



# “Eating Disorders and Substance Use: Switching Deckchairs on the Titanic”

Prepared For

**Cigna ED Awareness Series**

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Marty Lerner, PhD.

Milestones In Recovery

# Substance Use Disorders

American Psychiatric Association DSM V

- ▶ Tolerance [more to obtain same result / effect]
- ▶ Withdrawal symptoms
- ▶ More for longer periods than intended
- ▶ Unsuccessful effort to cut back or control
- ▶ Significant time to obtain or recover from effects
- ▶ Giving up social, occupational, recreational, activities because of substance use
- ▶ Continuation despite consequences

\* **LEVEL OF DEPENDENCY: MILD 2-3 MODERATE 4-5 SEVERE 6+**

# Can an Eating Disorder be viewed as similar to an Alcohol or Drug Problem?

- ▶ Anorexia - need for continued weight loss or restriction of caloric intake to achieve or maintain weight loss and avoid negative emotional state.
- ▶ Bulimia and Binge Eating Disorder – need for increased frequency and amount consumed (or purging) to achieve the same physical and/or affective [emotional] effect.
- ▶ Food Addiction – Physical / biological [addiction] to specific food substances such as sugar, salt, flour, processed foods, etc.
- ▶ Common to all eating disorders – continued eating disordered behaviors, despite physical, emotional, social, and financial consequences.
- ▶ Going through the criteria for substance use disorders “does the shoe fit” – Looking at the definition of addiction from the American Psychiatric Association.

# Substance Use Disorders

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# AMERICAN SOCIETY OF ADDICTION MEDICINE

## ...a working definition

- ▶ Addiction is a treatable, chronic medical disease involving complex interactions among brain circuits, genetics, the environment, and an individual's life experiences. People with addiction use substances or engage in behaviors that become compulsive and often continue despite harmful consequences.
- ▶ Prevention efforts and treatment approaches for addiction are generally as successful as those for other chronic diseases.
- ▶ *Adopted by the ASAM Board of Directors September 15, 2019*

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- ▶ **“NATURE OF THE PERSON, NATURE OF THE SUBSTANCE or BEHAVIORS, NATURE OF THE ENVIRONMENT”\*** \*reference “A Guide to Eating Disorder Recovery” revised 2019, ML

# So...What Have We Learned and Who Have We Studied?



# A Couple of "Volunteers"



# Oreos Addictive? Study Says Cookie May Be Similar to Cocaine to Rats and Dog

Click [here](#) to watch video (YouTube)

# AMERICAN SOCIETY OF ADDICTION MEDICINE

## ...Does This Shoe Fit then?

- ▶ **An Eating Disorder** is a treatable, chronic medical disease involving complex interactions among brain circuits, genetics, the environment, and an individual's life experiences. People with **an eating disorder often engage in feeding behaviors** that become compulsive and often continue despite harmful consequences.
- ▶ Prevention efforts and treatment approaches for **eating disorders** are generally as successful as those for other chronic diseases.
- ▶ *Adopted by M. Lerner, Ph.D. from the 2019 ASAM Addiction*

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- ▶ **“NATURE OF THE PERSON, NATURE OF THE SUBSTANCE or BEHAVIORS, NATURE OF THE ENVIRONMENT”\*** \*reference “A Guide to Eating Disorder Recovery” revised 2019, ML

