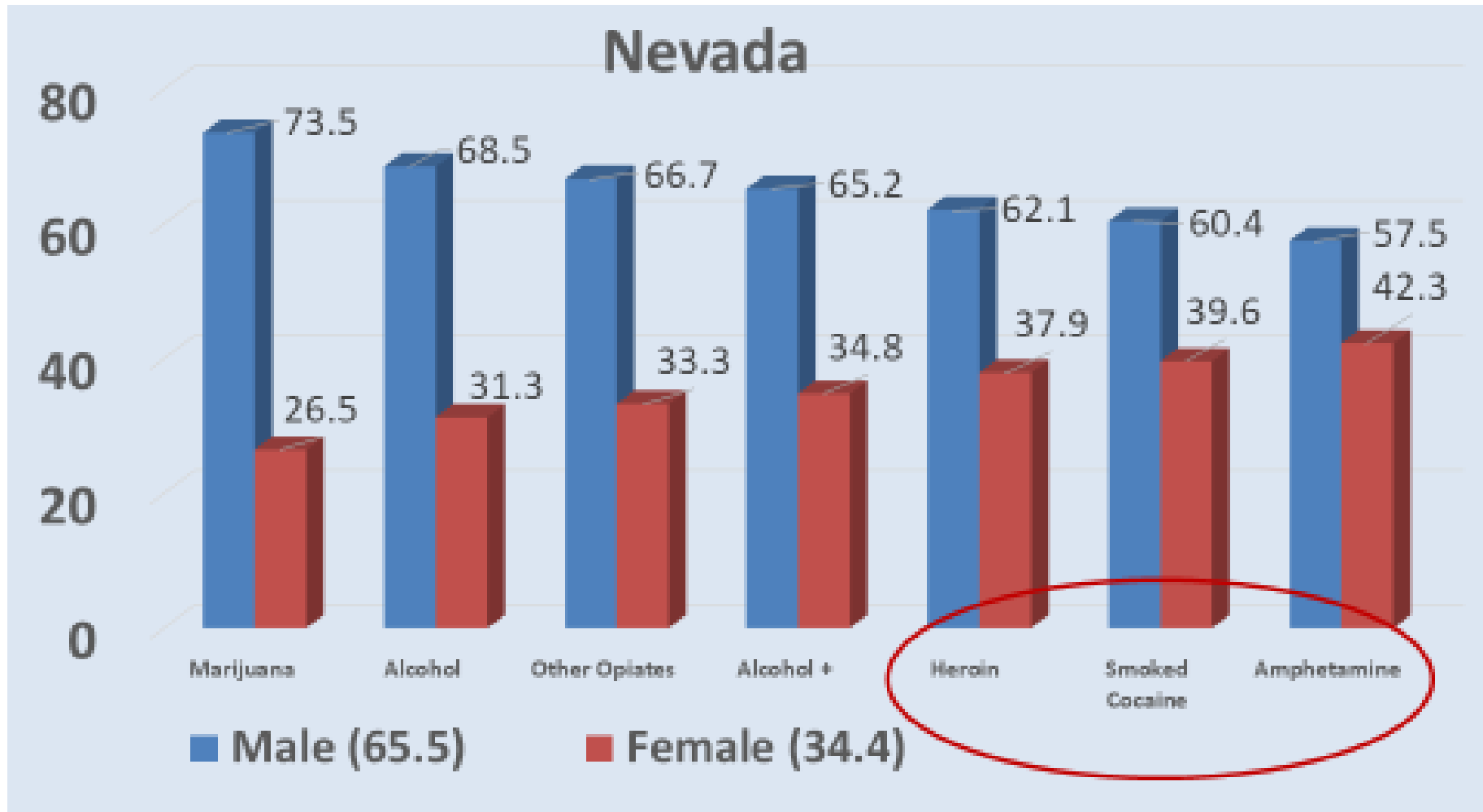
Location	0 – 24	25 – 34	35 – 44	45 – 54	55+
United States	10%	26%	23%	23%	19%

- Highest in **15-44 year old** women in the south.
- The highest rate of opioid-related emergency room visits was among those aged **25-44 years**.

# State Admissions to Substance Abuse Treatment Services TEDS 2004-2014



# State Admissions to Substance Abuse Treatment Services (2018)



# Sex & Gender Difference

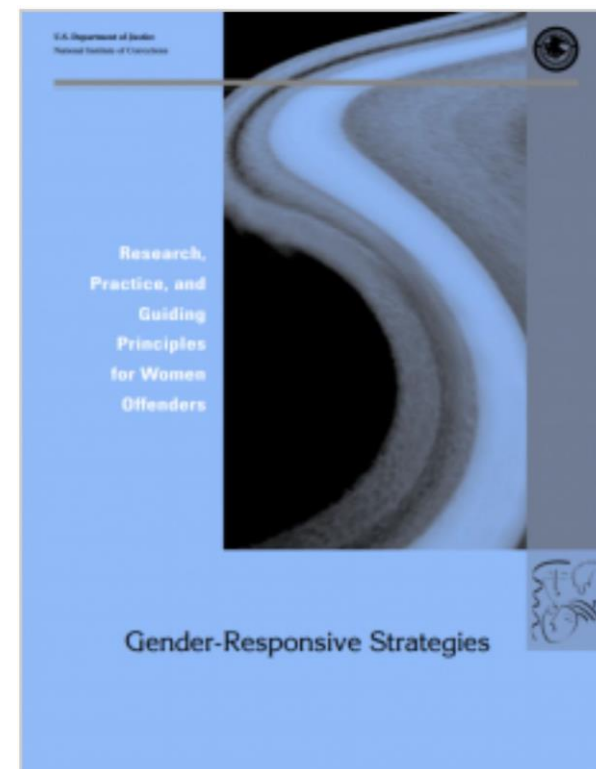
- **Sex Difference:** based on biological factors, such as sex chromosomes and hormones
  - Women have a harder time quitting smoking than men do. Women metabolize nicotine, the active ingredient in tobacco, faster than men. Differences in metabolism may help explain why nicotine replacement therapies, like patches and gum, work better in men than in women. Men appear to be more sensitive to nicotine's pharmacologic effects related to substance use disorder.
- **Gender Difference:** based on culturally defined roles
  - Although men are more sensitive than women to nicotine's addiction-related effects, women may be more susceptible than men to non-nicotine factors, such as the sensory and social stimuli associated with smoking (e.g. greater sensitivity to visual and olfactory cues as triggers and greater concern about weight gain while quitting).
  - **Sources:** ORWH, 2015; NIDA, 2002

