

# Why People Take Drugs

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**To feel good**  
To have novel:  
Feelings  
Sensations  
Experiences  
And  
To share them  
(Connection)



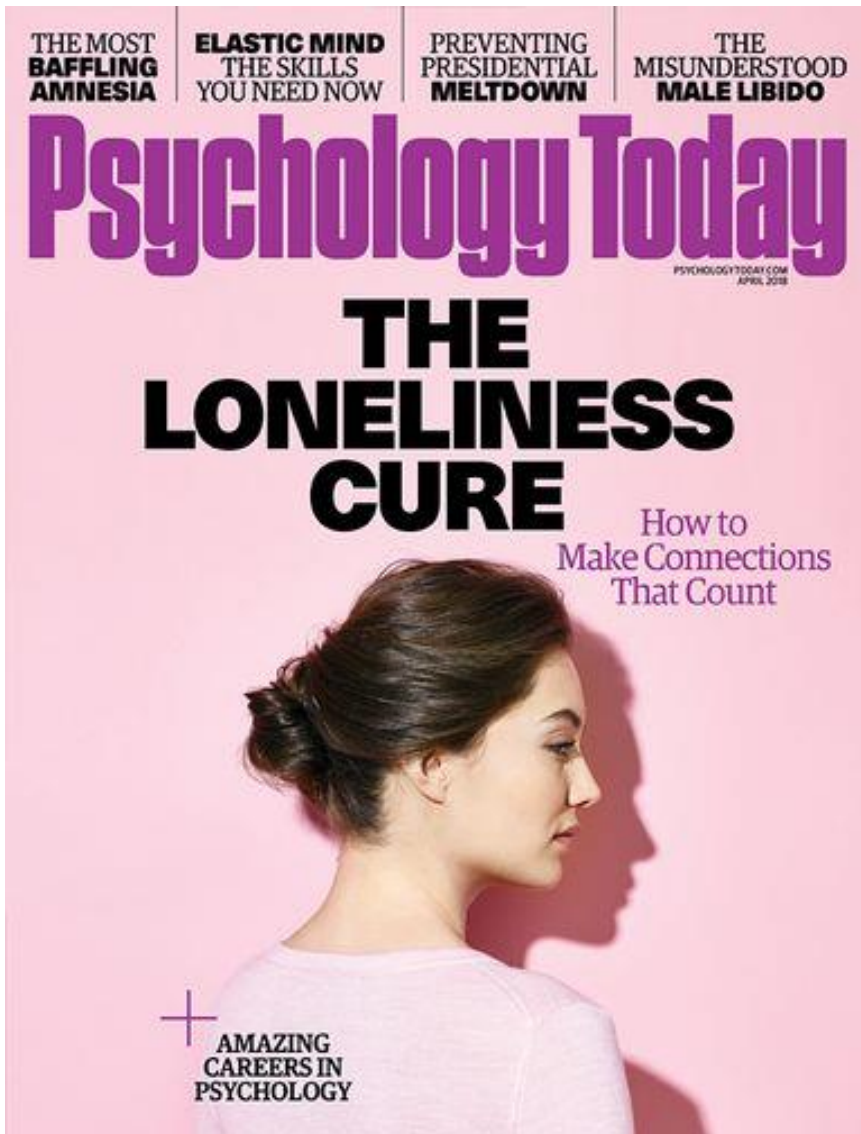
**To feel better**  
To lessen:  
Anxiety  
Worries  
Fears  
Depression  
Hopelessness  
Withdrawal  
(Disconnection)

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“The opposite of addiction is not sobriety. The opposite of addiction is connection.”

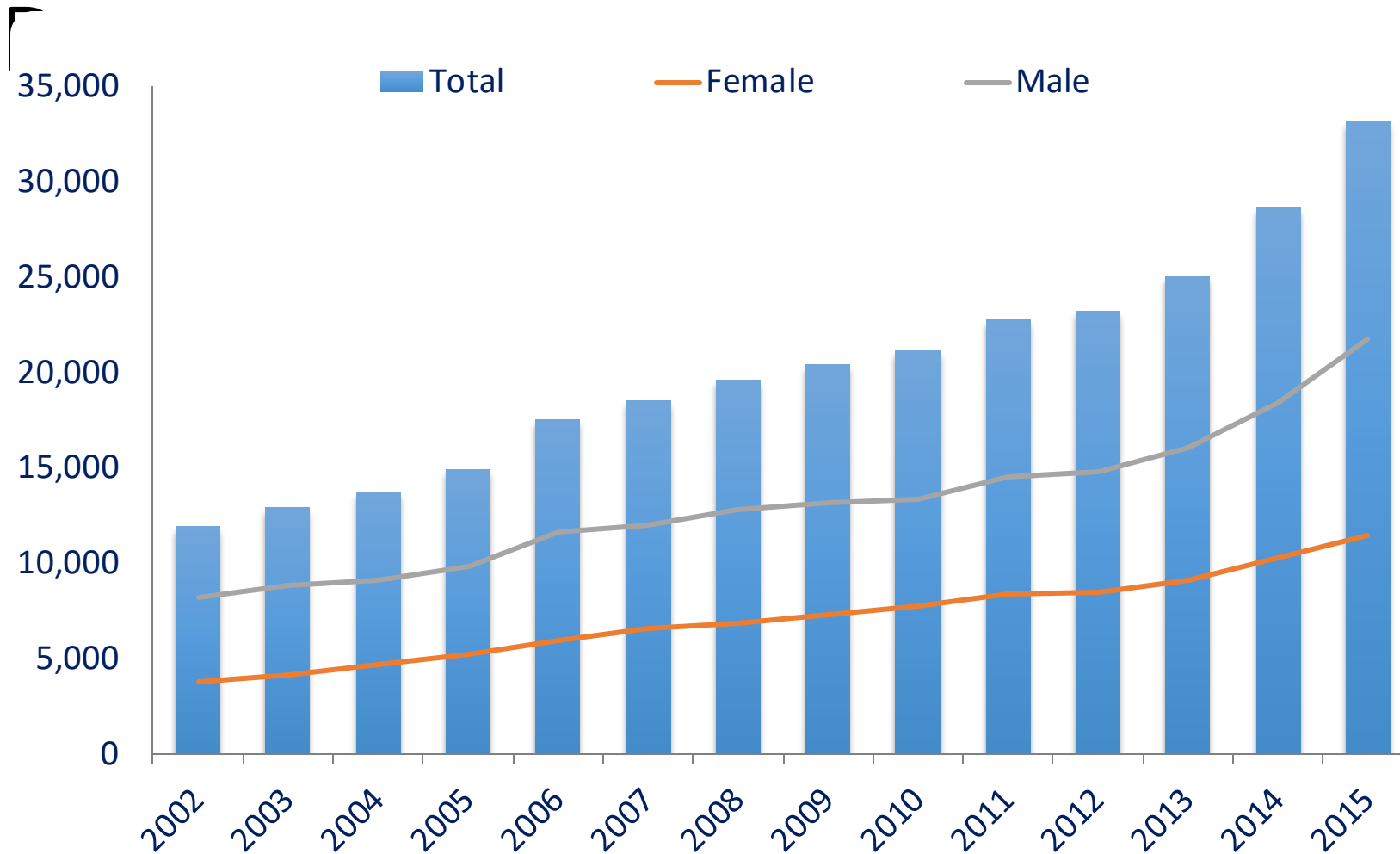
-Johann Hari

# We need to address problems “upstream”



- Acts on same parts of brain as physical pain
- Social support is protective
- Loneliness is not being alone- subjective experience independent of the size of network.
- Emptiness
- Worthlessness
- Lack of control
- Personal Threat
- 16-24 y/o most likely of all age groups to report feeling lonely

# National Overdose Deaths Involving Opioid



Source: National Center for Health Statistics, CDC Wonder

# Lethal Doses

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Heroin: 30 milligrams

Fentanyl: 3 milligrams

Carfentanil: 2 micrograms  
(estimated)

**“Just about the size of  
Lincoln’s beard on a penny —  
of Carfentanil can be lethal  
to most people.” —DEA**



New Hampshire State Forensic Lab (Schultze, 2017)



# Heroin Use Is Part of a Larger Substance Abuse Problem

Nearly all people who used heroin also used at least 1 other drug.

Most used at least **3** other drugs.

**Heroin** is a highly addictive opioid drug with a high risk of overdose and **death** for users.

People who are addicted to...



ALCOHOL

are

**2x**



MARIJUANA

are

**3x**



COCAINE

are

**15x**



Rx OPIOID PAINKILLERS

are

**40x**

...more likely to be addicted to heroin.

SOURCE: National Survey on Drug Use and Health (NSDUH), 2011-2013.

# Addiction Potential of Various Substances

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1.	Tobacco	32%
2.	Heroin	23%
3.	Cocaine	17%
4.	Alcohol	15%
5.	Sedatives	9%
6.	Cannabis	9%

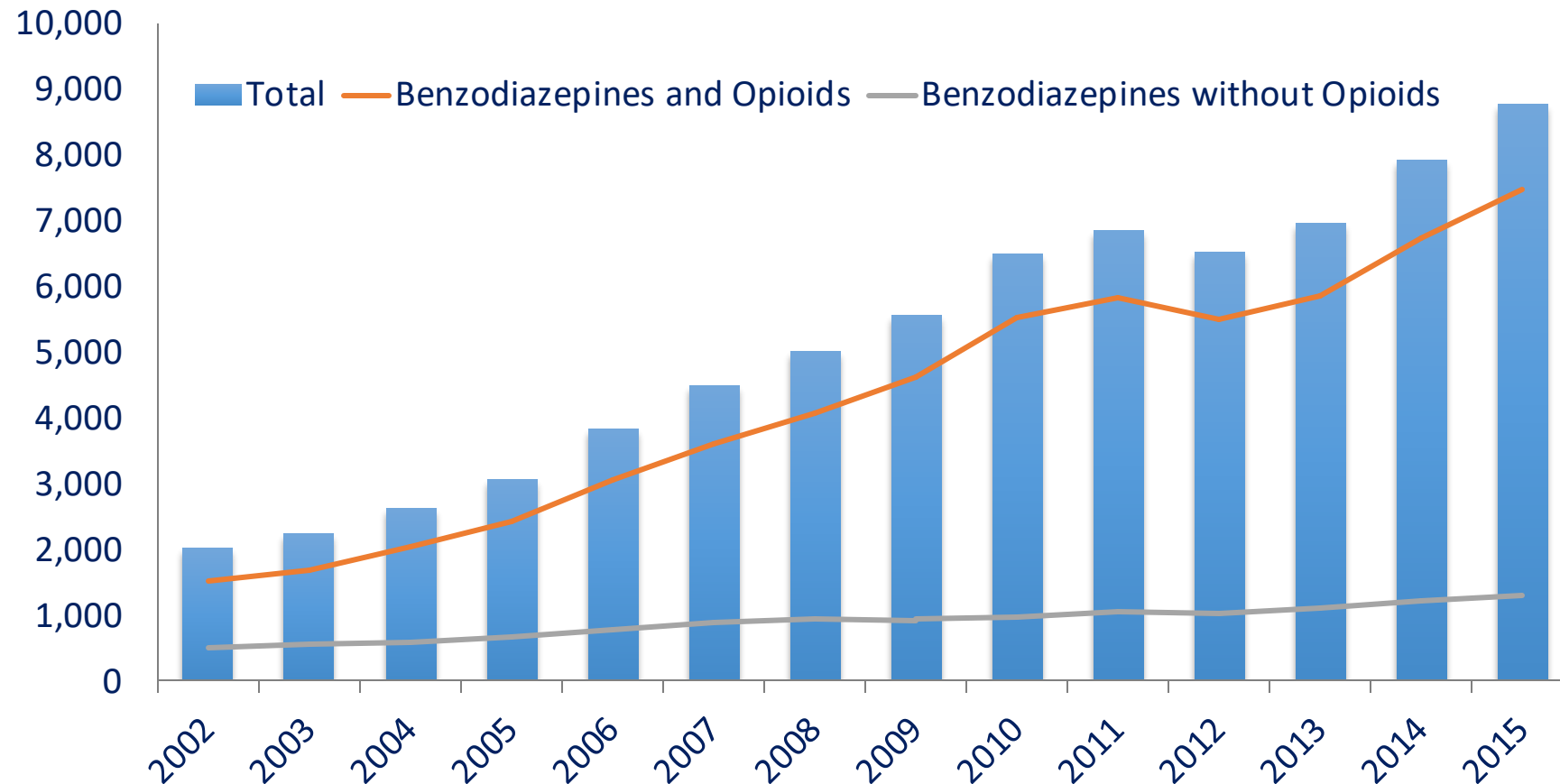
If age of start is:

= or < 18 years old +17%

= or < 15 years old +25-50%



# Opioid Involvement in Benzodiazepine Overdoses



Source: National Center for Health Statistics, CDC Wonder



## Connecticut Accidental Drug Intoxication Deaths Office of the Chief Medical Examiner

	2012	2013	2014	2015	2016 Jan-March	2016 Apr-June	2016 Jan-June	2016 (projected)
Accidental Intoxication Deaths*	357	495	568	729	208	236	444	888
-Heroin, Morphine, and/or Codeine detected	195	286	349	445	118	146	264	528
-Heroin in any death	174	258	327	416	109	135	244	488
-Heroin alone	86	109	115	110	26	14	40	80
-Heroin + Fentanyl	1	9	37	108	39	80	119	238
-Heroin + Cocaine	50	69	73	106	26	39	65	130
-Morphine/Opioid/Codeine NOS	21	28	22	29	9	11	20	40
-Cocaine in any death	105	147	126	177	53	65	118	236
-Cocaine alone	46	53	22	30	7	6	13	26
-Oxycodone in any death	71	75	107	95	22	30	52	104
-Methadone in any death	33	48	51	71	20	19	39	78
-Hydrocodone in any death	15	19	15	20	5	5	10	20
-Fentanyl in any death	14	37	75	188	84	139	223	446
-Fentanyl alone	8	6	12	31	15	15	30	60
-Fentanyl + Cocaine	2	16	14	43	18	36	54	108
-Fentanyl + Prescription Opioid	4	7	14	23	14	25	39	78
-Fentanyl + Heroin	1	9	37	108	39	80	119	238
<b>Any Opioid + Benzodiazepine</b>	<b>41</b>	<b>60</b>	<b>140</b>	<b>221</b>	<b>58</b>	<b>54</b>	<b>112</b>	<b>224</b>
-Hydromorphone	1	0	12	17	5	4	9	18
-Amphetamine/Methamphetamine	7	5	11	20	5	1	6	12
-MDMA	0	0	2	1	1	0	1	2