# CROSS ADDICTION: Substance Abuse and Eating Disorders

**So What Does Cross Addiction Mean?**

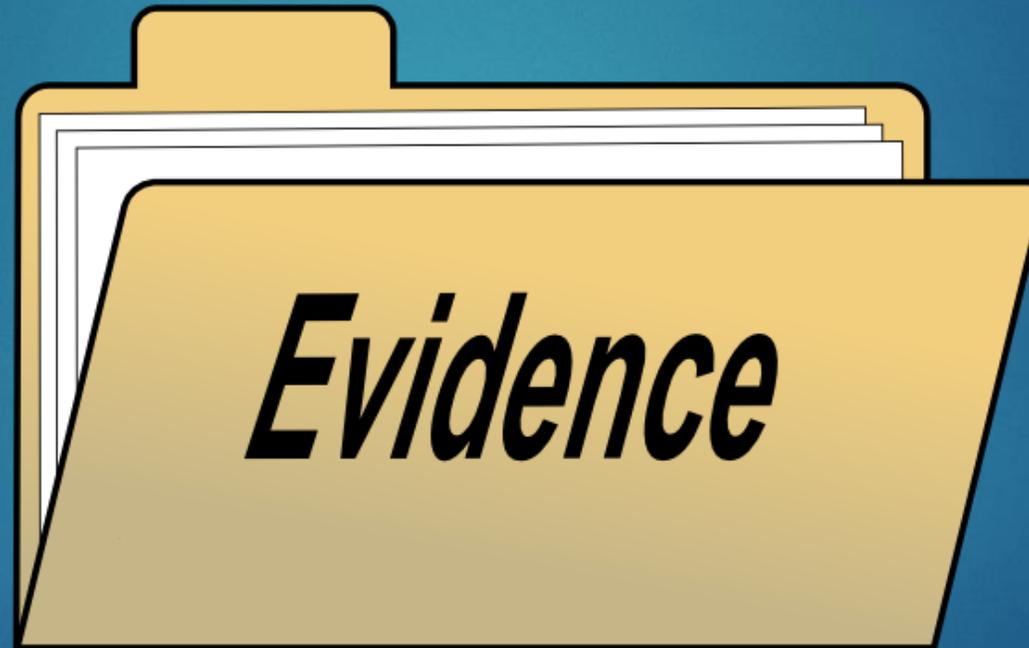
**Do Individuals with an ED have a higher risk of S.U.D.?**

- ▶ Cross addiction, also known as addiction transfer or Addiction Interaction Disorder, is when a person has two or more addictive behaviors. The addictions can include alcohol or other drugs, but can also include addictions to food, gambling, sex, gaming, nicotine consumption, or other compulsive behaviors.
- ▶ “Switching” addictions [aka Cross Addition] also is a common occurrence whereby someone stops engaging in one “addiction” and soon develops another to take it’s place – for example: you give up abusing alcohol or drugs and begin compulsively overeating or you quite smoking and abusing food and so on.

**“A Picture Worth a thousand Words....”**



# Addictive Disease aka “The Titanic”



# Brain Changes, Prevalence, and Relapse

There appears to be plasticity [neural / brain structural changes] associated with the “addiction” phenomenon in general. Changes produced by using certain substances and/or repetitive behaviors occur in the brain. These findings also provide the basis for our current understanding of substance use disorders [aka addiction] as a chronic, often relapsing disease of the brain with changes that persist long after the last use of the drug. ***“Once a cucumber becomes a pickle, no way back to being a cucumber again”***