# Gender-Responsive

Considers gender norms, roles and inequalities and takes measures to address them – **WHO**

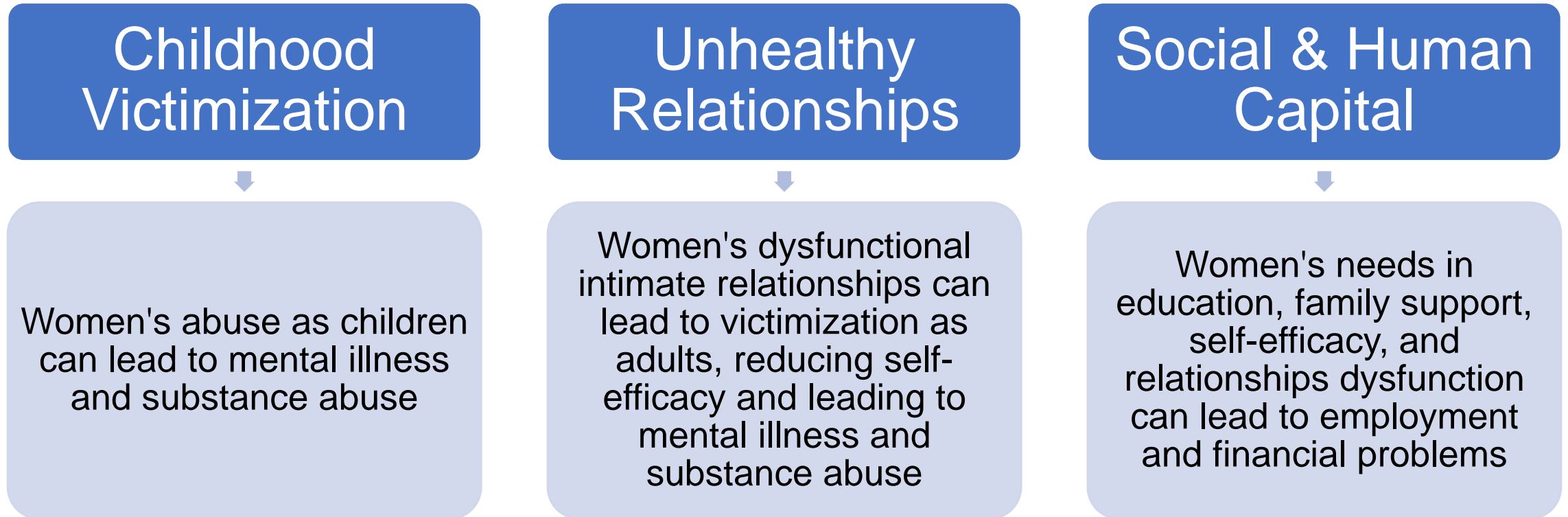
“Gender-responsive means creating an environment . . . that reflects an understanding of the realities of women’s lives and addresses the issues of the women.” Gender-responsive *practice* can improve outcomes for women offenders by considering their **histories, behaviors, and life circumstances.**

*Bloom, Owen & Covington, 2003*





# Women's Pathway to System Involvement



Can lead to crime and imprisonment.

## Co-Occurring Disorders Women are More Likely to Suffer From

- **Major depression:** nearly **twice as likely** to suffer from major depression as men (OWH, 2009)
- **Anxiety:** rates of anxiety are **two to three times higher** in women than men. (OWH, 2009)
- **PTSD:** women are **two to three times more likely to** have PTSD than men (Kesler et al., 2005)
- **Eating disorders:** women suffer from **BN 10:1** compared to men, and **ED 4:1** (NEDA)

# Women & SUDs

- Women and men use drugs for different reasons
- Women respond to drugs differently (SUD's can manifest differently in women than in men)

## Women are more likely to:

- **Experience pain**, including chronic pain (more likely to report);
- **Self-medicate** (physical, stress, anxiety)
- **Experience cravings**
- **Relapse**

# Gender Differences in Impacts of *Rx Opioid and Heroin Use*<sup>CDC</sup>

- Women are more likely to experience chronic pain and use Rx opioid pain medications for **longer periods and in higher doses** Back et al (2011), SAMHSA, N-SSATS (2014)
- Women use **smaller amounts for a shorter period of time before become dependent** Back et al (2011), SAMHSA, N-SSATS (2014)
- **Substance use develops into addiction more quickly** in women than in men