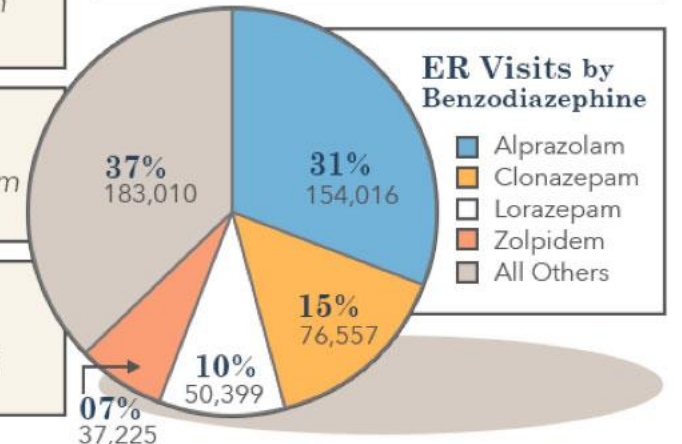
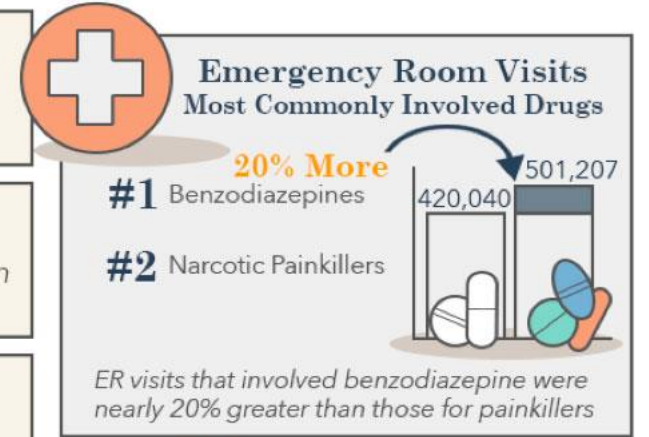
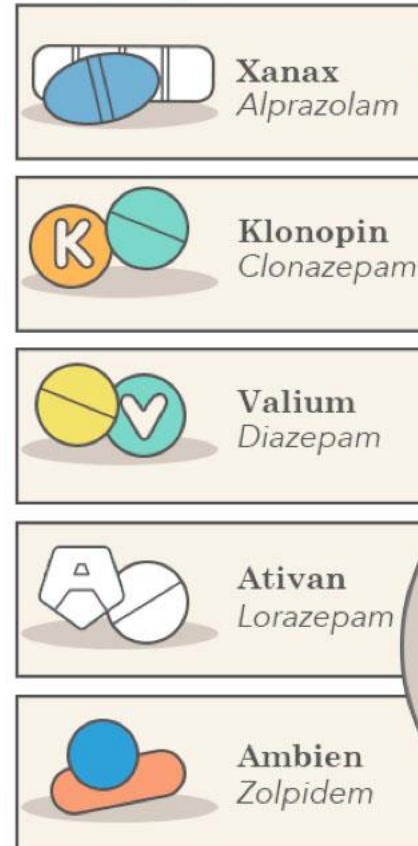
\*Some deaths had combinations of drugs; pure ethanol intoxications are not included. NOS, not otherwise specified

Updated 9/2/16

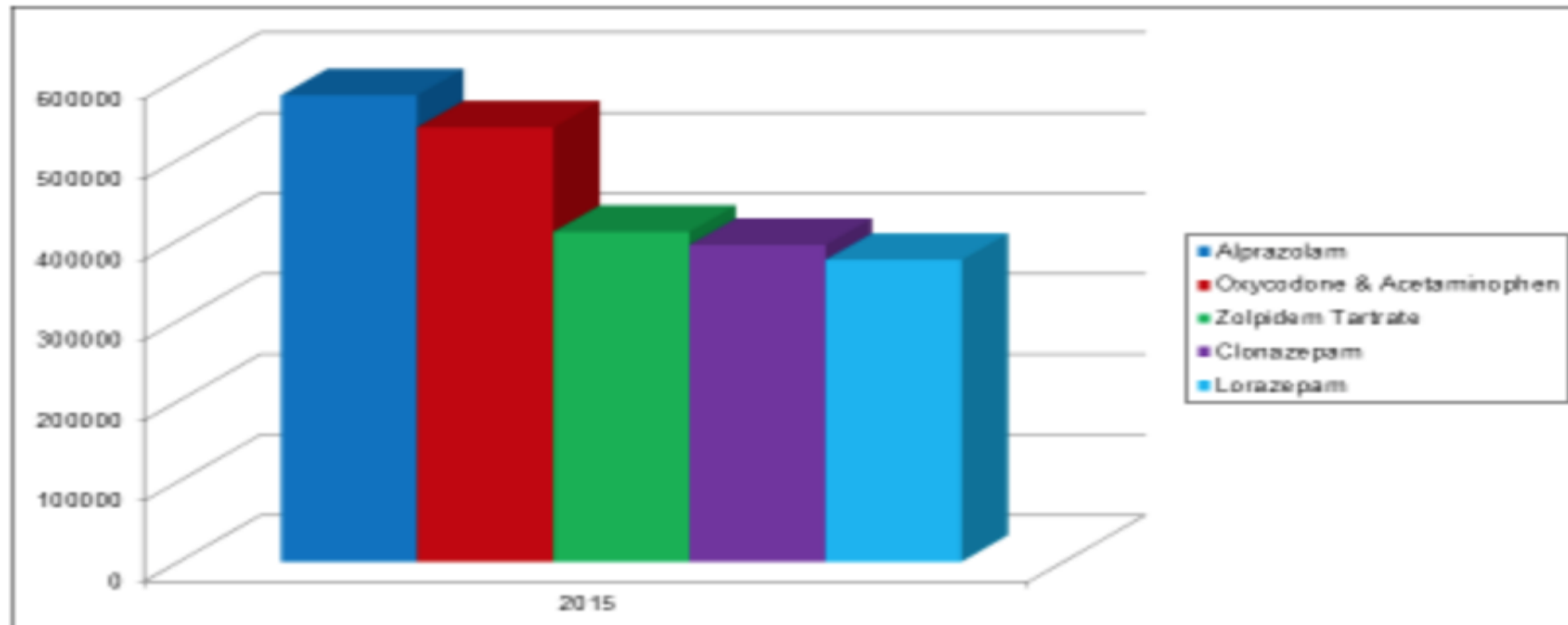
# What Are Benzodiazepines?

- Sometimes called “benzos”
- Sedatives often used to treat anxiety, insomnia, and other conditions
- Combining benzodiazepines with opioids increases a person’s risk of overdose and death

## Commonly Abused



## Most Prescribed Controlled Substances - 2015





ZP9A pill press, small rotary tablet press, pill press, tablet press

**\$5,350.00** + \$500.00 Shipping

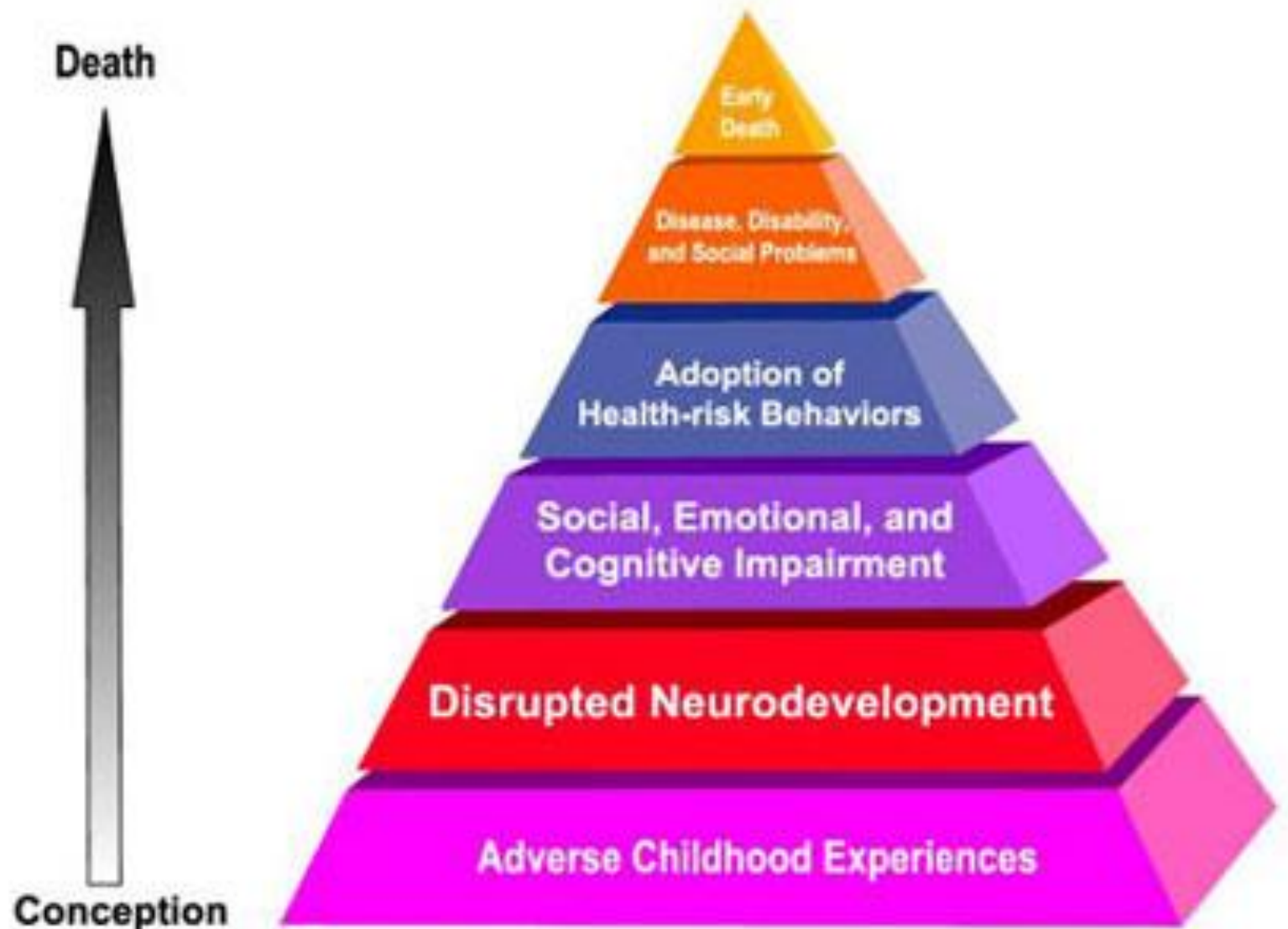
Qty : 1 ▼

Buy It Now

Add to cart

- INCREASED EXPOSURE  
TO DRUGS, ALCOHOL  
AND TOXIC STRESS  
INCREASES RISK





**Mechanisms by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan**

# Trauma

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Trauma is not what happened to you,  
It is what happened inside you.

Trauma is a disconnection to self, to body and emotions. It makes it impossible to be in the present moment.

Addiction is most often rooted in trauma.

The goal of sobriety is to have the capacity to be present.  
(Gabor Mate)

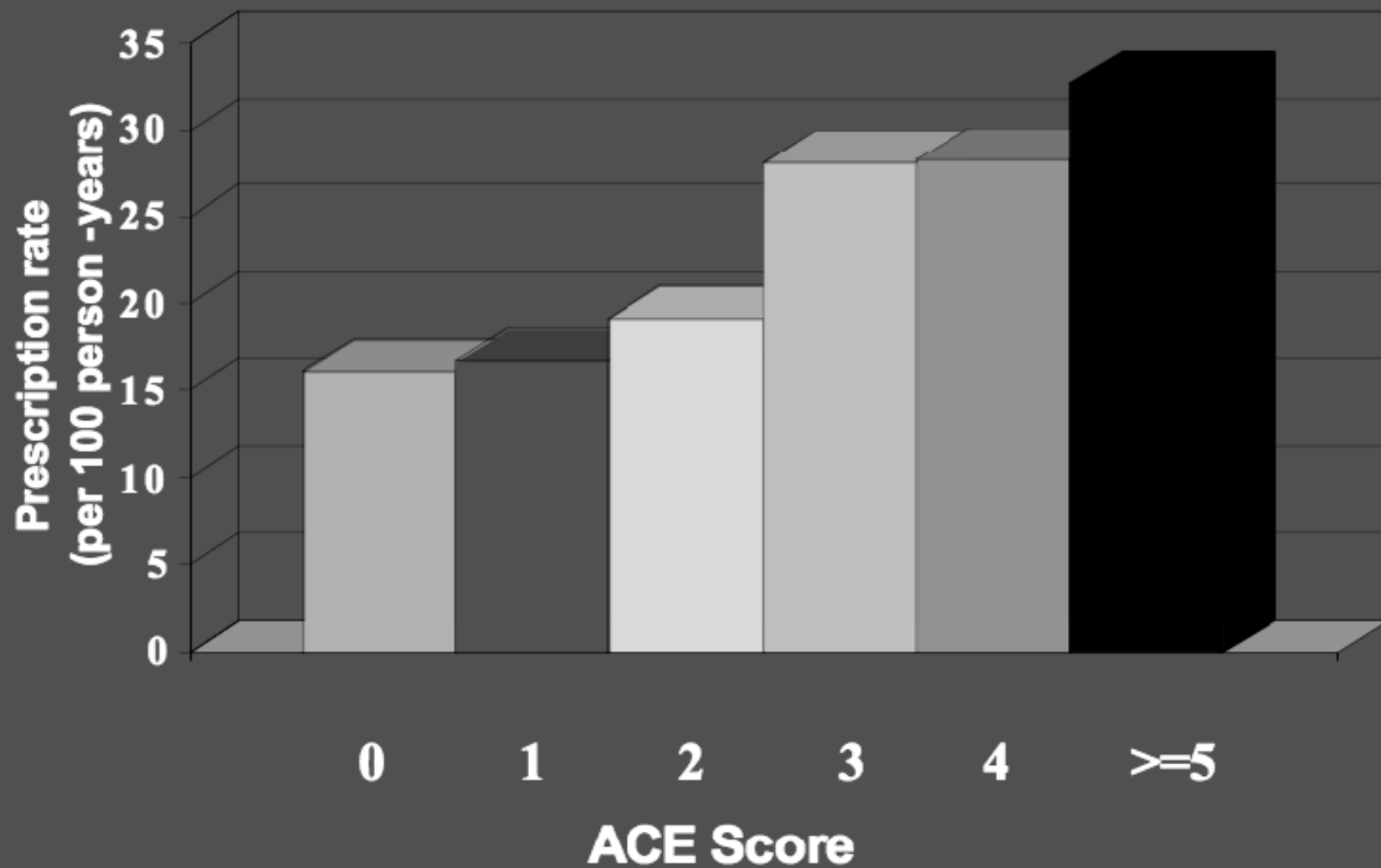
# Salience Attribution-what is important to pay attention to.

