

## *What is Addiction?*



# Definition of Addiction

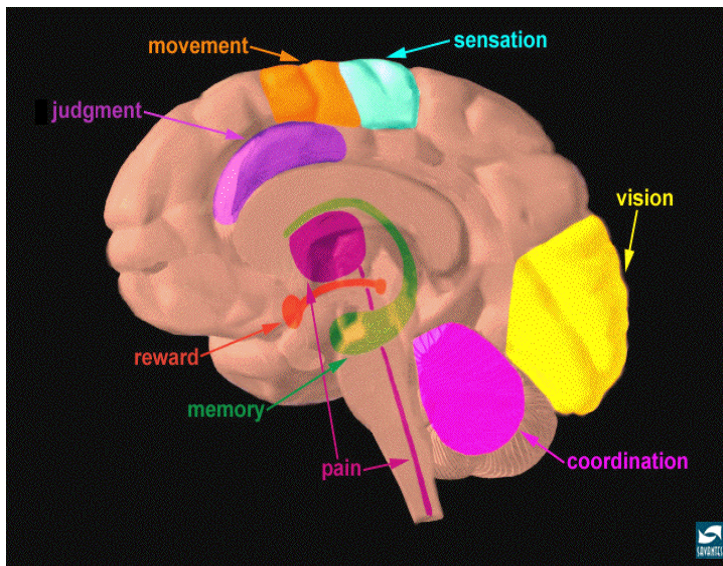
- is a primary, chronic disease of brain reward, motivation, memory & related circuitry



# Addiction

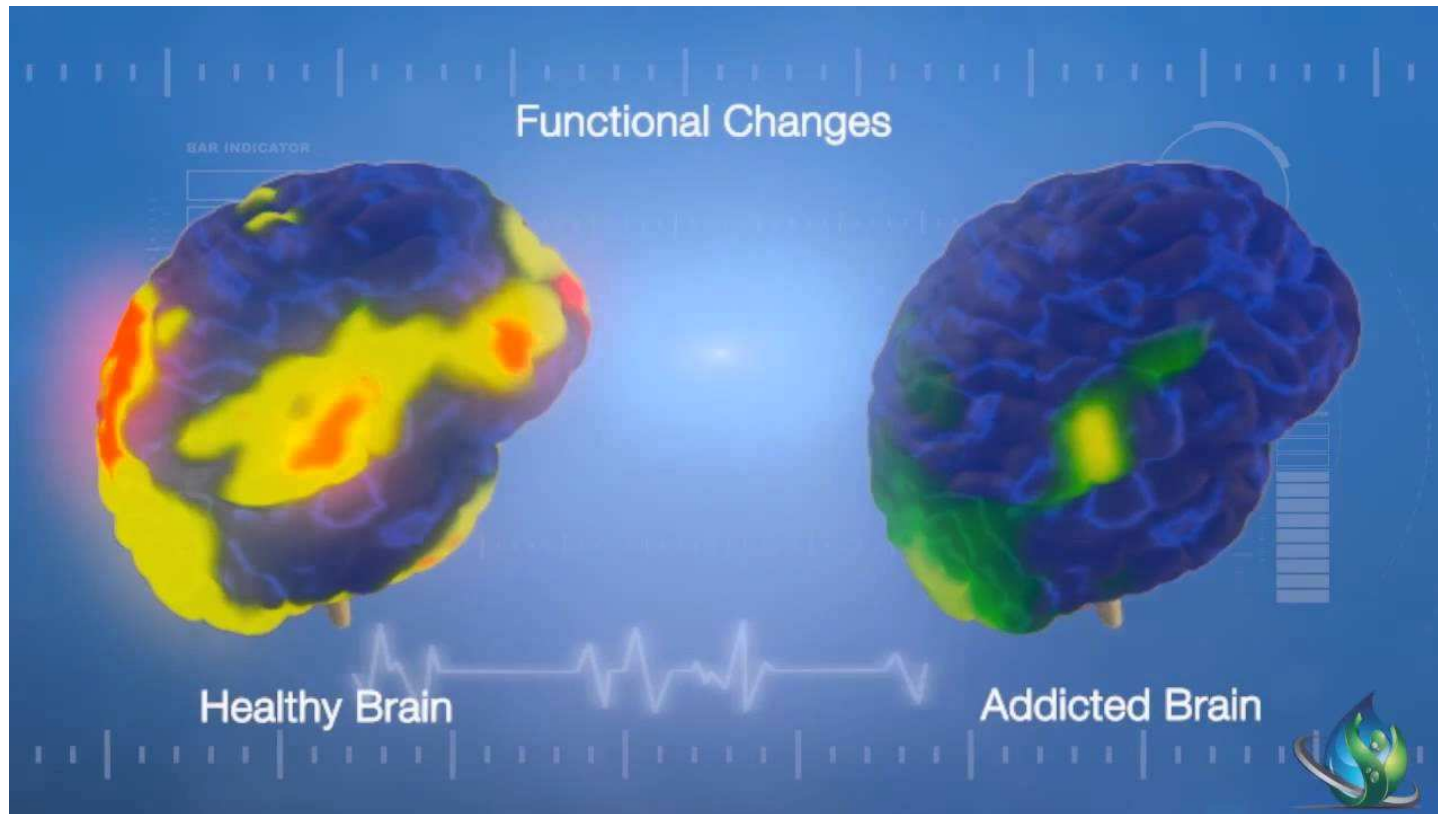
- Dysfunctional in these circuits leads to characteristic manifestation: biological, psychological, social and spiritual. This is reflected in an individual pathologically pursuing rewards and/or relief by substance use and other behavior