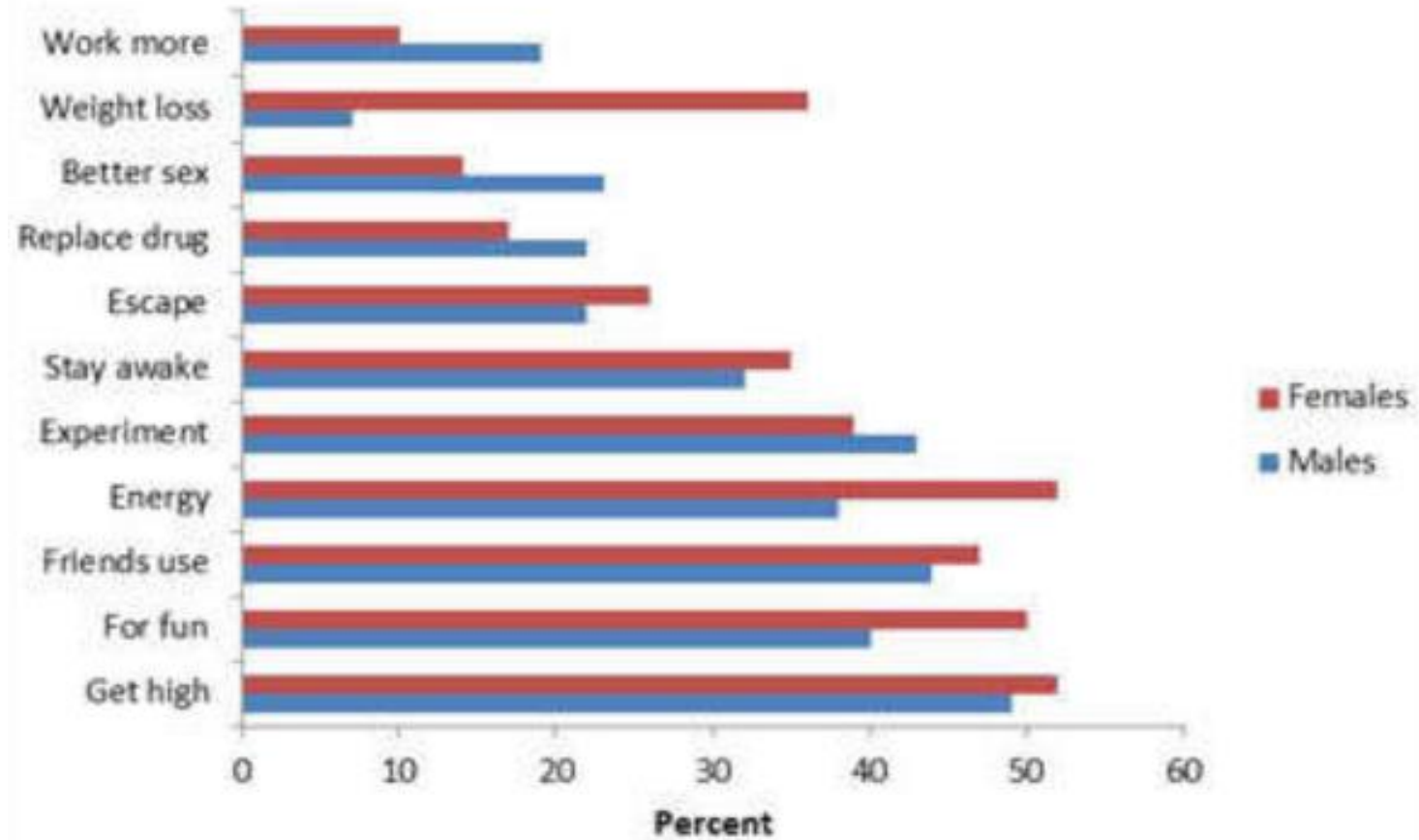
## Women are more likely to:

- **Be prescribed opioids/medications:**
  - highest rate in reproductive age 18-44
  - ¼ privately insured women and 1/3 female Medicaid (CDC 2008-12 filled an opioid Rx)
  - middle class white women are more likely to be prescribed opioids than other races (physician bias that “assumes less risk”)
- **Engage in “doctor shopping”** (obtaining prescriptions from multiple prescribers)

# Stimulants

- Methamphetamine
- Cocaine
- Ecstasy
- Nicotine
- Prescription for ADD/ADHD or narcolepsy
  - Concerta ® (methylphenidate)
  - Ritalin ® (methylphenidate)
  - **Adderall** ® (amphetamine/dextroamphetamine)

# What Women Want! Motivators for Methamphetamine Use



Source: Brecht et al., 2004



# Methamphetamine & Women

- Linked to high rates of co-occurring **depression** in women
- Tend to begin **using methamphetamine at an earlier age** than do men, with female users typically **more dependent** on methamphetamine compared to male users.
- **Less likely to switch** to another drug when they lack access to methamphetamine
- **More receptive treatment** than men (methamphetamine & other substances)