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- We don't react to what happens, we react to our interpretation of what happens.
- Trauma interferes with our response flexibility-the ability to chose a response.
- What is salient to a traumatized brain is whatever will sooth the brain or distract.
- Addiction is not a lack of free will, it is a lack of free won't

(Mate)

# ACE Score and Rates of Anxiolytic Prescriptions



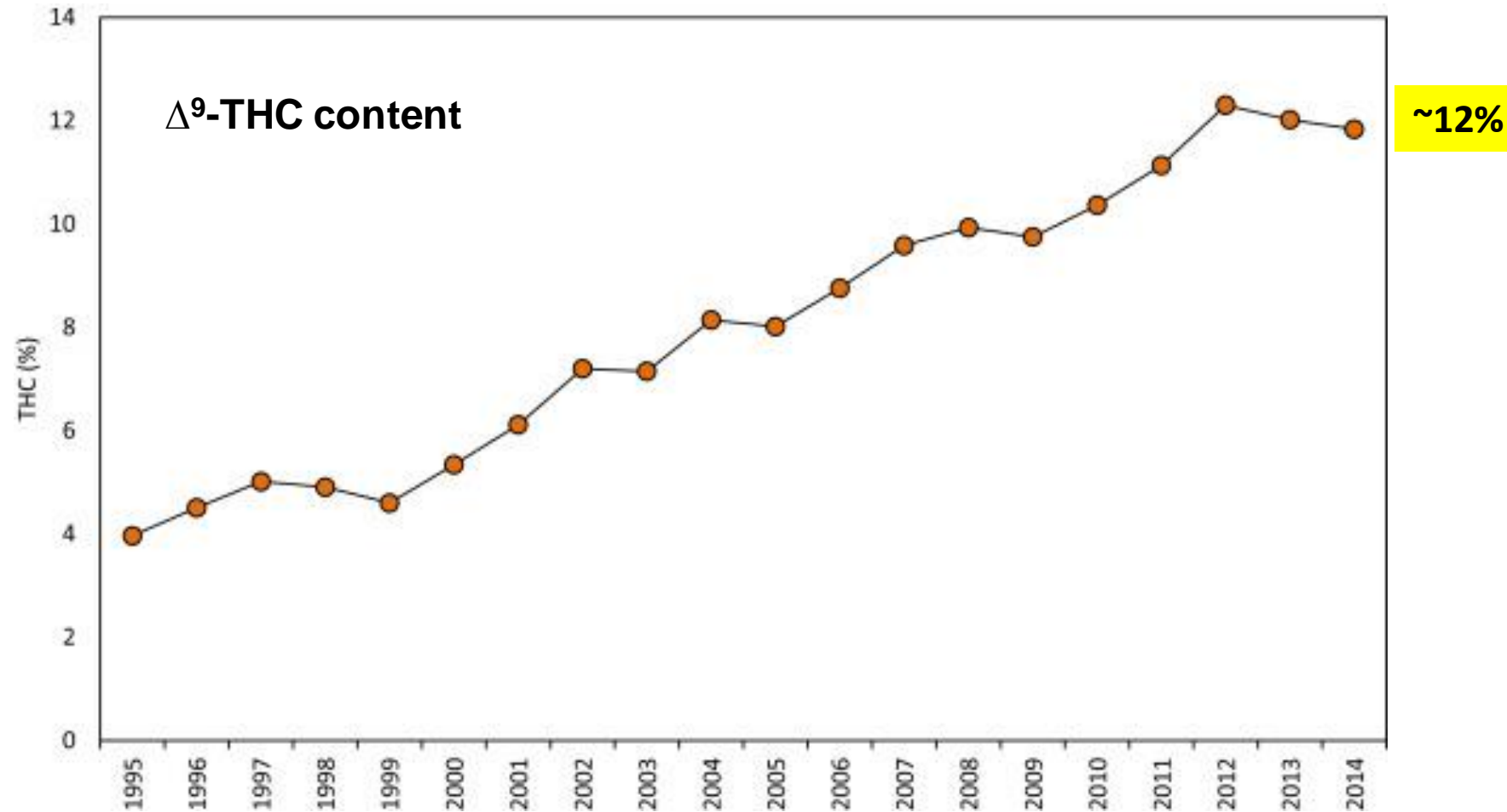
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Anxiety of parents will  
influence the anxiety  
of your teens.

—*John Gottman*



# Cannabis Potency Has Increased Over the Last 2 Decades (1995–2014) in the U.S



Average  $\Delta^9$ -tetrahydrocannabinol (THC) concentration of Drug Enforcement Administration specimens by year, 1995–2014.

# “But it’s just a plant...”

(80-90% THC) Concentrates



*“Green Crack” wax*



*“Ear Wax”*



Butane Hash Oil (BHO)



Hash Oil Capsules



*“Budder”*

Mohini Ranganathan

*“Shatter”*



# M-Cigarettes

(marijuana vaporizers) – Brought to you by *Groupon!*

Atmos Dry Herb, Wax, and Oil Vaporizer Kit. Multiple Colors Available.

Online Deal

FROM

**\$39.99**

BUY!

VALUE	DISCOUNT	YOU SAVE
\$117.95	66%	\$77.96

OPTIONS

Select Option

LIMITED TIME ONLY!

🕒 10 days 07:40:35

LIMITED QUANTITY AVAILABLE

👤 Over 1,000 bought



# Is Cannabis Addictive?

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CUD  $\geq 2$  of the following accompanied by significant impairment of functioning and distress:

- Difficulty containing use.
- people failed attempts to quit or reduce.
- Too much time spent acquiring, using, or recovering from the effects of cannabis.
- Cravings and a desire to use.
- Continued use despite consequences.
- Other important activities in life superseded by the desire to use.
- Use in contexts that are potentially dangerous (e.g., driving).
- Continued use despite awareness of problems attributed to use.
- Tolerance.
- Withdrawal.

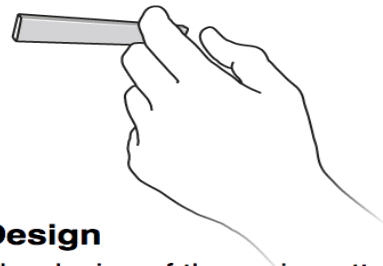
***Cannabis is addictive (~10%)***

# JUUL e-cigarettes

Some e-cigarette critics are calling the JUUL e-cigarette the “Apple of vaping” or the “iPhone of vaping.” With its relatively low entry price, sleek portable design, ease of use, and nicotine head rush it generates for users, JUULS are catching on with younger people.

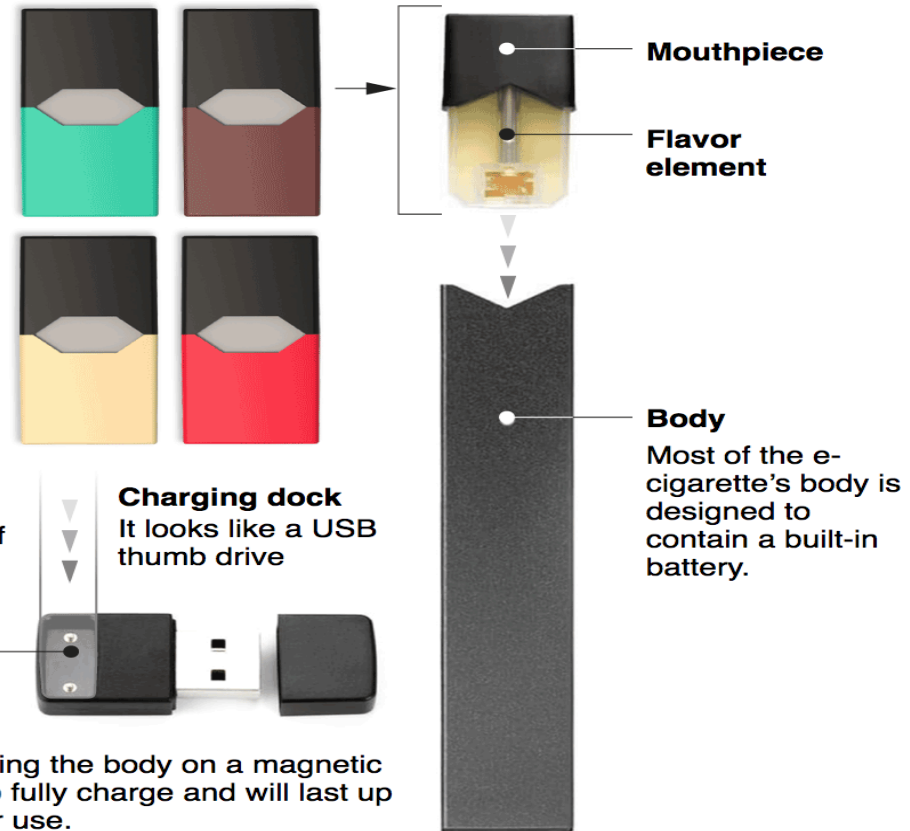
## JUUL flavor pods

The juice-flavored pods contain 50 milligrams of nicotine, roughly equivalent to a pack of cigarettes.



## Design

The design of the e-cigarette is about the same size as a cigarette and weighs a couple of grams.

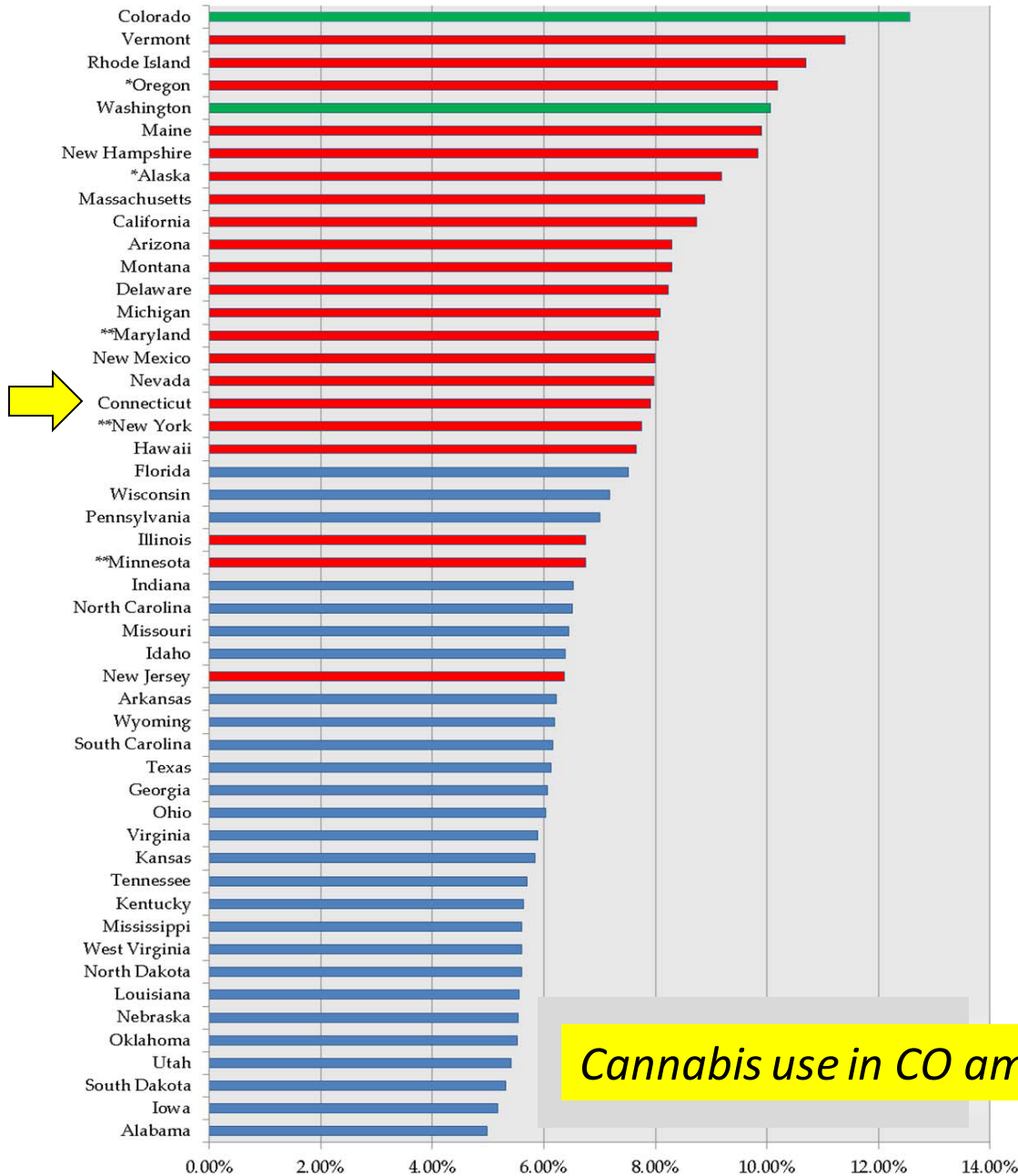


## USB charging dock

The battery is charged by dropping the body on a magnetic USB adapter. It takes an hour to fully charge and will last up to 200 puffs, a full day of regular use.



# Past Month Usage, 12 to 17 Years Old, 2013/2014



As of 2014:

Legalized Recreational and Medical Marijuana

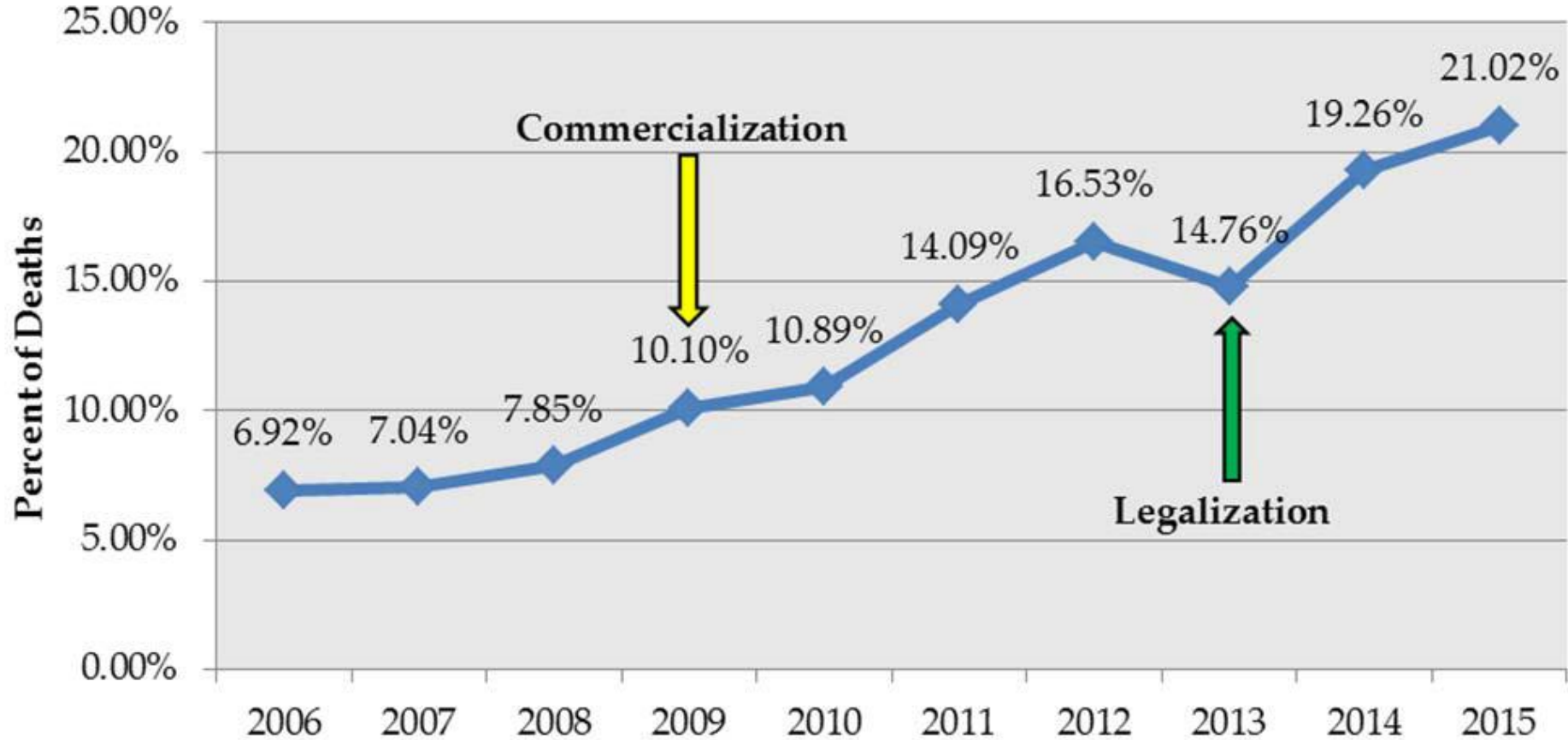
Legalized Medical Marijuana Only

Marijuana Not Yet Legalized

*Cannabis use in CO amongst 12-17yr olds is highest*

SOURCE: SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014

# Percent of All Traffic Deaths That Were Marijuana-Related\*



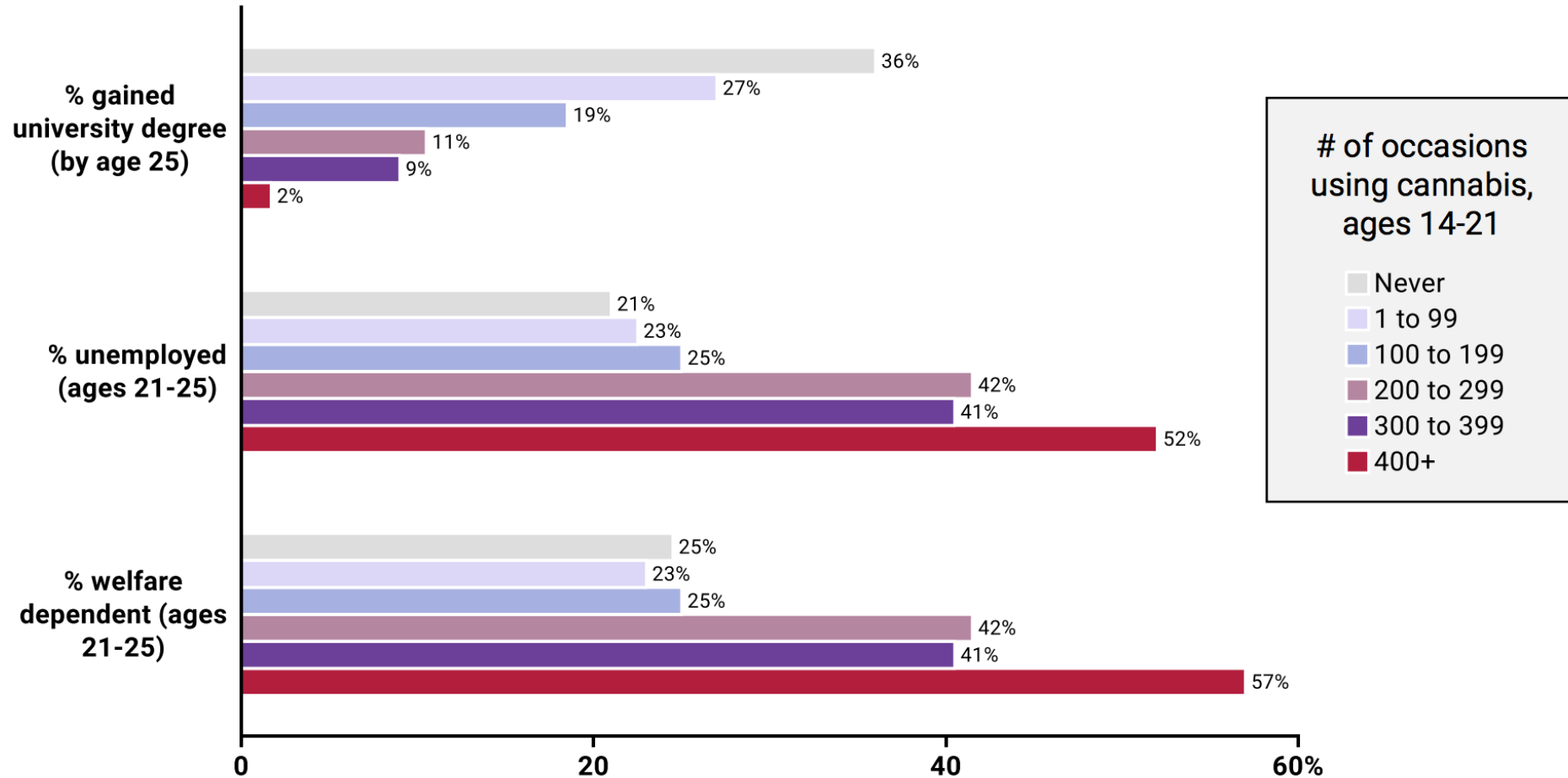
\*Percent of All Fatalities Where the Operators Tested Positive for Marijuana

*Increase in cannabis-related traffic deaths in CO*

Mohini Ranganathan

SOURCE: NHTSA, Fatality Analysis Reporting System (FARS), 2006-2011 and Colorado DOT 2012-2015

## New Zealand study showing relationship between cannabis use and social outcomes



# Drug Addiction: A Complex Disorder

## HISTORICAL

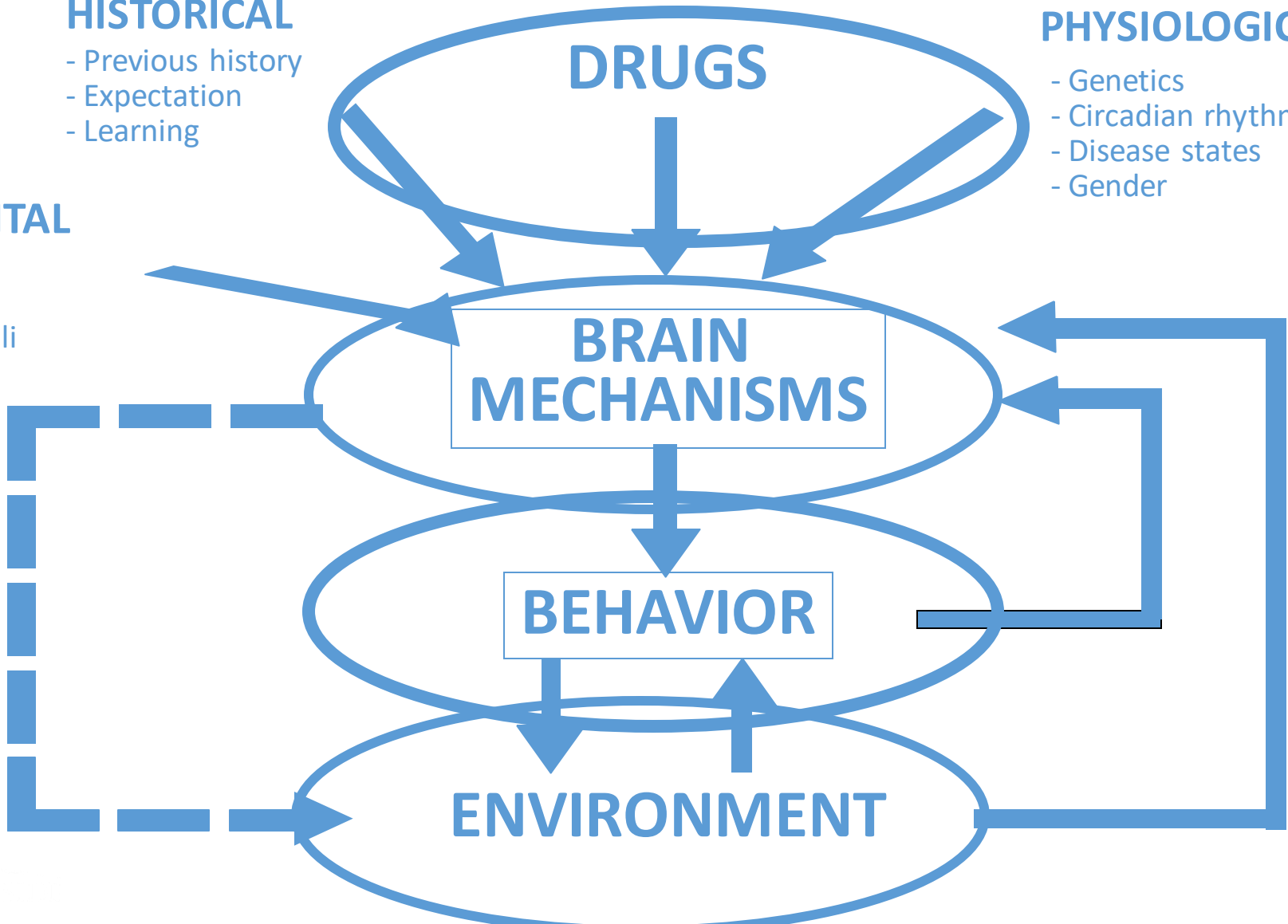
- Previous history
- Expectation
- Learning

## PHYSIOLOGICAL

- Genetics
- Circadian rhythms
- Disease states
- Gender

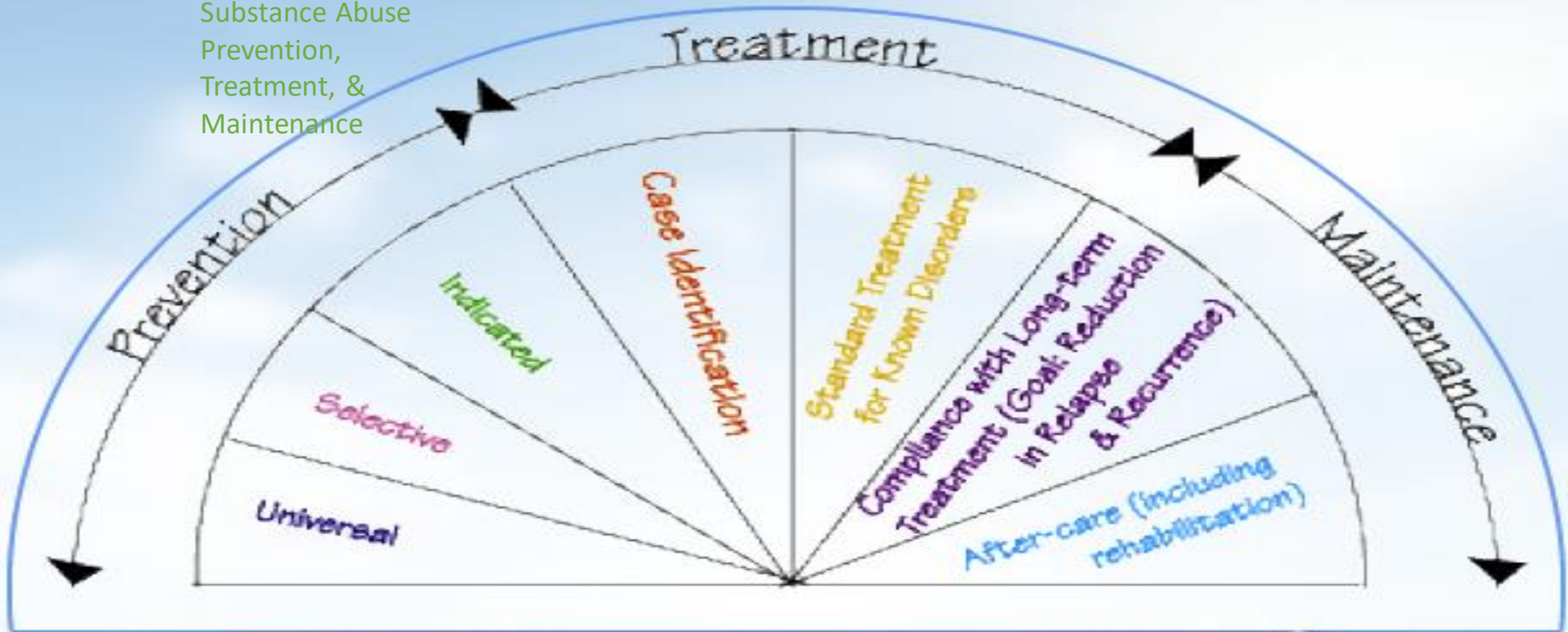
## ENVIRONMENTAL

- Social interactions
- Stress
- Conditioned stimuli



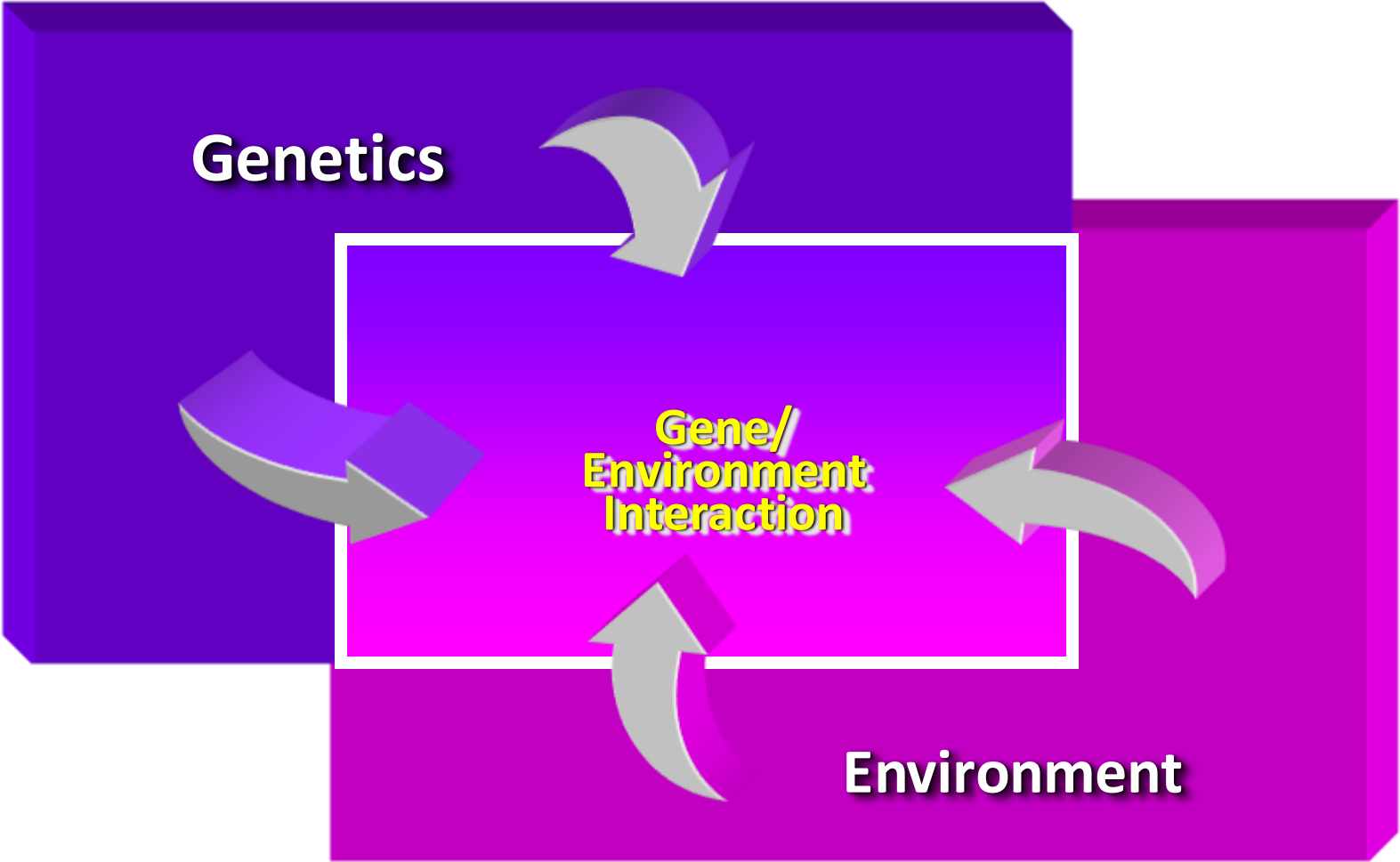
## Institute of Medicine (IOM) Continuum of Care Model:

Substance Abuse  
Prevention,  
Treatment, &  
Maintenance



# Genetics vs. Environment

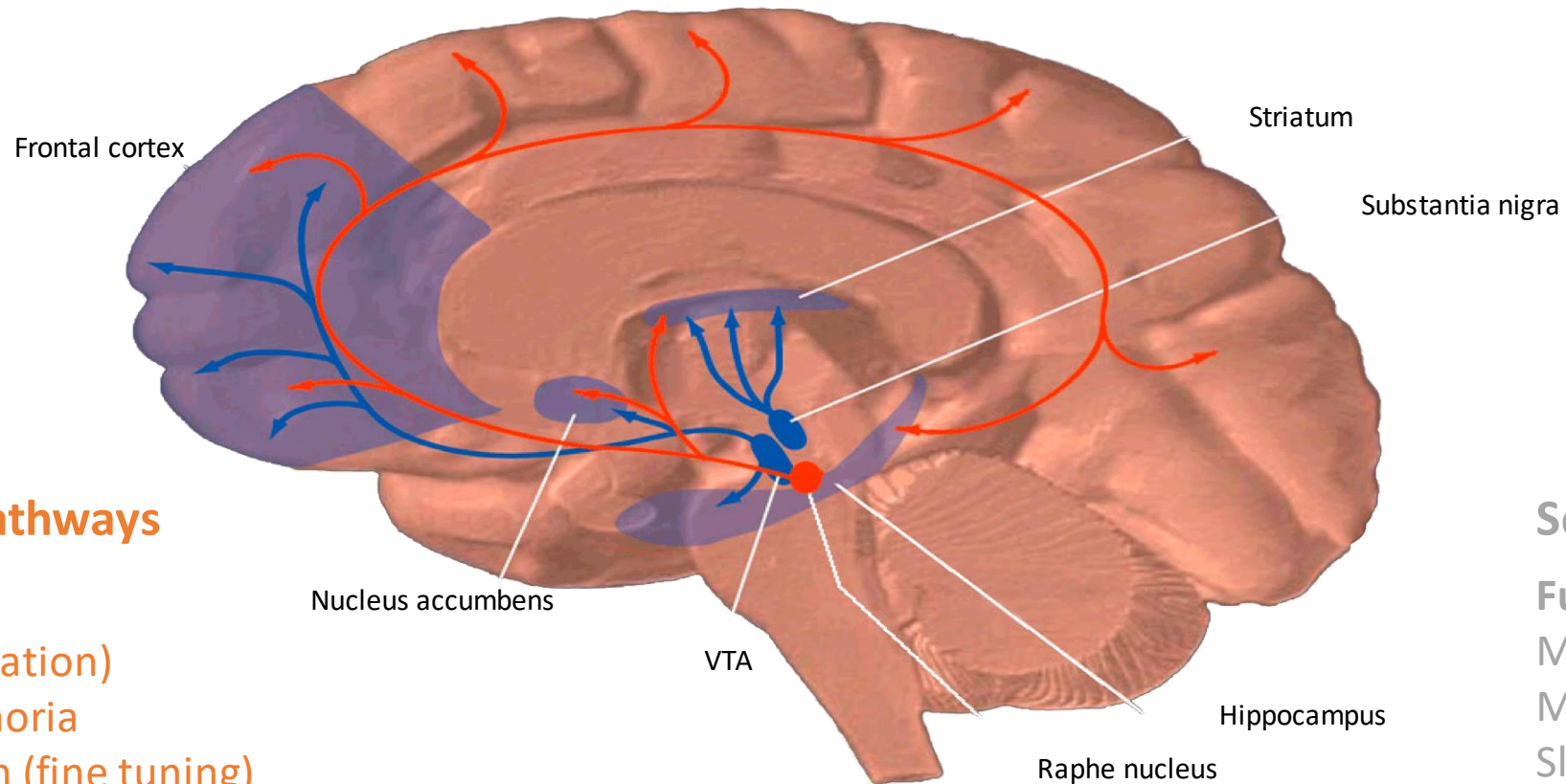
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# How Drugs Affect Brain Function

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## Dopamine Pathways

### Functions

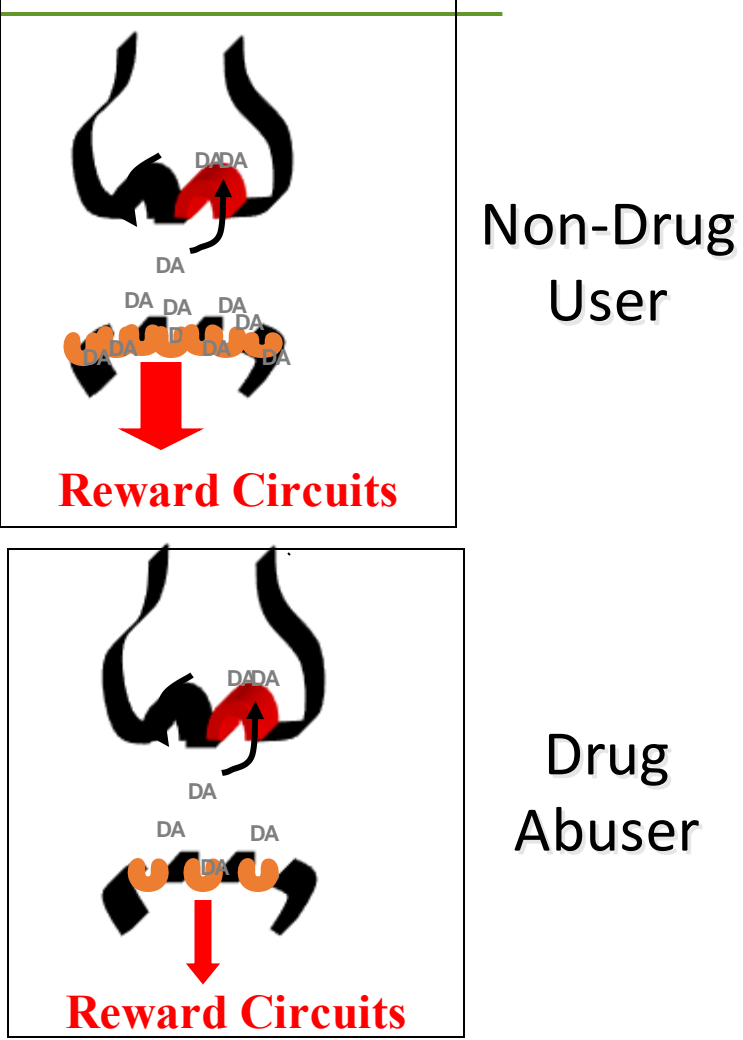
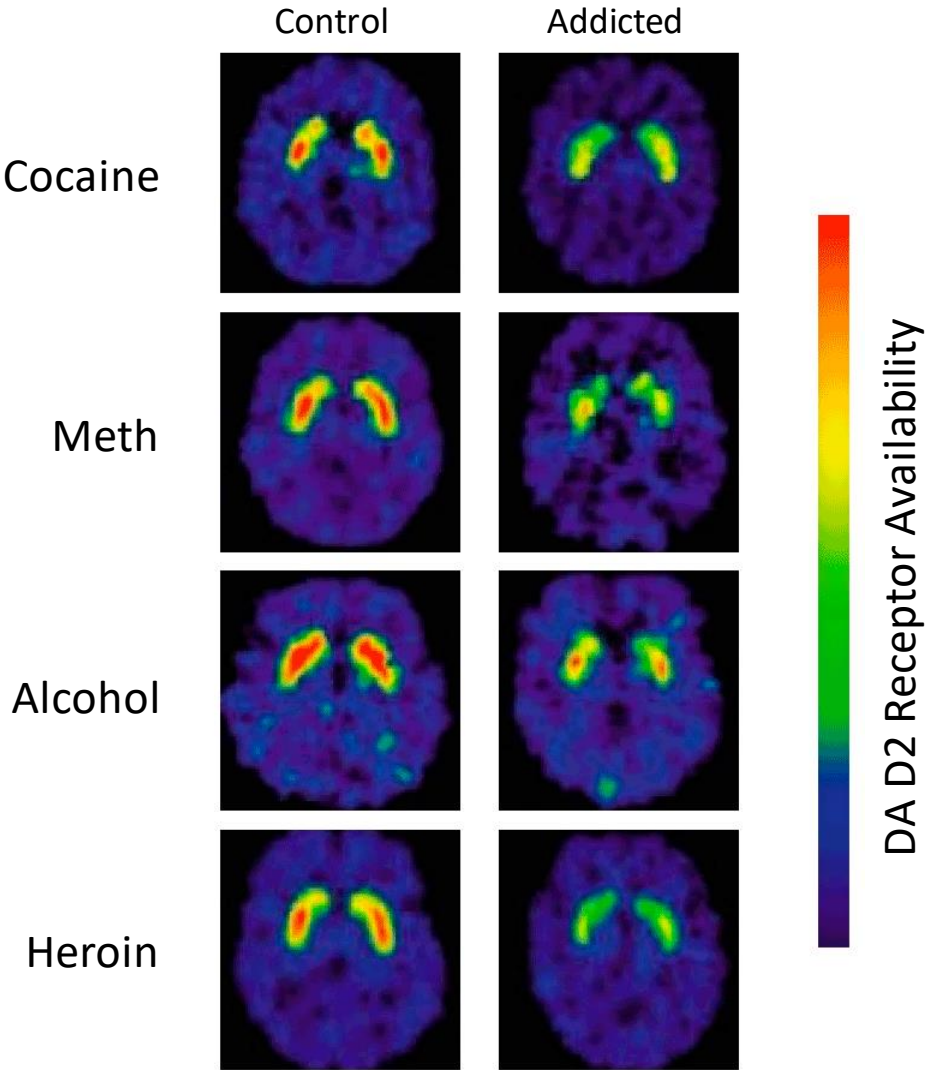
- Reward (motivation)
- Pleasure, euphoria
- Motor function (fine tuning)
- Compulsion

## Serotonin Pathways

### Functions

- Mood
- Memory processing
- Sleep
- Cognition

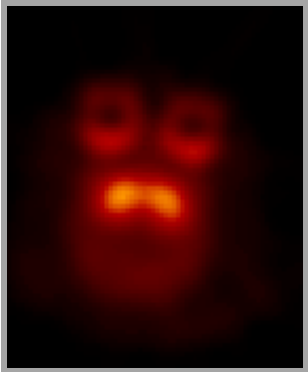
# Dopamine D2 Receptors Are Lower in Addiction



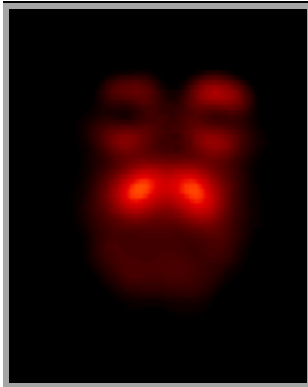
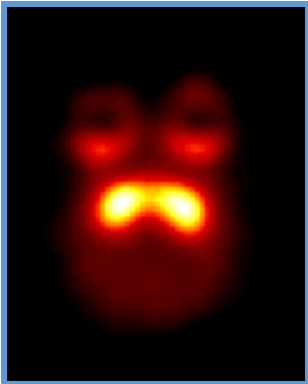


# Effects of a Social Stressor on Brain

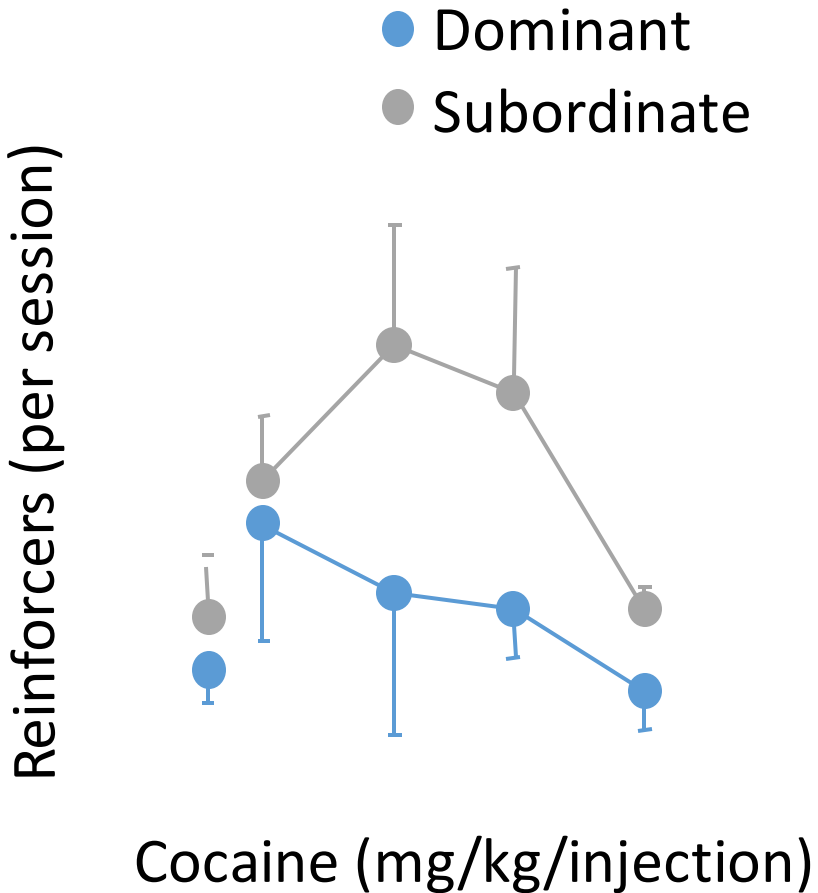
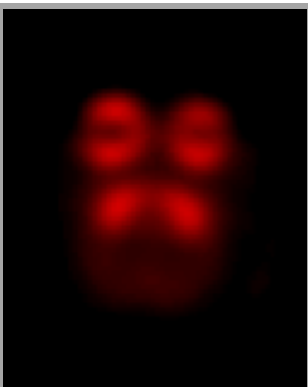
## Isolation Can Change Neurobiology



Becomes Dominant  
No longer stressed



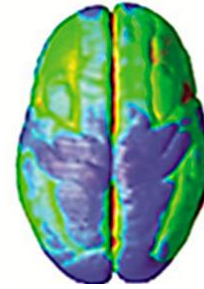
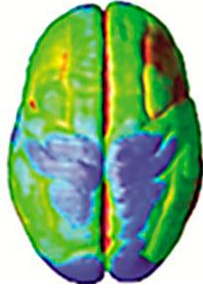
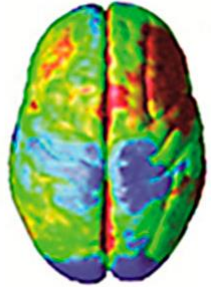
Becomes Subordinate  
Stress remains



Morgan, D. et al. Nature Neuroscience, 5: 169-174, 2002.

