

The Brain, Substance Use Disorders and Parenting: A Guide for Community Professionals

VA Early Intervention

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Opioid Response Network

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Working with Communities

- ◆ The SAMHSA-funded *Opioid Response Network (ORN)* assists states, organizations and individuals by providing the resources and technical assistance they need locally to address the opioid crisis and stimulant use.
- ◆ Technical assistance is available to support the evidence-based prevention, treatment and recovery of opioid use disorders and stimulant use disorders.

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Working with Communities

- ◆ The *Opioid Response Network (ORN)* provides local, experienced consultants in prevention, treatment and recovery to communities and organizations to help address this opioid crisis and stimulant use
- ◆ *ORN* accepts requests for education and training
- ◆ Each state/territory has a designated team, led by a regional Technology Transfer Specialist (TTS), who is an expert in implementing evidence-based practices




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Contact the Opioid Response Network

◆ To ask questions or submit a request for technical assistance:

- Visit www.OpioidResponseNetwork.org
- Email orn@aaap.org
- Call 401-270-5900




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Today's Learning Objectives

<p>1</p> <p>Clarify our concept of recovery within the broader context of behavioral health & wellness</p>	<p>2</p> <p>Recognize addiction as a chronic brain disease</p>	<p>3</p> <p>Understand the connection between ACE's and vulnerability for addiction</p>	<p>4</p> <p>Recognize challenges faced when parenting and early recovery coincide</p>
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Conceptualizing Recovery

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Addiction in the US – Recovery Data

- ◆ Approximately 50 percent of adults who once met diagnostic criteria for a substance use disorder—or about 25 million people—are currently in stable remission (1 year or longer)
- ◆ Recovery goes beyond the remission of symptoms to include a positive change in the whole person
- ◆ “Abstinence,” though often necessary, is not always sufficient to define recovery
- ◆ Well-supported scientific evidence demonstrates the effectiveness of 12-step mutual aid groups focused on alcohol and 12-step facilitation interventions
- ◆ Evidence for the effectiveness of other recovery supports (educational settings, drug-focused mutual aid groups, and recovery housing) is promising

 SAMHSA Office of the Surgeon General
Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health

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SAMHSA Definition of Recovery, 2012

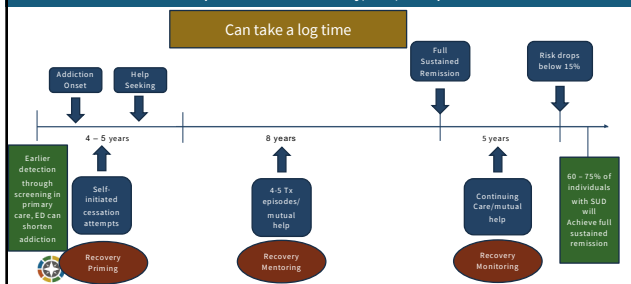
A process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential



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The Clinical Course of Addiction and Achievement of Stable Recovery


(slide credit: John F. Kelly, PhD, ABPP)



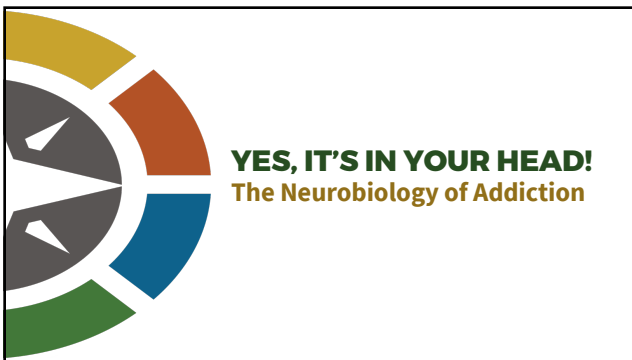
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Active Ingredients for Sustained Remission & Long-Term Recovery

- ◆ Connections
- ◆ Hope & optimism
- ◆ Identity (positive self-identity)
- ◆ Meaning & purpose
- ◆ Empowerment