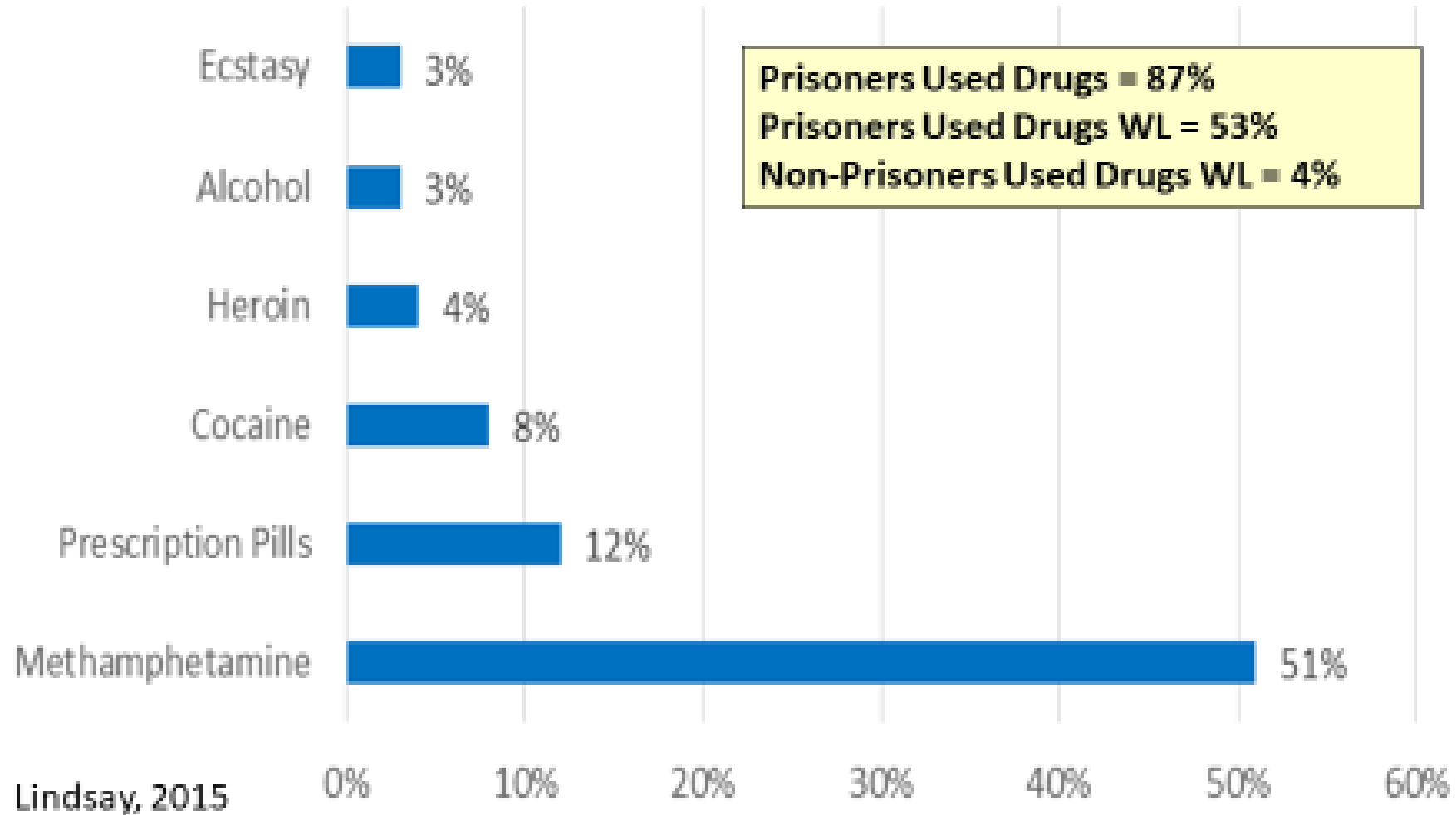
# Cocaine & Women

- In animal studies, females are **quicker to start taking cocaine—and take it in larger amounts**—than males
- **More vulnerable to the reinforcing (rewarding) effects of stimulants** (estrogen increases sensitivity)
- **More sensitive than men to cocaine's effects on the heart and blood vessels**
- Female cocaine users are also less likely than male users to exhibit **abnormalities of blood flow in the brain's frontal regions** (sex-related mechanism may be protective factor)

# Adderall

- Used to treat ADHD
- Schedule II Drug
- High potential for abuse
- High potential for dependence
- Should be consumed only with a Rx

# All Substances Reported by Prisoners Used for Weight Loss



# Gender-Responsive Strategies

Research shows that gender-responsive assessment and treatment are **more effective at preventing recidivism and other crime-related outcomes** than those that are “gender-neutral.”

Gobeil, Blanchette, & Stewart, 2016; Salisbury et al., 2016

# Treatment Barriers

- Social or legal fears
- Child Care
- Work
- Home care and other family responsibilities
- Energy concerns
- Weight concerns
- Body dissatisfaction

# Treatment Issues

- Weight Concerns & Body Composition
- Body Dissatisfaction & Thin-Internalization
- Eating Pathology
- Dieting & Metabolism
- Nutrition
- Physical Activity
- Cognitive Distortions

# Weight Concerns

Perception of fat and weight based on societal influences; and the impact of body composition on use and relapse



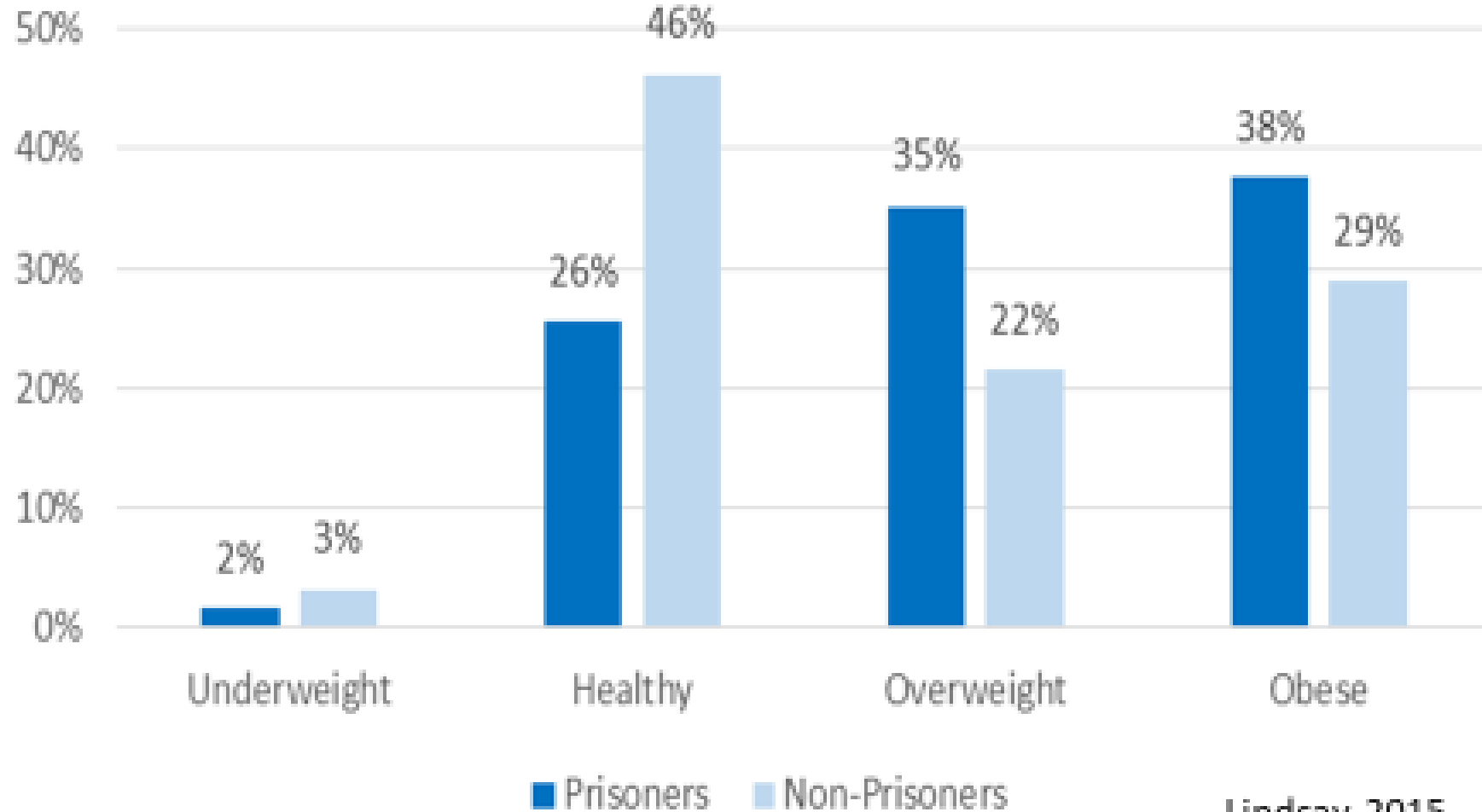
## Weight Concerns (Cont.)