# Addiction



- Reward center is the region of brain that responds to sensation of pleasure
- Dopamine naturally stimulates the reward center
- Many drugs simulate this process

# Addiction





# Addiction







## Psychological

- One of the psychological effects of addiction involved in craving is the belief the addict cannot function or handle life without use of the drug.

# Psychological

“Kiwi Nugget” video

[http://www.huffingtonpost.ca/2014/11/24/nuggets-kiwi-video-addiction\\_n\\_6211766.html](http://www.huffingtonpost.ca/2014/11/24/nuggets-kiwi-video-addiction_n_6211766.html)

# Psychological

- Other psychological effects of drug addiction include: Wild mood swings, depression, anxiety, paranoia, violence. Decrease in pleasure in everyday

# Psychological



# Psychological



# Psychological



## Social

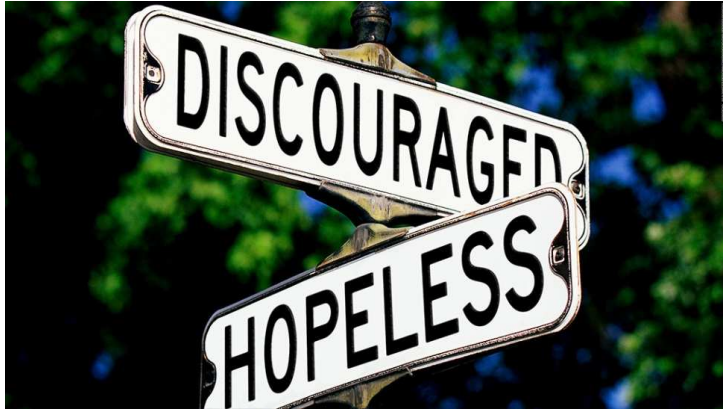
- Spending a lot of time obtaining & pursuing
- Repeatedly unable to carry out major obligations at work, school, or home
- Financial difficulties
- Relationship problems
- Having problems with the law
- Dropping hobbies and activities
- Social and/or recreational sacrifices

# Spiritual

“spirituality is the aspect of humanity that refers to the way individuals seek and express meaning and purpose and the way they experience their connectedness to the moment, to self, to others, to nature, and to the significant or sacred”