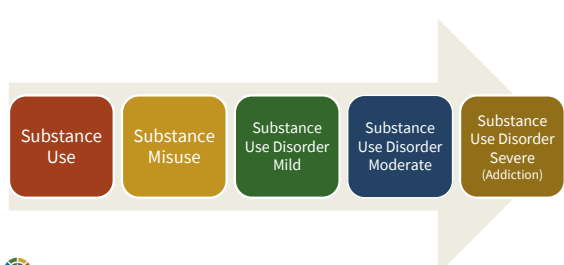
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YES, IT'S IN YOUR HEAD!
The Neurobiology of Addiction

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The Substance Use Progression



Substance Use → Substance Misuse → Substance Use Disorder Mild → Substance Use Disorder Moderate → Substance Use Disorder Severe (Addiction)



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ACCORDING TO ASAM ADDICTION IS:

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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ADDICTION IS NOT:

- ✦ **Caused by** another mental illness or trauma
- ✦ A moral or ethical problem
- ✦ A personality disorder
- ✦ A choice
- ✦ **Caused by** lack of social connection or isolation



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ADDICTION IS NOT CASUAL USE

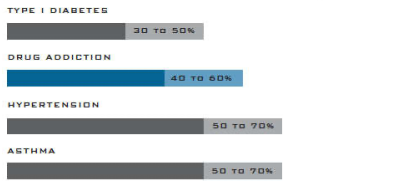
- ✦ Compulsion to seek and take the drug
- ✦ Loss of control in limiting intake
- ✦ Diminished recognition of significant problems
- ✦ Emergence of negative emotional state
- ✦ Craving
- ✦ Chronicity
- ✦ Periods of remission and recurrence



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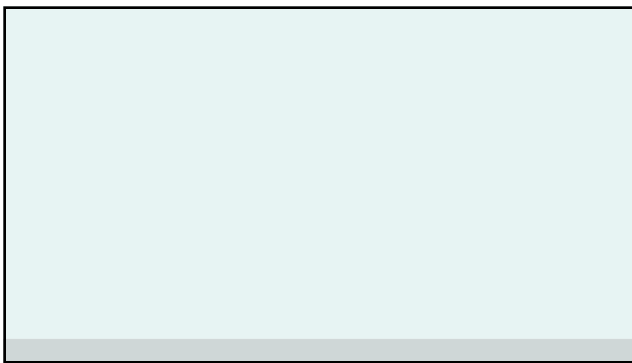
Like Other Chronic Diseases, Addiction Often Involves Cycles Of Recurrence And Remission

Percentage of Patients Who Relapse



NIDA, 2020

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”Old Brain”



- ◆ Three Main Functions:
 - ◆ Regulate physiological functions
 - ◆ Experience basic emotions (anger, fear, hunger, thirst, lust, pain and pleasure)
 - ◆ Imprint survival memories
- ◆ Overrides new brain in times of stress
- ◆ Can be thought of as the “go” or reactive part of the brain



University of Minnesota

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The New Brain: Prefrontal Cortex

Executive Functions <small>(not fully developed until age 25)</small> <ul style="list-style-type: none">✦ Judgment✦ Impulse control✦ Self-monitoring	Coping Functions <ul style="list-style-type: none">✦ Attention span✦ Organization✦ Learning from experience✦ Empathy✦ Problem Solving
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-University of Minnesota

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DOPAMINE

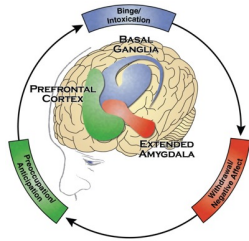
- ✦ Neurotransmitter
- ✦ Signals reward in our brains
- ✦ Also increased by stimuli that predict a reward
- ✦ Brain itself will drive the repeating of what it perceives as life-sustaining activity
- ✦ Over time when the brain is regularly flooded with dopamine (and other neurotransmitters) it will reduce the natural production