- A primary reason women use legal and illegal drugs (especially stimulants)  
(Joe 1995, 1996; Brecht, O'Brien et al. 2004; Parkes et al. 2008; Greenfield, Back et al. 2010).
- Individuals newly abstinent from stimulants tend to gain *significant* weight  
(Henry, Minassian et al. 2012).
- Weight is core issue for women in treatment to prevent relapse

## *Weight-Related Concerns Related to Drug Use*

<b>Concern</b>	<b>Prevalence</b>
Concerned about weight while in recovery?	71%
Concerned that gaining weight could trigger relapse?	45%
Concerned about using to lose weight after treatment?	30%
Started using drugs (in part) to lose weight?	33%
Continued using drugs (in part) to lose weight?	33%

# BMI Categories (CDC)



Lindsay, 2015

# Body Dissatisfaction

The influence of media, culture, family and peers on women's body image and self-esteem; and its relationship to substance abuse

# **Body Image Disturbances**

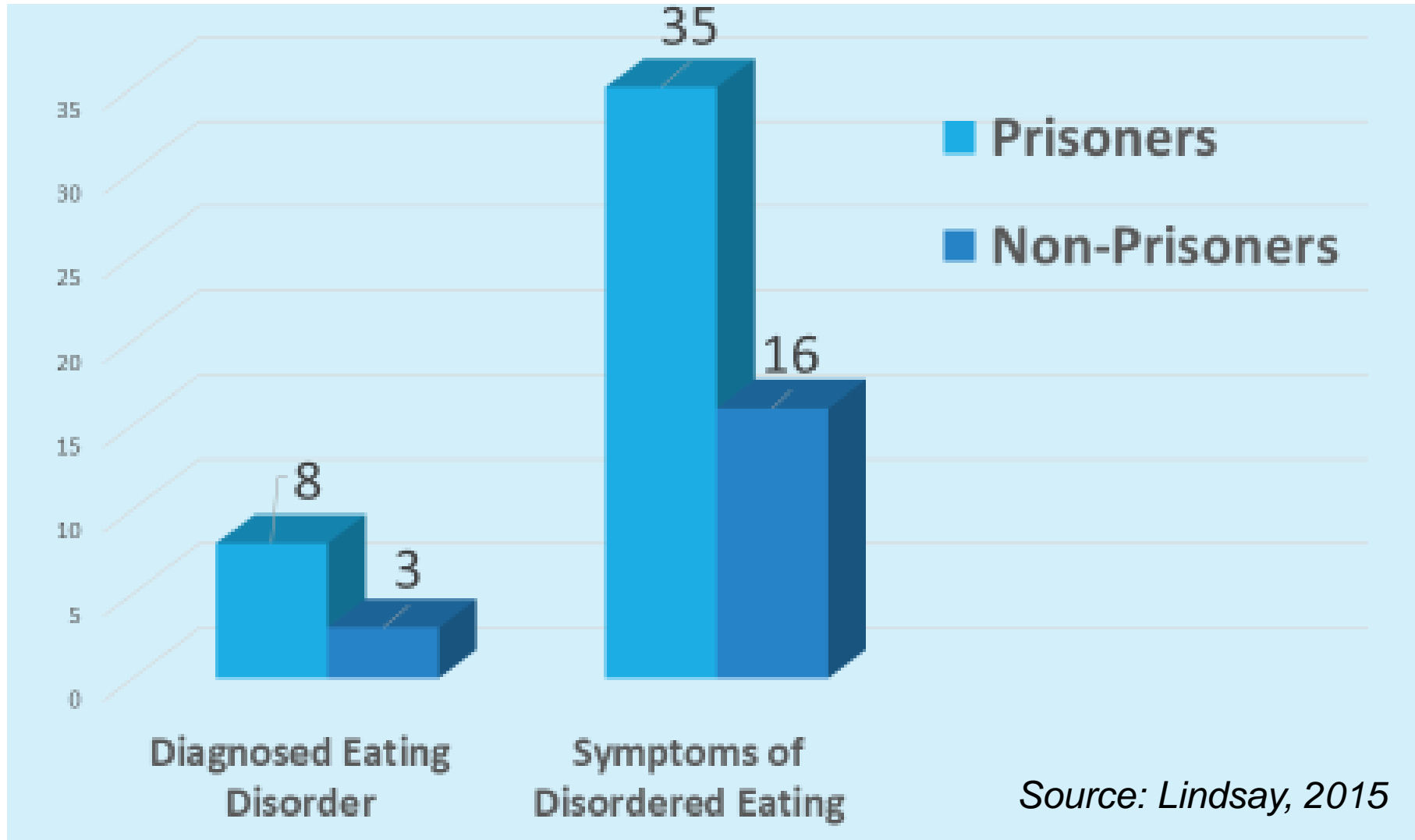
*(Disliking one's physical appearance)*

- One of the strongest predictors of eating pathology & leads to extreme measures to decrease body weight  
(Stice and Shaw 2003; Parkes, Saewyc et al. 2008).
- Often associated with low self-esteem, depressive symptoms and increased anxiety  
(Paxton, Neumark-Sztainer et al. 2006)