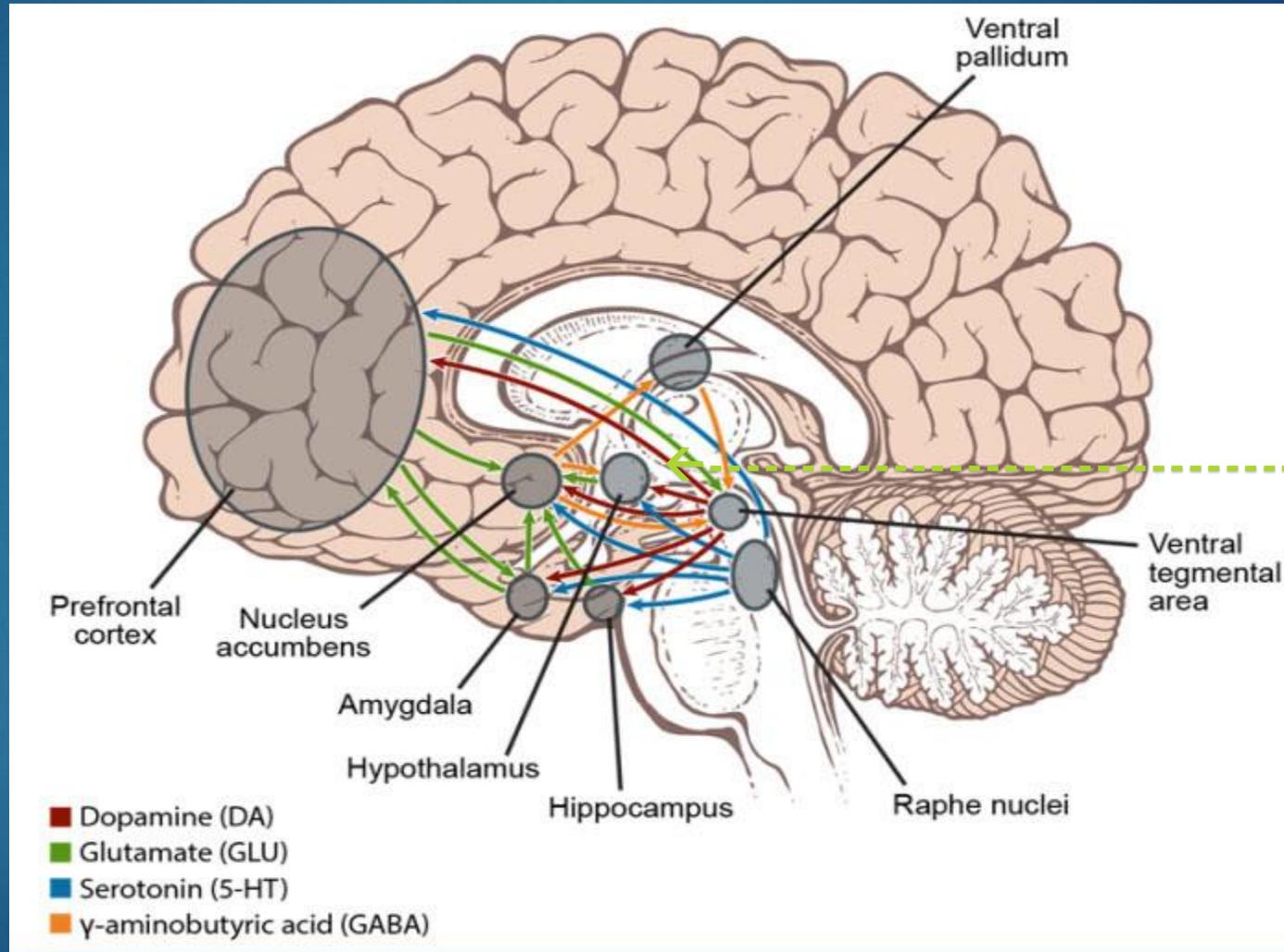
Hence, the **neuroplasticity [nerve changes]** in brain circuits and cell **function induced by addictive substances [and behaviors]** that are thought to underlie the compulsions to resume addictive behavior [even after a period of abstinence] warrant further exploration. **These investigations have significant implications for future therapies and treatments.** [the brain is a constantly changing circuit board]

# Substance and/or Behavior > Use > Abuse

"The brain's **pleasure center**, called the nucleus accumbens, is essential for our survival as a species... Turn off pleasure, and you turn off the will to live... But long-term and excessive stimulation of the pleasure center drives the process of addiction... When you consume any substance of abuse or engage in any "exceedingly pleasurable behavior" in excess the **nucleus accumbens** [**pleasure center**] receives a dopamine signal, from which you experience pleasure. And so you consume more." Repeating this in excess = tolerance and tolerance leads to addiction.