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Three Stages of the Addiction Cycle



- ◇ **Binge/Intoxication**, the stage at which an individual consumes an intoxicating substance and experiences its rewarding or pleasurable effects
- ◇ **Withdrawal/Negative Affect**, the stage at which an individual experiences a negative emotional state in the absence of the substance
- ◇ **Preoccupation/Anticipation**, the stage at which one seeks substances again after a period of abstinence

SAMHSA Office of the Surgeon General
Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health, 2016

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The Addiction Cycle

- ◇ The three stages are linked to and feed on each other
- ◇ A person may go through this three-stage cycle over the course of weeks or months or progress through it several times in a day
- ◇ May be variation in how people progress through the cycle and the intensity with which they experience each of the stages
- ◇ The addiction cycle tends to intensify over time, leading to greater physical and psychological harm

SAMHSA Office of the Surgeon General
Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health, 2016

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Dr. Nora Volkow Explains the Science of Addiction



https://www.youtube.com/watch?v=H7z08_W8WU

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BRAIN CHANGES INHERENT TO ADDICTION

- ❖ Less dopamine produced
- ❖ Fewer dopamine receptors
- ❖ Ability to experience normal reward – feel joy reduced significantly
- ❖ Using no longer pleasurable, but about trying to get dopamine function back to a normal level
- ❖ Brain is driven to seek out and use substances compulsively
- ❖ Ability to make sound decisions and control impulses is compromised



NIDA – Drugs, Brains and Behavior: The Science of Addiction

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Let's Talk!

As you look at these functions of the pre-frontal cortex, what are some things you see that are the result of diminished capacity in these areas? And how does that inform the way you support the family?

Executive Functions

(not fully developed until age 25)

- ❖ Judgment
- ❖ Impulse control
- ❖ Self-monitoring



Coping Functions

- ❖ Attention span
- ❖ Organization
- ❖ Learning from experience
- ❖ Empathy
- ❖ Problem Solving

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"There's always a pull to regulate, to seek comfort, to fill that reward bucket. But it turns out that the most powerful form of reward is relational. Positive interactions with people are rewarding and regulating. Without connection to people who care for you, spend time with you, and support you, it is almost impossible to step away from any form of unhealthy reward and regulation."

"Connectedness counters the pull of addictive behaviors. It is the key."

~Dr. Bruce Perry
What Happened to You?
pg. 66



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How Adverse Childhood Experiences Increase Vulnerability for Substance Use Disorders

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Why Do Only Some People Become Addicted?

- ◆ No single factor
- ◆ More risk factors = a more vulnerable brain
- ◆ Protective factors decrease chance of brain becoming addicted
- ◆ Genetics account for 40% - 60%
- ◆ Adolescents & people with mental illness are at greater risk
- ◆ In many ways addiction is a disease that originates in adolescence




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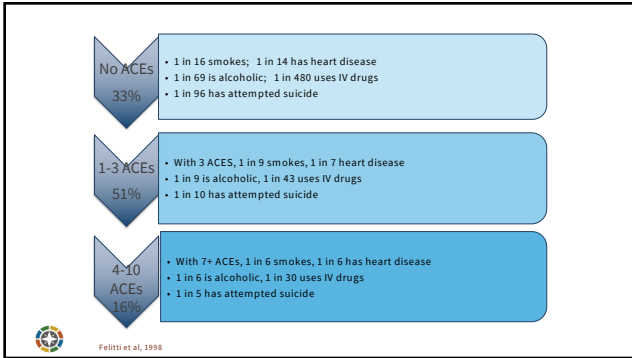
Adverse Childhood Experiences (ACE) Questions