# Eating Pathology

Disordered eating behaviors and other co-occurring disorders; risk factors associated with these issues; and the role they play in recovery

# Self-Reporting Eating Pathology



# Eating Pathology

## *Co-morbidity with Substance Abuse*

- Often develop/resurface during recovery (remission during drug use)
- Food consumption relies on intuitive satiety cues (which become impaired following substance abuse cessation)
- Results in overeating, binge eating, compensatory behaviors and eating disturbances
  - *Unhealthy dieting* (e.g. laxative, vomiting, extreme food restriction)
  - *Eating practices* (e.g. binge eating)
  - *Full-blown eating disorders* (e.g. BN, AN, BED, etc.)  
(Jacobi, Wittchen et al. 2004; Hudson, Hiripi et al. 2007; Hilbert 2012)



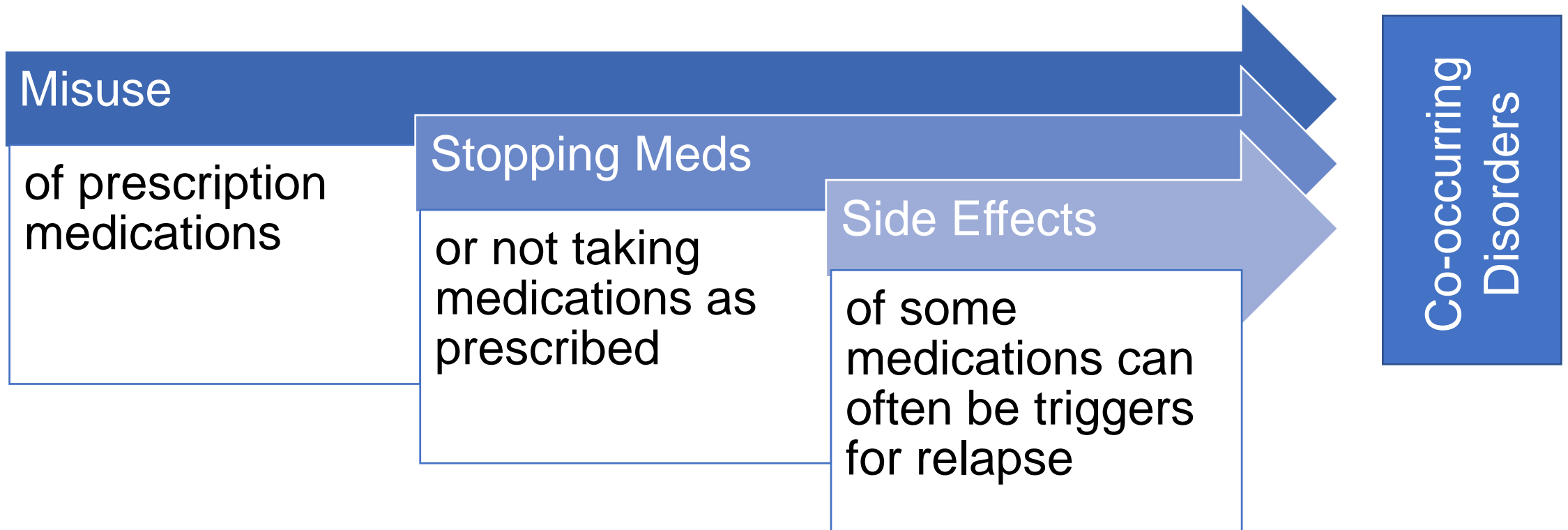
# Compensatory Behaviors

- Attempting to GET RID of the calories . . .
  - Excessive exercise
  - Purging (making yourself throw up)
  - Misusing Laxative
  - Starvation
  - Diet Pills
  - Drug use/misuse