# Impact on Brain Development

Exposure to drugs of abuse during adolescence could have profound effects on brain development & brain plasticity



Adolescence is a period of profound brain maturation


It was believed that brain development was complete during childhood

The maturation process is not complete until about age 24!!!

# INSIDE THE ADOLESCENT BRAIN

The brain undergoes two major developmental spurts, one in the womb and the second from childhood through the teen years, when the organ matures by fits and starts in a sequence that moves from the back of the brain to the front.

## Nerve Proliferation ...



By age 25, the brain has 100 billion neurons. The majority of the brain's neurons have formed in the womb. The rest are produced throughout life, but most of them die off before they reach maturity.

### Corpus Callosum

This thick band of nerve fibers connects the left and right hemispheres of the brain. During adolescence, the corpus callosum undergoes a process called myelination, which speeds up the transmission of nerve impulses.

### Prefrontal Cortex

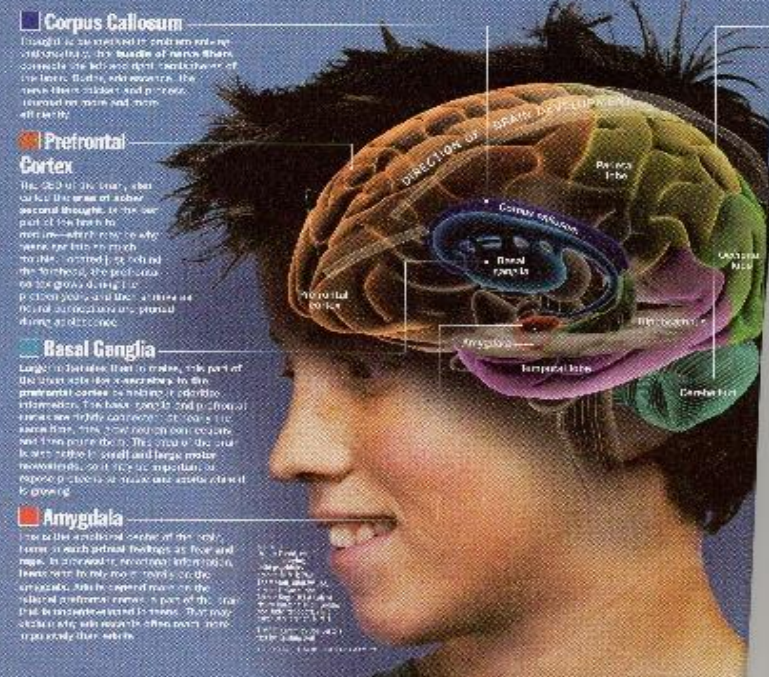
The part of the brain that controls the way we think, act, and feel. It is the last part of the brain to mature, and it continues to develop throughout adolescence. This area is responsible for decision-making, planning, and impulse control.

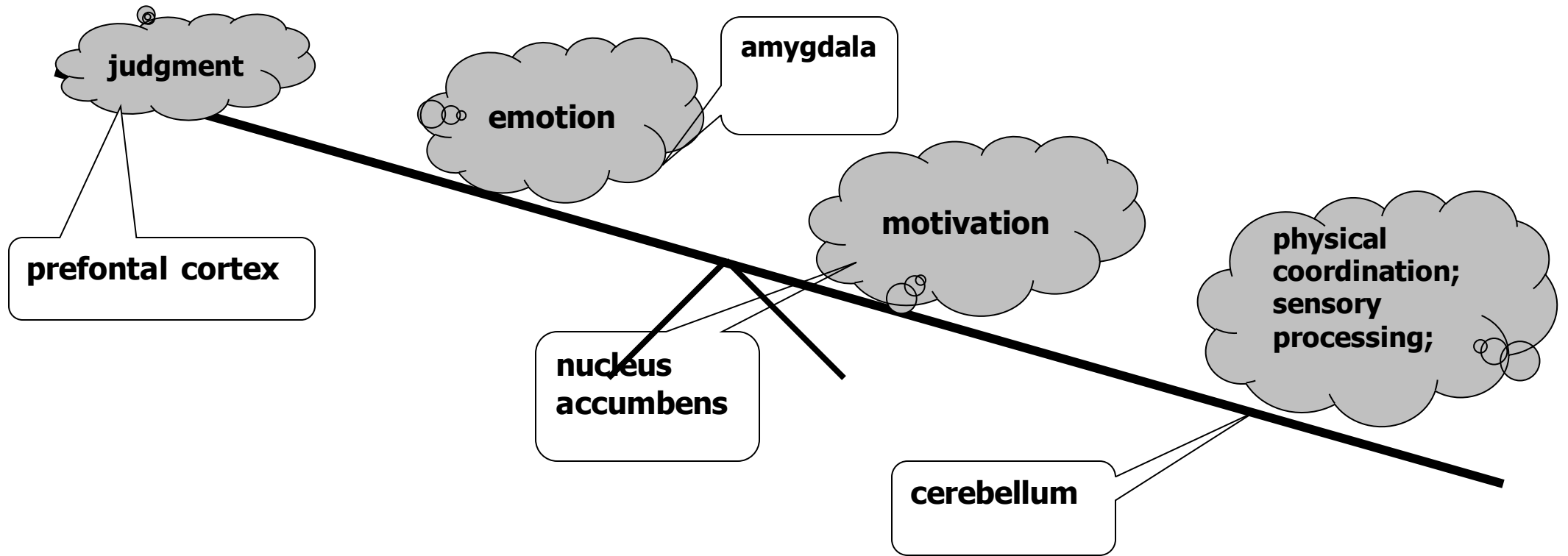
### Basal Ganglia

These structures are involved in movement, learning, and habit formation. They help coordinate voluntary movements and are important for motor control.

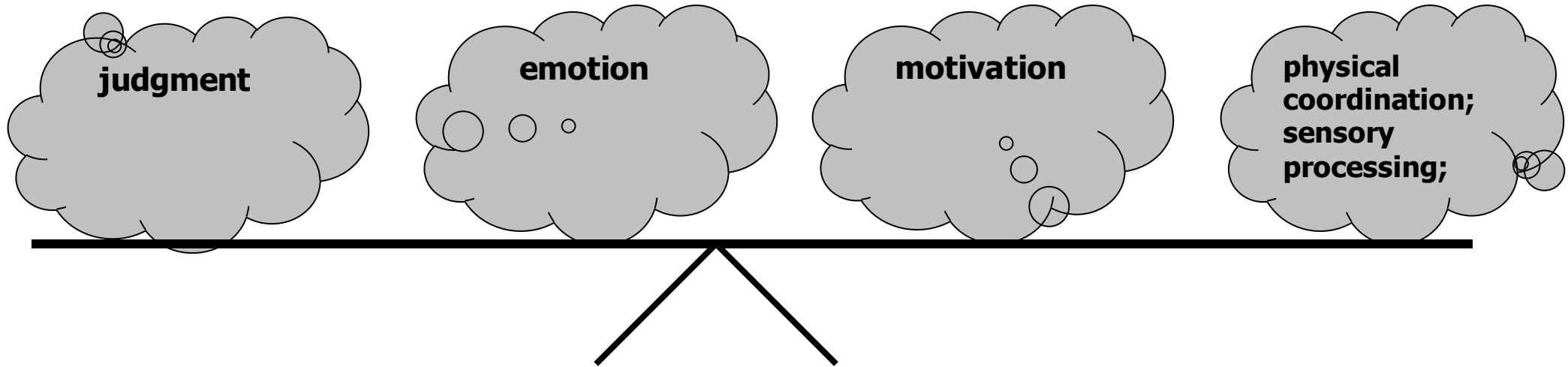
### Amygdala

This almond-shaped structure is involved in emotion, memory, and decision-making. It plays a key role in processing social information and is important for understanding other people's feelings.





# Age 24

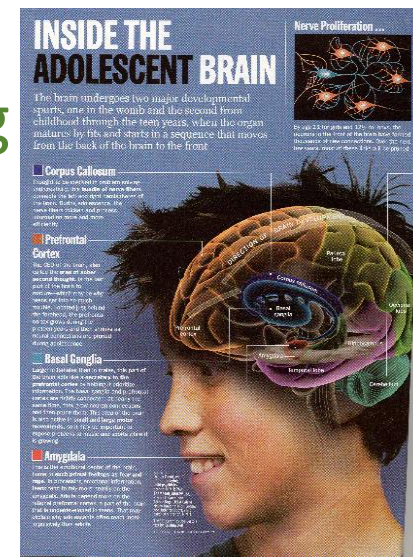


- **Neurodevelopment likely contributes to....**
  - **> risk taking (particularly in groups)**
  - **> propensity toward low effort - high excitement activities**
  - **> interest in novel stimuli**
  - **< capacity for good judgment & weighing consequences**



## Arrested Development

- Back of brain matures before to the front of the brain...
  - sensory and physical activities favored over complex, cognitive-demanding activities
  - propensity toward risky, impulsive behaviors
    - group setting may promote risk taking
  - poor planning and judgment





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## Can Addiction be Prevented by Delaying Drug Use Onset?

- **Every year use of a substance is delayed, the risk of developing a substance use disorder is reduced.**

# CRAFFT

---

➤ Car

➤ Relax

➤ Alone

➤ Family or Friends

➤ Forgot

➤ Trouble

# Treatment

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## **Prevalence of Co-Occurring Disorders**

Estimates of psychiatric co-morbidity among clinical populations in substance abuse treatment settings range from 50-70%

Estimates of substance use co-morbidity among clinical populations in mental health treatment settings range from 20-50%

\*Flynn and Brown, Co-Occurring Disorders in Substance Abuse Treatment: Issues and Prospects, *Journal of Substance Abuse Treatment*. January 2008.

## Search Institute's The Origin of "Assets"

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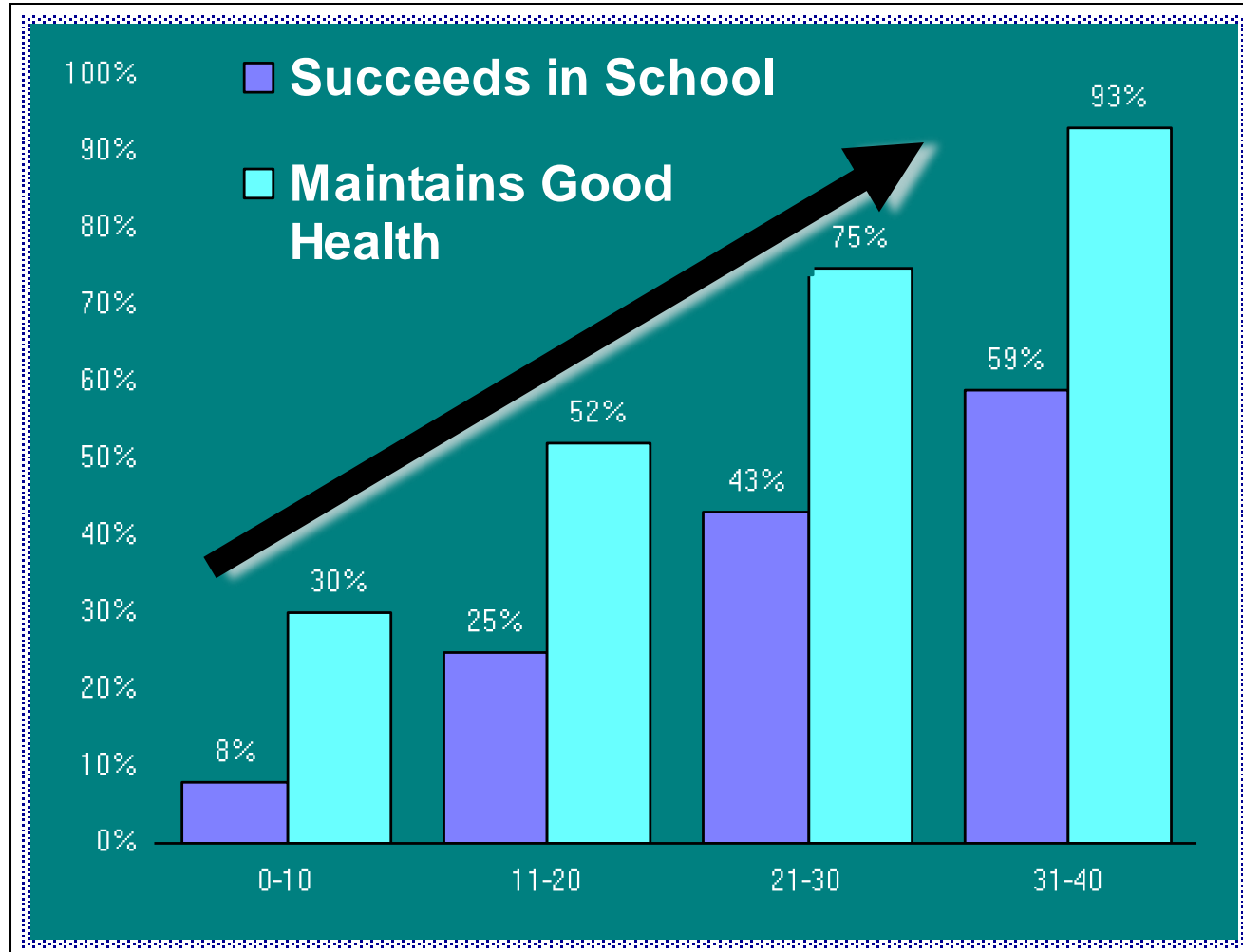
### External Assets

- Support and Caring Relationships
- Empowerment
- Boundaries and Expectations
- Constructive Use of Time

### Internal Assets

- Commitment to Learning
- Positive Values
- Social Competencies
- Positive Identity