# Reward Circuitry

**IMPULSE CONTROL**  
JUDGMENT,  
DECISION MAKING



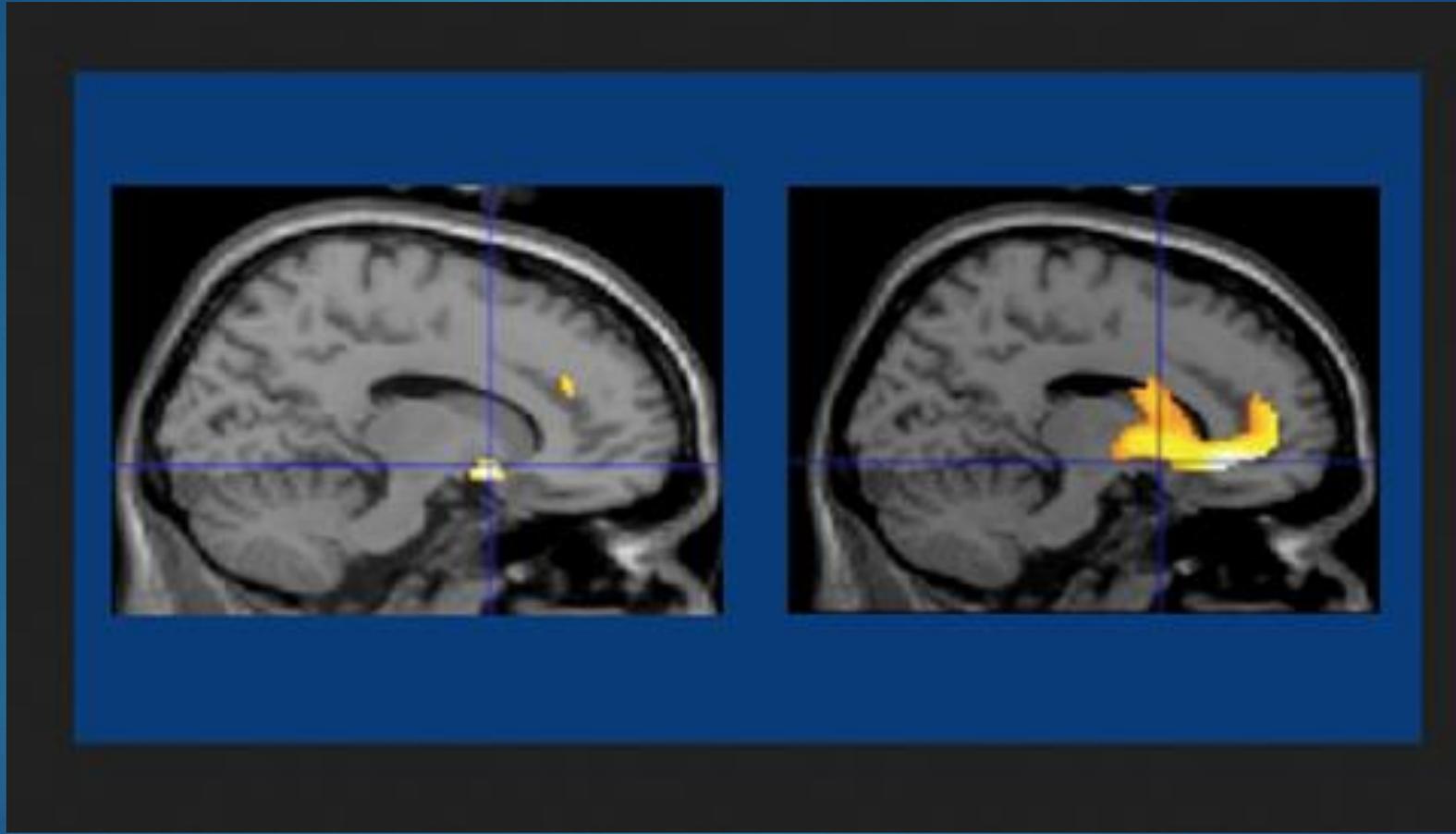
**REWARD  
CENTER**

# Dopamine – The Reward / Feel Good Chemical in the Brain

- ▶ The greater the anticipation and experience of the substance or behavior, the “stronger” the dopamine signal. [Learned / Conditioned]
- ▶ Drugs such as cocaine, amphetamines, alcohol, opiates, stimulate increased levels of dopamine. [include sugar and palatable foods]-starvation and purging may have the same effect in the short run.
- ▶ Dopamine deficiencies will develop in response to repeated use /abuse of substances. This is know as “down regulation” as tolerance develops
- ▶ Dopamine deficiencies are thought to motivate drug seeking behavior / craving, in an attempt, to avoid withdrawal or experience the prior pleasant feelings. “Chasing the original high” – **initial** [feels good] **middle stage** [less good] **end** [avoid pain of withdrawal]