# Alternate Behaviors to Fill Drug Void



# How Medication Can Lead to Co-occurring Disorders



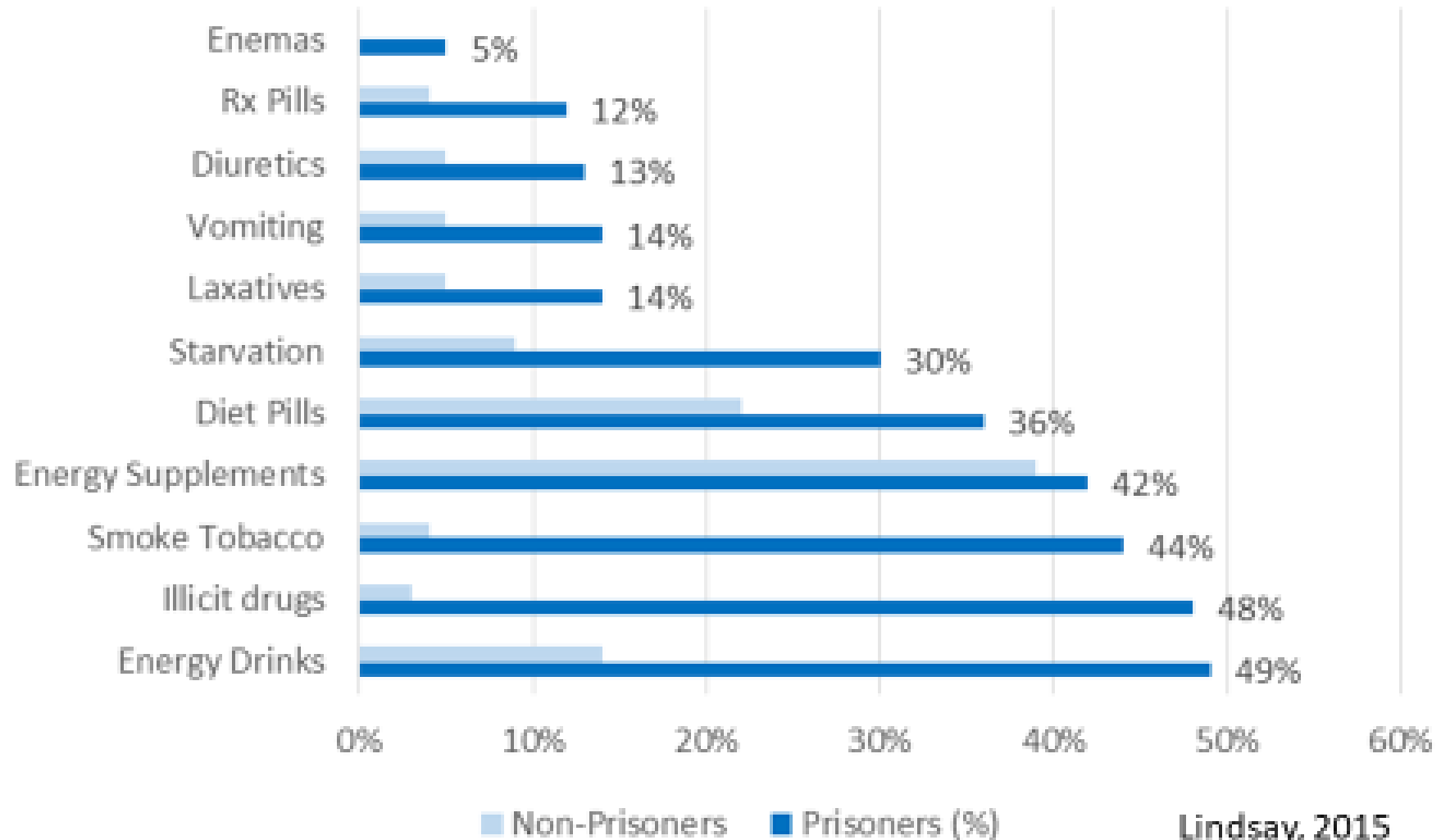
# Dieting & Metabolism

Dangerous dieting and supplement practices;  
and healthy alternatives to achieve energy  
balance and improve impaired metabolism

## Dieting & Supplements

Dietary restriction, energy & dietary supplements, tobacco, and anorexic & bulimic practices often are a “self treatment of-choice” and a gateway to/back to methamphetamine or other illicit substances

# Methods of Weight Loss Used Sometimes, Often, Very Often

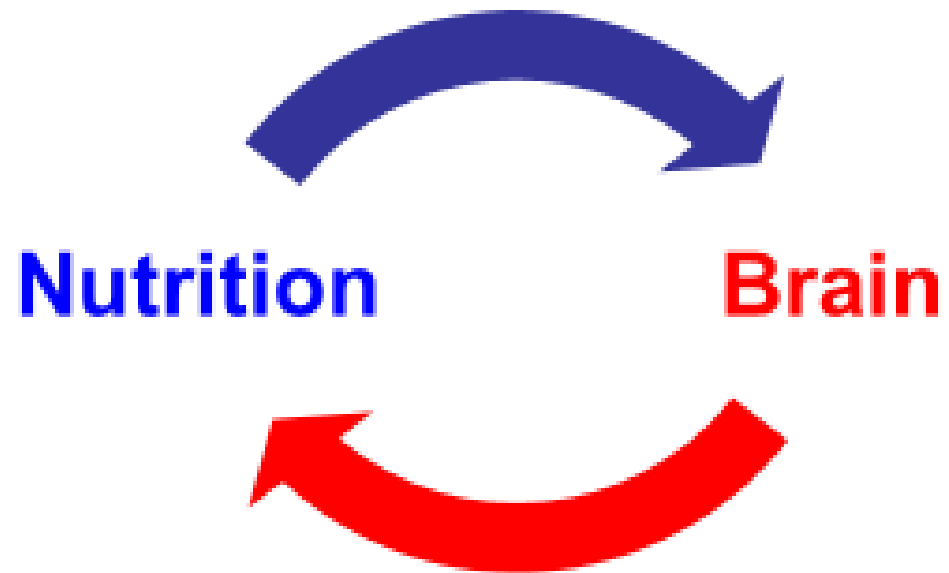


# Nutrition

The basic nutrients our bodies need; deficiencies while using drugs and during treatment; and the role of a healthy diet for successful recovery

# The Nutrition Paradox

- Poor nutrition negatively impacts psychological health and addiction.



- Poor psychological health and addiction negatively impacts nutrition.



## Poor Psychological Health and Addiction Negatively Impacts Nutrition

Substance use disorders, in many cases, can lead to malnutrition, metabolic disorders that compromise nutrition (Nabipour et al., 2014), altered body composition (Tang et al., 2010) and poor mental health (Tolliver and Anton, 2015).