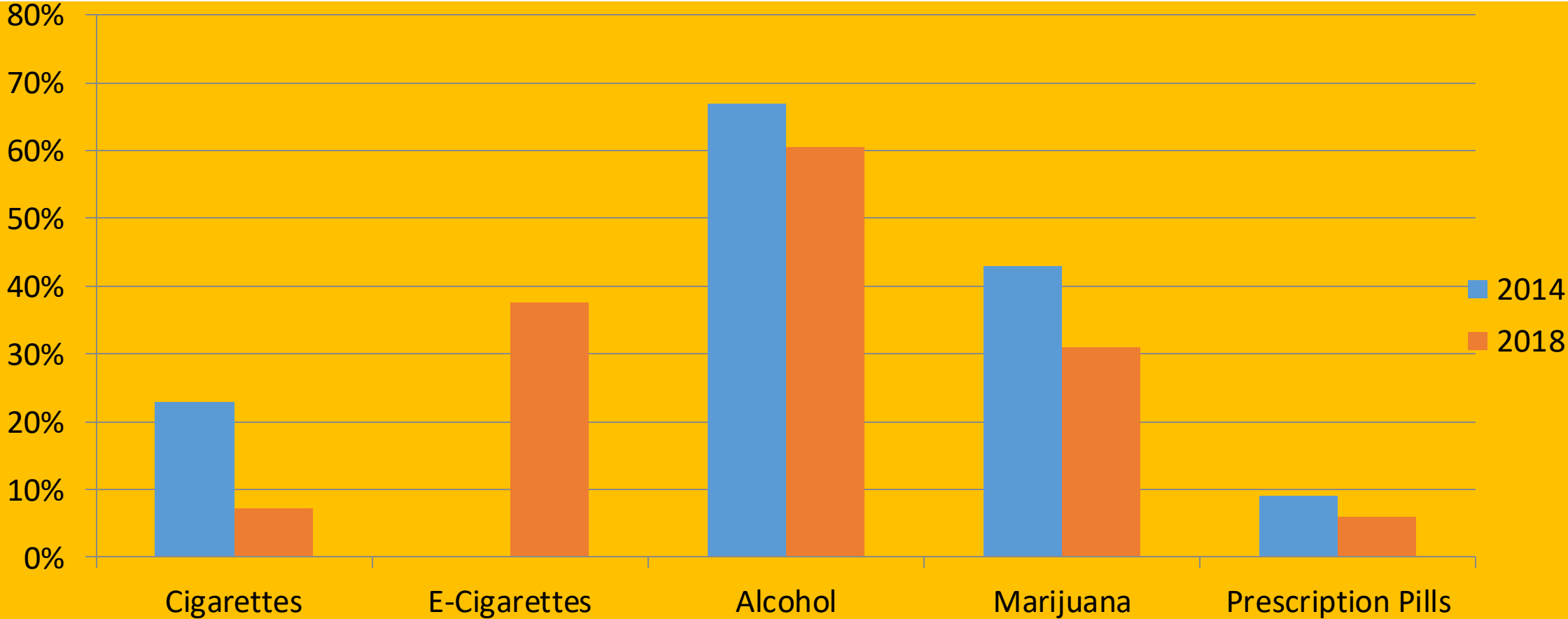
## Thriving Indicators by Asset Level



# Darien Students' Asset Results

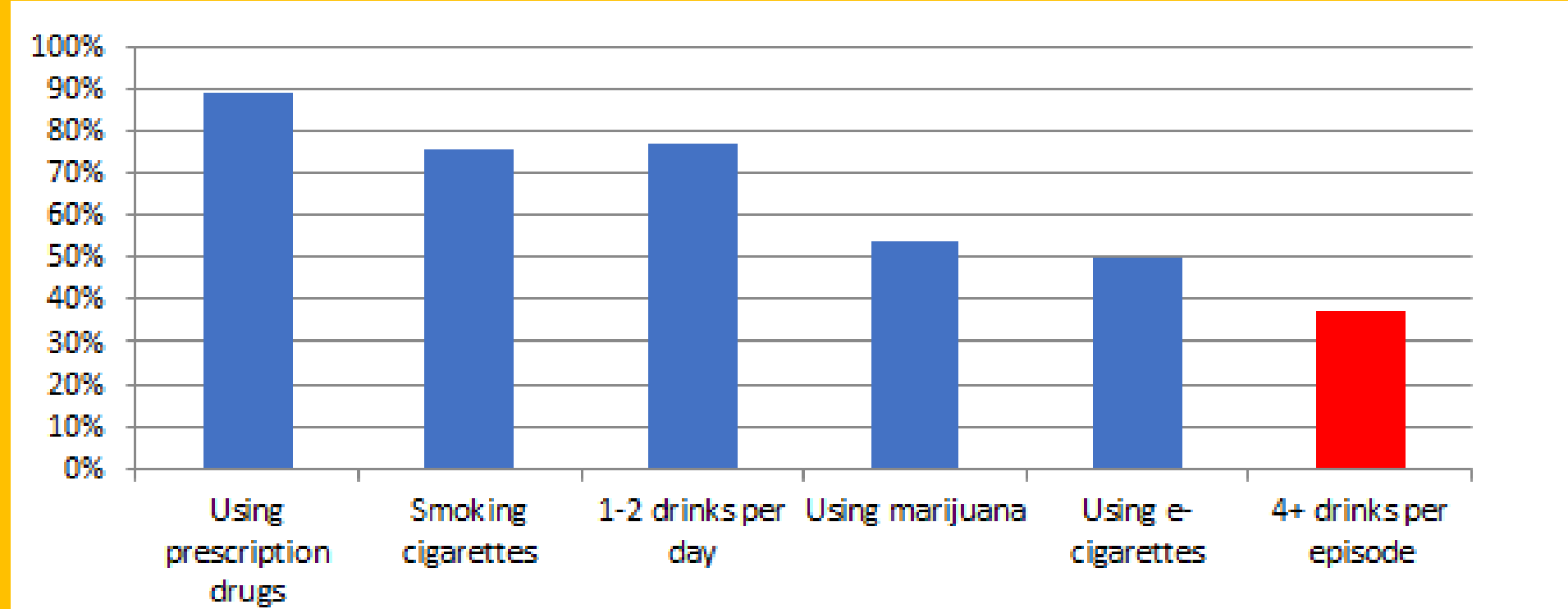


# 30 Day Prevalence of Substance Use for 12<sup>th</sup> Graders 2014 vs. 2018





# 12<sup>th</sup> Graders Perception of Parental Disapproval of Substance Use 2018



# Why do students drink?

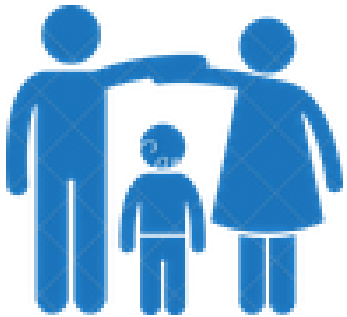


Friends; Peer Pressure; To Have Fun

Stress; To Feel Better

Ready Availability of Alcohol; Curiosity

# Students report deterrents to drinking



Parent  
Rules



License  
Suspension



Breathalyzer

# Search Institute's Asset Framework

The Search Institute has been researching how children and teens grow up healthy for **50 years**.

They have surveyed over **5 million students** around the globe.

The Search Institute has identified 40 positive experiences and qualities that help young people grow up healthy, caring and responsible.

# WHERE ARE WE STRONG?

- SUPPORT
- EMPOWERMENT
- COMMITMENT TO LEARNING
- CONSTRUCTIVE USE OF TIME

# WHERE ARE WE ADEQUATE?

- BOUNDARIES & EXPECTATIONS
- POSITIVE VALUES
- SOCIAL COMPETENCIES

# What do youth need from parents?

- Positive Reinforcement
- Ground rules
- Support, Love & Encouragement
- Realistic Expectations
- Don't live through your kids
- Communication
- Ability to Fail
- Openness
- Being a role model for kids
- Judgement free outlet

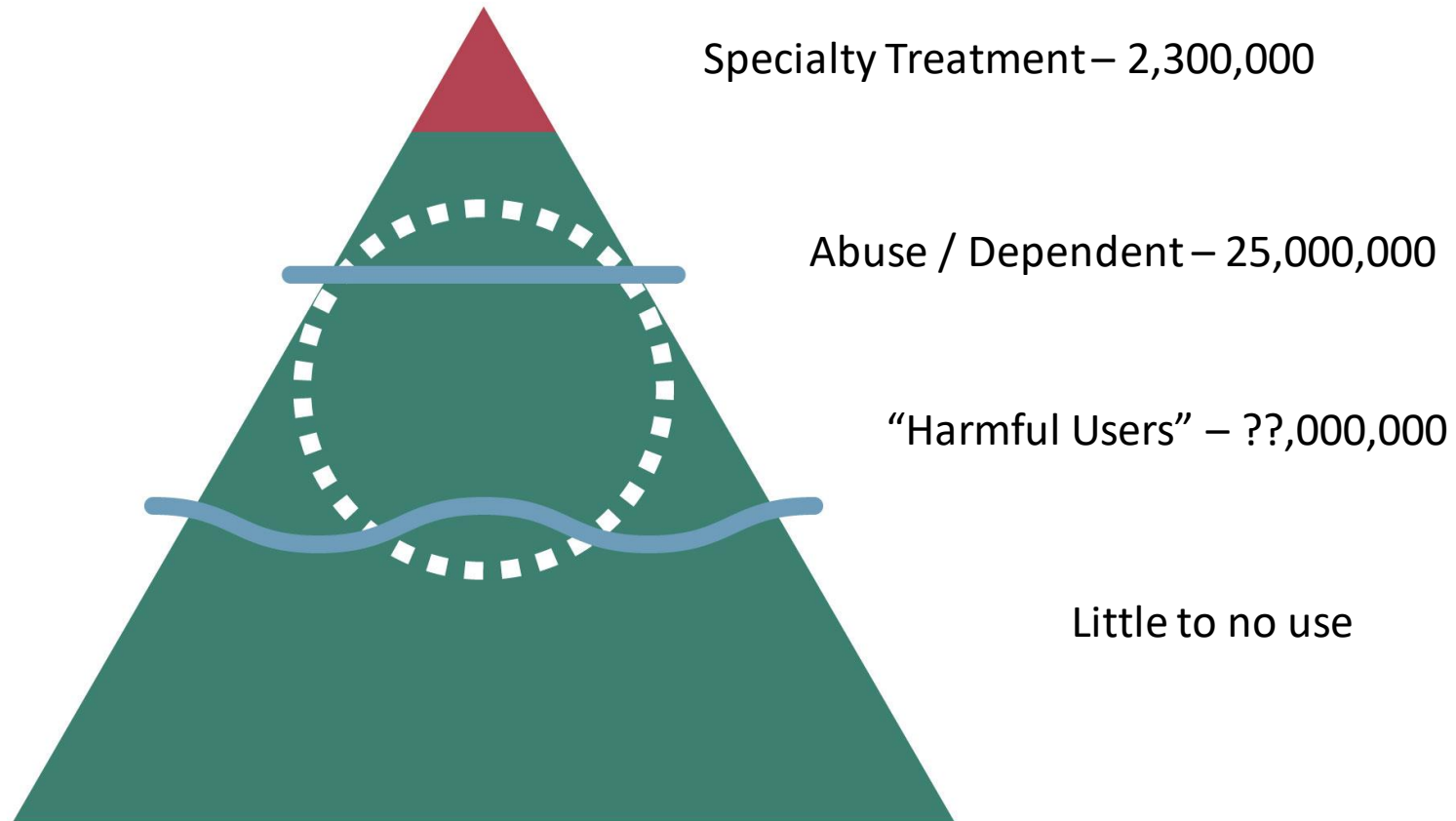


## RISK AND PROTECTIVE FACTORS

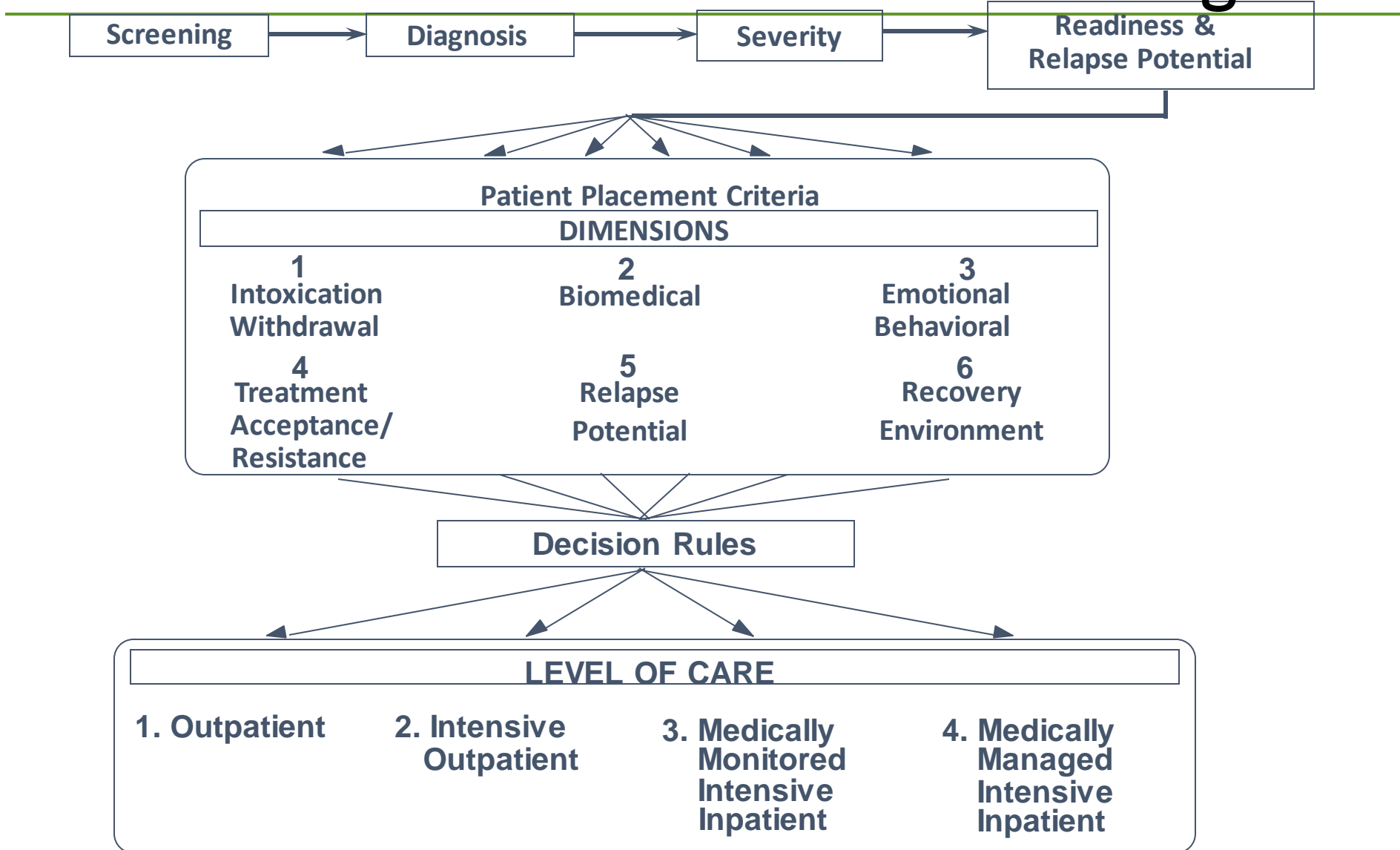
<i>Risk Factors</i>	<i>Domain</i>	<i>Protective Factors</i>
Sensation-seeker	Individual	Successful student
Child of drug user		Bonds with family
No supervision	Family	Consistent discipline
Parent/sibling drug use		Anti-drug family rules
Pro-drug use norm	School	Anti-drug use norm
Availability of drugs		High academics
Crime/poverty	Community	Consistent anti-drug message
No afterschool programs		Strong law enforcement