Focus On Occurrences Before The Age Of 18

<p>Personal</p> <ul style="list-style-type: none"> • Physical abuse • Verbal abuse • Sexual abuse • Physical neglect • Emotional neglect 	<p>Family Members</p> <ul style="list-style-type: none"> • Mother is a victim of domestic violence • Family member in jail • Parent with a substance use disorder • Family member with mental illness • Disappearance of parent through divorce, death or abandonment
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We have such good intentions, and we have good people, and we're spending a lot of money, but we're ineffective because we are not understanding the underlying mechanisms that make someone vulnerable to a Substance Use Disorder

-Dr. Bruce Perry
What Happened to You?
pg. 66

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The Reward System & Parenting

- ◆ In chronic active addiction the brain's reward circuits drive drug-seeking behavior
- ◆ Key regions of the brain's reward system do not engage among addicted individuals to the same extent as non addicted persons when it comes to non-drug rewards
- ◆ Research has shown activation of reward circuits in mothers' brains when viewing their infant's smiling face vs. an unfamiliar infant
- ◆ Studies indicate that these reward processing areas of the brain overlap with the areas of the brain involved in processing infant cues in mothers

The Neurobiology of Addiction and Attachment H. Rutherford, M. Potenza and L. Mayes

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The Stress Response System

- ◆ Considerable research has shown that stress increases craving in addicted individuals and these factors could explain increased incidence of recurrence during the postpartum period
- ◆ Stress-induced cravings have been found to significantly predict return to use in abstinent individuals
- ◆ Stress related to lack of resources also contributes
- ◆ Oxytocin an important facilitator of maternal caregiving behavior (and lactation) and may also help reduce the impact of the stress response
- ◆ Mothers taking cocaine during pregnancy have lower levels of Oxytocin which were actually decreased by stress – non-using mothers did not show such a decrease

Source: The Neurobiology of Addiction and Attachment H. Rutherford, M. Potenza and L. Mayes

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Brain Pathways Overlap

- ◆ The brain pathways involved in parenting are also the pathways negatively impacted by addiction
- ◆ Reward and stress pathways are of significant importance in both parenting and addiction
- ◆ Pathways driving parenting and attachment behaviors seem to be the same pathways negatively impacted or dysregulated by addiction



Source: The Neurobiology of Addiction and Attachment H. Rutherford, M. Potenza and L. Mayes

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Early Recovery & Early Parenting

- ◆ Mama & baby are difficult regulatory partners for each other
- ◆ Substance-affected baby has hard time regulating sleep/wake cycles, not always a clear signaler, needs more parental help to regulate
- ◆ Mothers have a difficult time reading baby's signals –and a reduced tolerance for coping with a distressed baby – very vulnerable combination



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Early Recovery & Early Parenting

- ◆ People in early recovery who have young children are making several huge changes at the same time in multiple areas of their life:
 - Make room for child in their mind
 - Take responsibility for child
 - Give up substances – including smoking
 - New social network
 - Life & securing services



Source: M. Pajulo, N. Suchman, M. Kalland and L. Mayes, Enhancing the Effectiveness of Residential Treatment For Substance Abusing Pregnant and Parenting Women: Focus on Maternal Reflective Functioning and Mother-Child Relationship, Infant Mental Health Journal, 2006 Sept 1; 27 (9): 448

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Connectedness is the Key

YOUR HISTORY OF CONNECTEDNESS IS A BETTER PREDICTOR OF YOUR HEALTH THAN YOUR HISTORY OF ADVERSITY

be with each other I celebrate diversity I listen and learn from others I share time, food, work

The "super-power" of human-kind is our capacity to connect; it is regulating and the major "route" by which we can teach, coach, parent, heal and learn




<https://norablog.wordpress.com/2020/03/21/advice-from-bruce-perry/>

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TO INSPIRE PEOPLE, DON'T SHOW THEM YOUR SUPER POWERS. SHOW THEM THEIRS.

Thank - you for all you do to support families with substance use challenges


Please take a few minutes to let us know how we did today. You can use the camera on your phone to scan the QR code below or use the link in the chat to complete an evaluation



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