# Control Versus Binge Eater

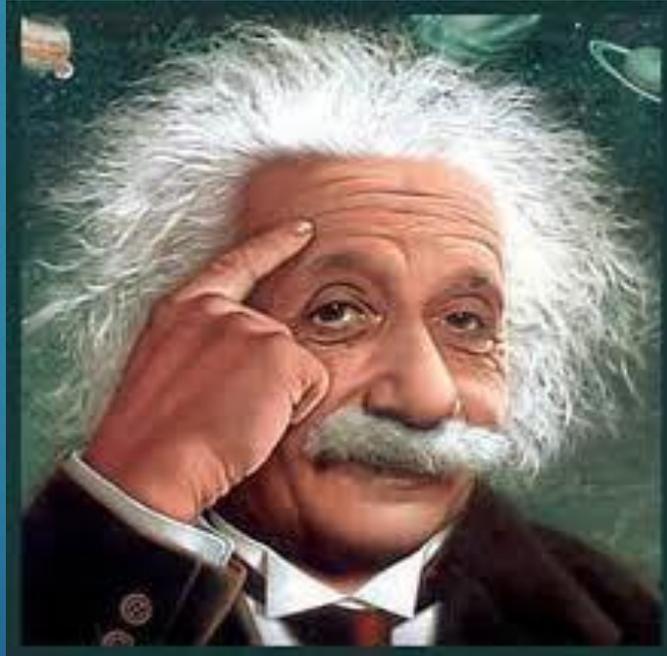
## “Sight Of Food Cue” [expectation] and Dopamine



CONTROL

BED

# SUMMARY OF THE RESEARCH: A RECAP OF TODAY'S PRESENTATION



# Summary of the Research Literature ...

- ▶ Evidence suggests that many eating disorders may be co-morbid [co-exist] with substance use disorders, especially binge eating disorder [BED] and Bulimia Nervosa [BN] <sup>(3)</sup>. Specifically, positive associations have been reported among binge eaters, individuals with bulimia, and some forms of binge/purging anorexics having difficulties with emotional regulation, restraint, hunger, night-eating patterns, food cravings, impulsivity, reward sensitivity, depressive symptoms, anxiety, post-traumatic stress disorder and current / past alcohol or drug use.
- ▶ Studies [references available upon request] include evidence of cross-over addictions to include alcohol and illicit drug use disorders, nicotine addiction, process [behavioral] addictions [gambling, shopping, video gaming, etc] and just about anything stimulating the reward pathways and neurotransmitters associated with pleasure or pain avoidance. Recent research shows many gastric bypass patients go on to develop alcohol and substance use problems after their ability to “reward themselves” with food is impaired and find alcohol a readily available substitute.

# Sensitization, Cross-Addiction, and Relapse - Neuroplasticity

- ▶ Opposite of tolerance – repeated abuse of a substance or “rewarding” behaviors will create a significant “sensitivity” or dopamine release with related substances and/or similar behaviors [cross addiction].
- ▶ Binge eaters, in particular with sugar, will be more “sensitive to the effects of alcohol and cocaine than non-binge eaters
- ▶ Although tolerance is reversible, it appears sensitization remains for extended periods and even a small amount of the offending substance [or behavior] will result in a heightened response. “Once a pickle, always a pickle”
- ▶ Supports “gateway” drug theory

# Switching Deckchairs on the Eating Disorders ship... a few examples

- ▶ Binge Eating > Restricting > ED, Unspecified [anorexia but without meeting underweight criterion], Anorexia [with or without purging]
- ▶ Binge Eating > Bulimia
- ▶ Binge Eating [alternating between restricting/dieting and then Binge Eating]
- ▶ Bulimia > Anorexic Drug Addiction [amphetamines, cocaine, opiates]
- ▶ Binge Eating > “Drunkorexia” Drinking alcohol on empty stomach > before engaging in binge eating or bulimia

# For more information or Listing of References:

- ▶ Email: [mlerner@MilestonesProgram.Org](mailto:mlerner@MilestonesProgram.Org)
- ▶ Web: [www.MilestonesProgram.Org](http://www.MilestonesProgram.Org)
- ▶ Contact Milestones: 800-347-2364 / 954-272-0806

**\*Milestones offers Residential and Outpatient Treatment for Eating Disorders. Fully Accredited by the Joint Commission and Licensed by the Agency for Healthcare Administration, Milestones is a proud member of the Cigna Network of Providers**