# Who Gets Treatment?

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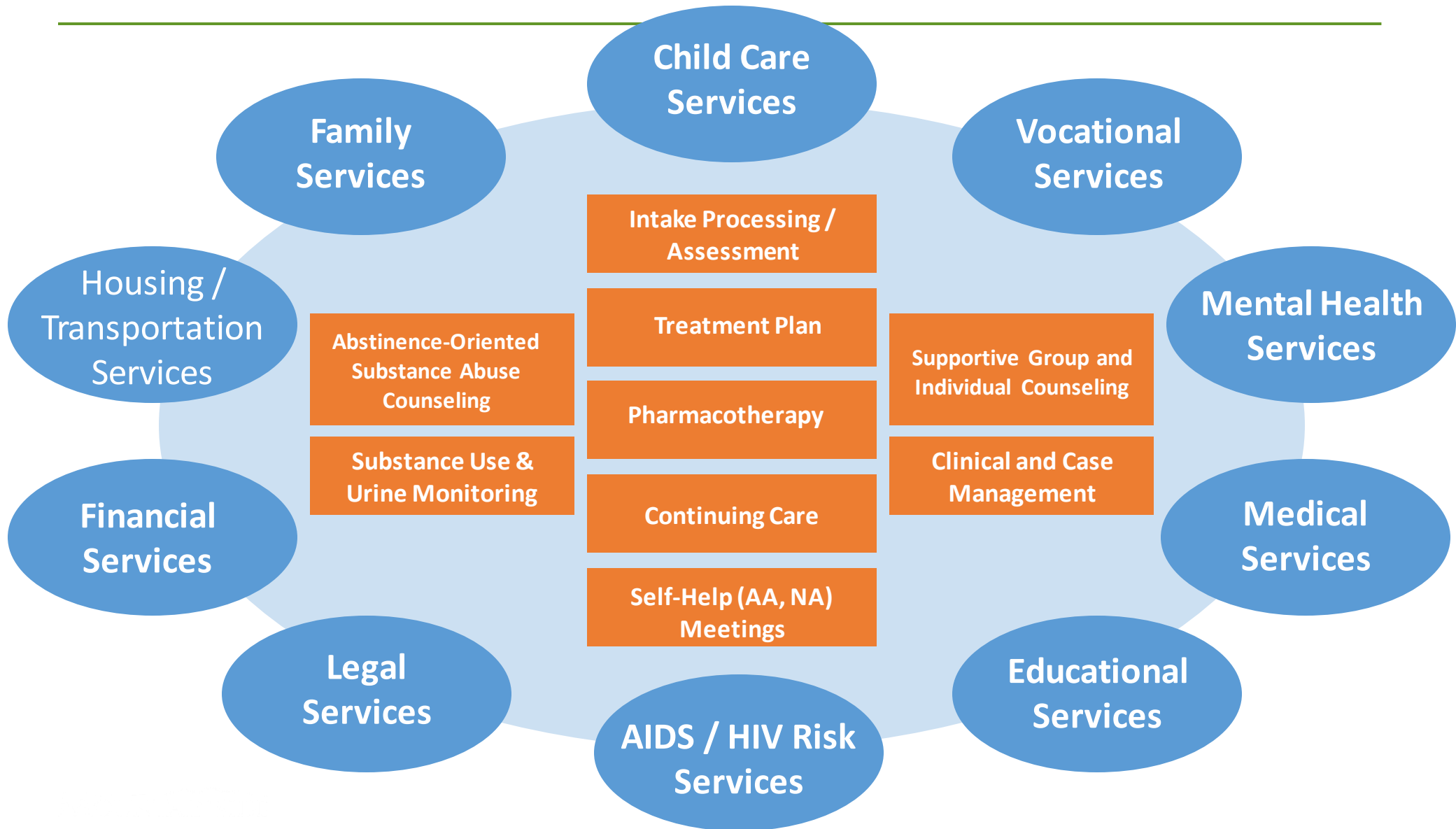


# The ASAM Criteria for Treatment Matching

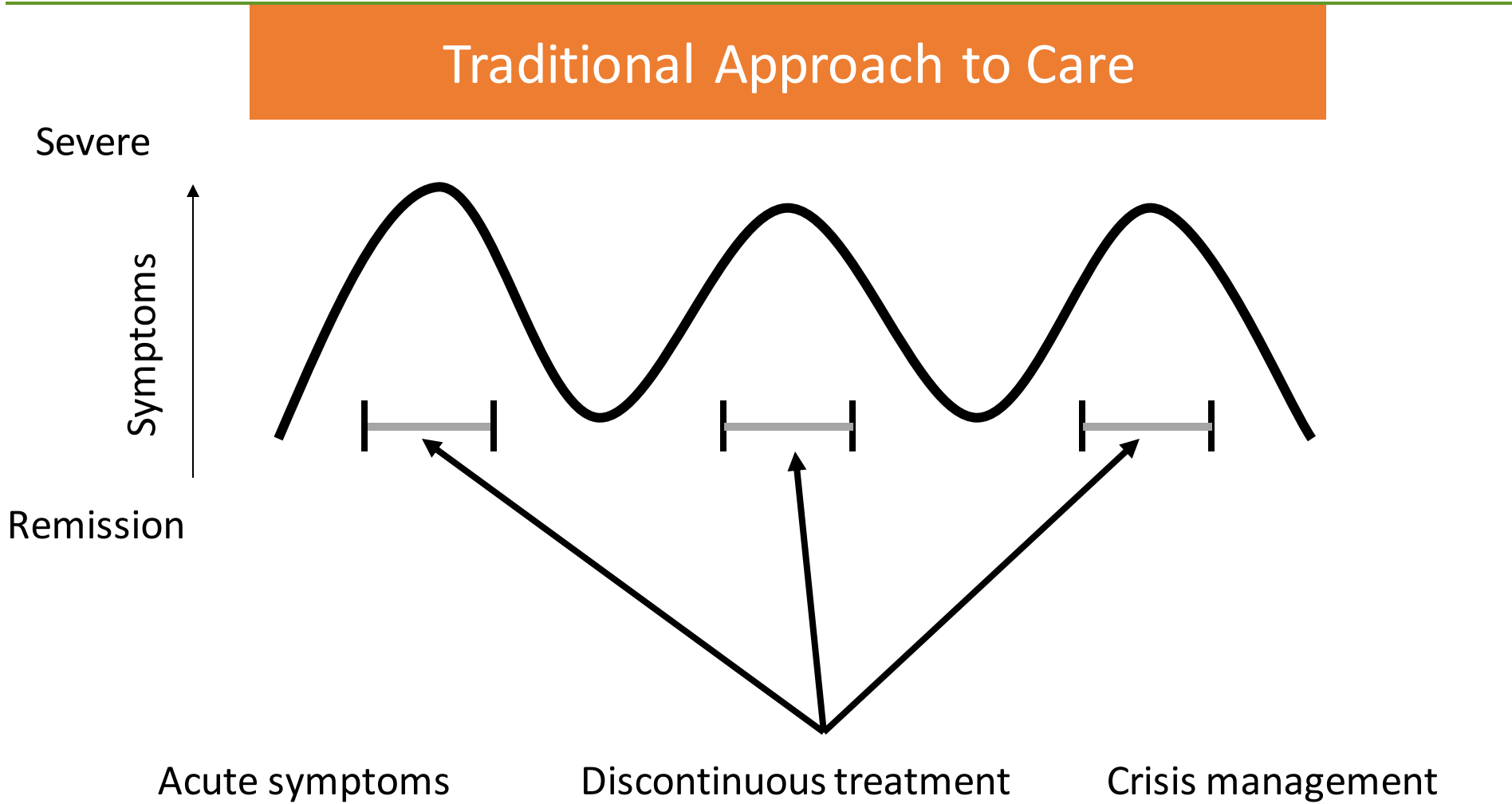


# Treatment: Core Components and Services

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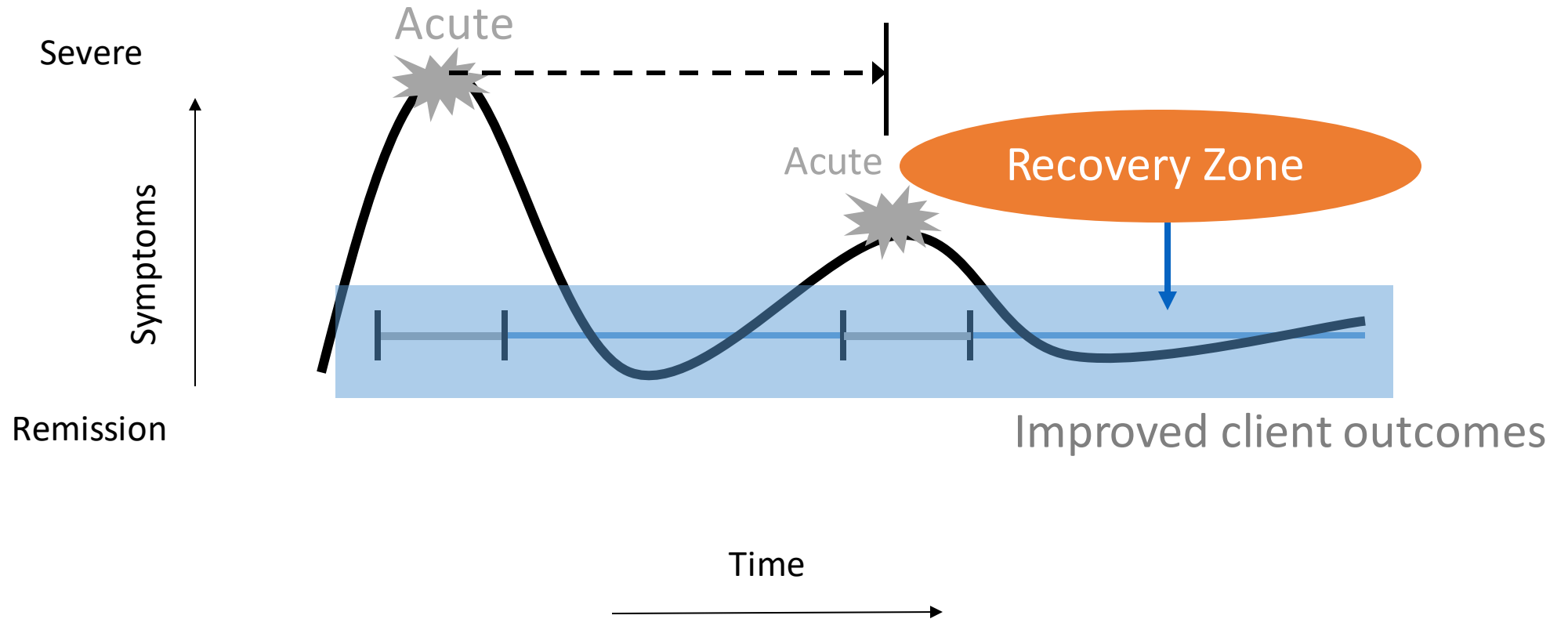


# Treatment Episodes Are Cyclical and Recurrent



# Goal: Helping People Move into Recovery Zone

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# What is a Recovery Coach?

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- Research shows ***trained peers*** with shared experiences have a higher success rate at engaging individuals in need of help.
- Work with people affected by alcohol/substance use disorders.
- Coaches don't diagnose or treat addiction.
- Focus on the future; they do not explore past feelings or trauma.
- Help with decision making, plans towards recovery that will improve lives, one step at a time.
- Provide support in following through.
- Knowledgeable about “multiple pathways” of recovery.

# Multiple Pathways of Recovery

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- 12-step (AA, NA, CA, ACA, DRA, Women in Sobriety)
- Religious (Celebrate Recovery, Alcoholics for Christ, Pioneer Association) or Spiritual (Refuge Recovery, White Bison)
- Secular (Life Ring, SMART)
- Medicated Assisted Treatment- Methadone, Suboxone, Vivitrol
- Wellness based (Yoga, Meditation, Qigong, Tai-Chi, etc.)
- Active Sober Community (Phoenix Multi-Sport, ROcovery Fitness, Fit2Recover, etc.)
- Online Recovery Supports (In the Rooms, Apps, Daily Affirmations, etc.)



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## NIAAA Guidelines

- Men-less than 4 drinks daily/14 per week total
- Women-less than 3 drinks daily/ 7 per week

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# DRINKING PATTERNS

- Never exceed the daily or weekly limits-1 in 100
- Exceed only the daily limit-1 in 5
- Exceed both daily and weekly limits -1 in 2

# Medical system “ill-prepared” for new wave of older adult substance abusers

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- Gerontologists in short supply.
- Physicians receive little-to-no training in addiction.
- Few age-specific treatment programs.

- **Adults 60+: substance abuse one of U.S. fastest growing health problems.**
- **Baby boomers retiring: 10,000 a day.**
- **85+ fastest-growing demographic.**

# Factors contributing to substance abuse

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- Grief (loss of spouse, job, ability to function.)
- Trauma (elder abuse).
- Boredom / Loneliness. Particularly for late onset drinking.
- Family history of alcoholism
- Gender: men more at risk for alcohol abuse; women more at risk for psychoactive medication abuse.
- Previous history of substance abuse
- Cognitive impairment

# Patterns of older adult substance use disorders

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- Early-onset:
  - substance use disorders develop before age 65.
  - psychiatric and physical problems tend to be higher than late-onset (Bogunovic, 2012).
- Late-onset:
  - substance abuse develops after stressful life situation (death of partner, retirement.)
  - boredom and loneliness high risk factors.
  - Addiction can occur unintentionally (Bogunovic, 2012).

Chronic pain is a high risk factor for both categories (Shallow, 2014).

Prescription drug misuse often overlooked in elderly (Doweiko, 2014).

The use of alcohol with pain pills is a common occurrence.(Neagle, 2012).

IF YOU MEET PEOPLE  
WHERE THEY ARE YOU  
WILL ALWAYS WALK AWAY  
WITH EMPATHY AND NEW  
UNDERSTANDING

# ALWAYS ASSESS

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- ABILITY
- WILLINGNESS

- 
- Trust vs Faith



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Everyone makes the best decisions available  
to them at the time with the choices  
available to them

Do what the relationship allows for the moment

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- WHO BELIEVED IN YOU?

- ( HOW DID YOU KNOW?)

- What messages do you give your kids that you believe in them, have faith in them?

- 
- Listen
  - Understand
  - Take serious
  - Affirm

## Reasonable parenting

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- based on who your child is not who you think they should be
- show them how much you care before you show them how much you know

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## ENJOY YOUR MATE MORE THAN YOUR CHILDREN

- The greatest gift a father can give to his children is to love their mother and the greatest gift a mother can give to her children is to love their father
  - This is where kids learn intimacy and dignity and respect

# Intimacy=Sharing

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1. Recreational
2. Aesthetic
3. Social
4. Intellectual
5. Emotional
6. Spiritual
7. Physical

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- DEPERSONALIZE
  - BE NICE AND FORGIVE  
(STAY THE ADULT)

- 
- Tailor intervention based on your relationship with your friend or family member and their relationship with alcohol and drugs



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## Dysfunctional Family

- There is no such thing as a dysfunctional family. All behavior is adaptive and has a function.

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# Enabling

- Everyone shows love the best they know how.
- **HELP FAMILY MEMBERS REALIGN AND REDEFINE RELATIONSHIPS IN A MANNER WHICH PROMOTES RECOVERY FOR EACH FAMILY MEMBER**

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- **WHO BELIEVED IN YOU?**  
( HOW DID YOU KNOW?)

- 
- THE MORE YOU SHOW YOUR HUMANESS, THE MORE YOU ARE LOVABLE  
(FAMILY MEALS)

- 
- What messages do you give your kids that you believe in them, have faith in them?

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# Mental Health

- Lovable
- Capable
- Connected