## Poor Nutrition Negatively Impacts Psychological Health and Addiction

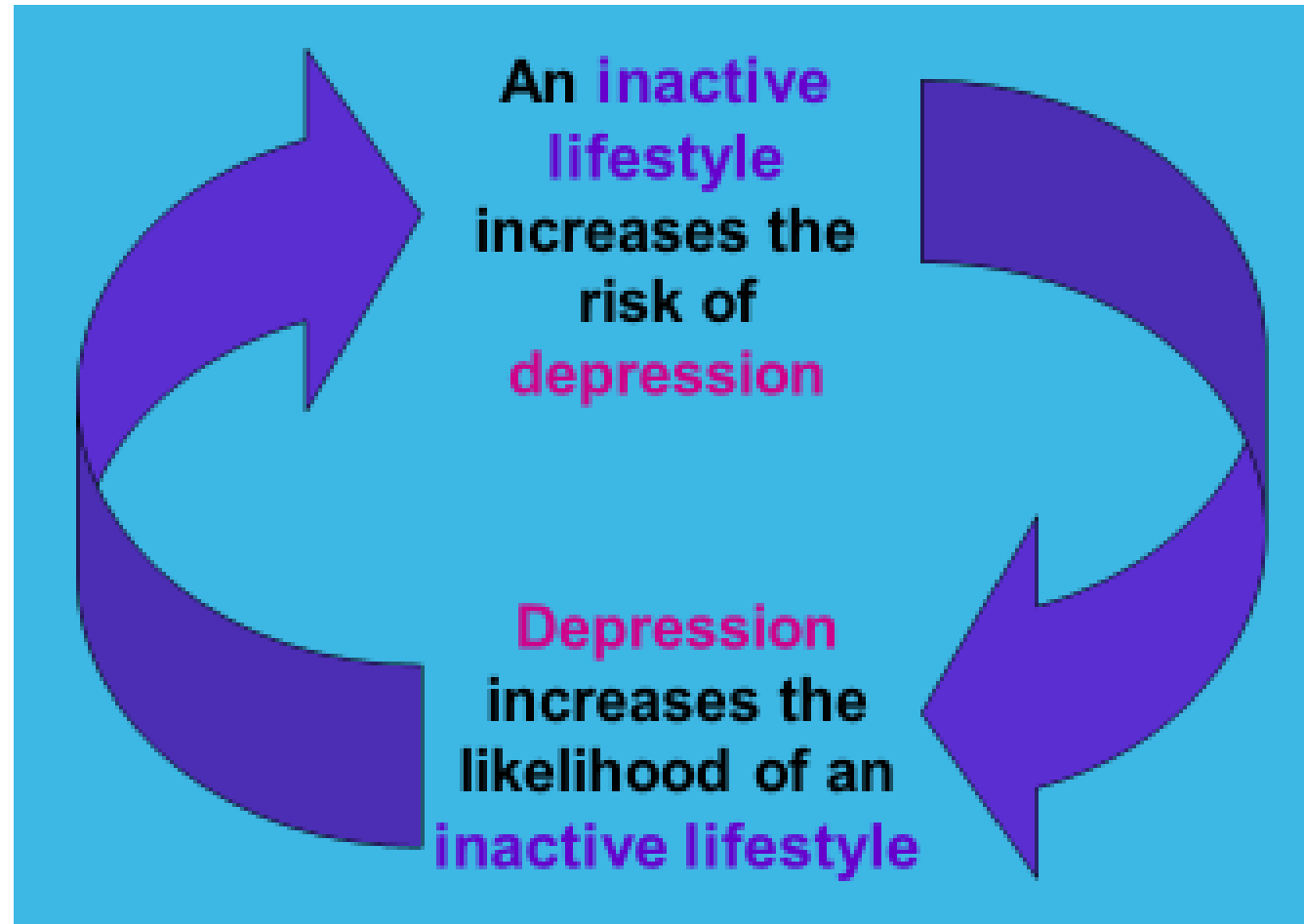
However, proper nutrition helps with physical recovery, which helps individuals function at a higher level during treatment. Improved nutrient levels and better eating patterns help clients have higher energy levels, better concentration and better sleep patterns, all of which help during the treatment process.

(Dekker, 200, pg. 38)

# Physical Activity

The role of physical activity in substance use disorder, depression, anger and stress; and how to promote physical activity during recovery

# Depression & Activity Influence Each Other



# Cognitive Distortion

Mental filters and influences that affect eating behaviors and improve recovery rates

# Repetitive Negative Thinking (RNT)

**Higher RNT predicted**

Higher binge eating, weighing, body checking, excessive exercise and restriction

**Predicted higher RNT**

Startup et al., 2013; Sala et al, 2019

# What do we know?

- ↑ body dissatisfaction & preoccupation with shape
- ↑ severe eating pathologies
- ↓ ability to employ satiety cues
- ↑ rates of binge eating
- ↑ body weights and BMI
- ↑ weight-related concerns
- ↑ unhealthy dieting practices
- ↑ use of illicit drugs for losing weight

# HSF Findings

- ↓ body dissatisfaction & preoccupation with shape
- ↓ severe eating pathologies
- ↑ ability to employ satiety cues
- ↓ rates of binge eating
- ↓ body weights and BMI
- ↓ weight-related concerns
- ↓ unhealthy dieting practices
- ↓ use of illicit drugs for losing weight



# Summary of Major Findings

- Weight status may increase the risk of re-offending for female prisoners and drug offenders
- Concern with weight gain was identified as a trigger for drug relapse
- Concern about using drugs to lose weight following release was prevalent
- Given that many of the women gain weight after arrest/incarceration, this concern may be warranted in this population

## Gender-Responsive is key!

Overweight/obesity, lack of physical activity, poor nutrition, perceived weight concerns, body dissatisfaction and poor weight management behaviors lead to “self-medication” to lose weight and increase energy, including illicit drug use which often results in re-offense

# Recommendations

- Prisons, jails, treatment facilities should take a PH approach e.g.
  - Decrease sedentary behavior
  - Promote opportunities for PA
  - Improve dining hall nutrition
  - Increase healthy options on commissary
- Provide gender-responsive programs to address these issues that include a team approach (nutrition, physical activity, healthy body image, eating pathology, etc.)

Questions?