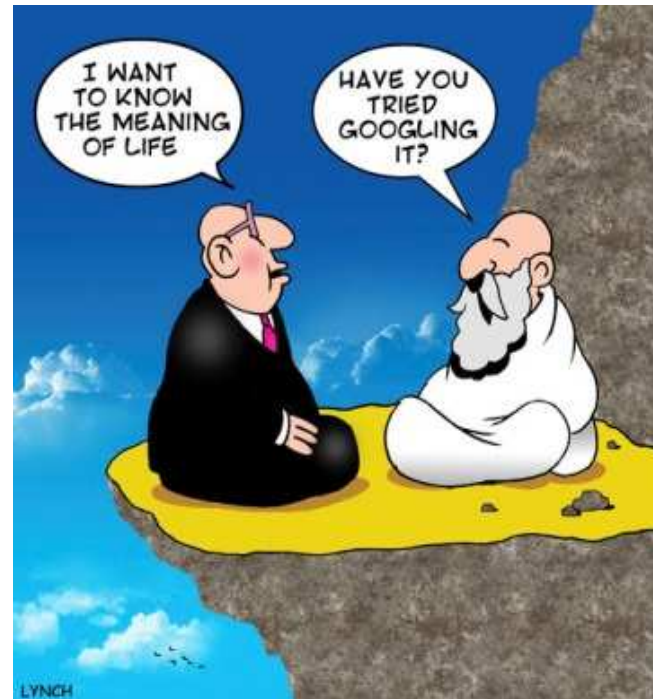


# Spirituality



# Spirituality

sense of **connection** to something bigger than ourselves, and it typically involves a search for meaning in life.



# What is Recovery?

re·cov·er·y

rə'kæv(ə)rē/

noun

1. a **return** to a normal state of health, mind, or strength.
2. the action or process of **regaining** possession or control of something stolen or lost.

## Project: “What is Recovery”

- August 2010
- Funded by National Institutes of Health
- 4 years
- 9,341 people in recovery from different pathways (12 steps group, other support group, treatment, medication assisted, moderation and “doing it on your own”).
- Project was to develop a way of defining recovery base on *how it is experience by those who actually live it.*

# Project: “What is Recovery?”

Recovery definition has 5 sections:

1. Abstinence in recovery
2. Essentials of recovery
3. Enriched recovery
4. Spirituality of recovery
5. Uncommon elements of recovery

# "Abstinence in recovery"

No use of alcohol

No abuse of prescribed medication

No use of non-prescribed drugs

# "Essentials of Recovery"

Being honest with myself

Being able to enjoy life without drinking or using drugs like I used to

Handling negative feelings without using drugs or drinking like I used to

Changing the way I think through things

Not replacing one destructive dependency with another

Taking care of my mental health more than I did before

A realistic appraisal of my abilities & my limitations

Being able to deal with situations that used to stump me

Freedom from feeling physically sick because of my drinking or using

Striving to be consistent with my beliefs & values in activities that take up the major part of my time & energy

Being able to have relationships where I am not using people or being used

Having people around me who know how to get thru life without using alcohol or other drugs like they used to

Getting along with family or friends better than I did before

Trying to live in a place that is not overrun with alcohol or drugs

# “Enriched recovery”

A process of growth & development

Taking responsibility for the things I can change

Reacting to life's ups & downs in a more balanced way than I used to

Living a life that contributes to society, to your family, or to your betterment

Having tools to try to feel inner peace when I need to

Developing inner strength

Improved self-esteem

Taking care of my physical health more than I did before

Learning how to get the kind of support from others that I need

Being the kind of person that people can count on



# “Spirituality of Recovery”

Being grateful

About giving back

About helping other people to not drink or use drugs like they used to

Appreciating that I am part of the universe, something bigger than myself

Becoming more open-minded about spirituality than before

Feeling connected to a spiritual being or force that helps me deal with difficulties in life

Spiritual in nature & has nothing to do with religion

## "Uncommon elements of recovery"

Physical & mental in nature & has nothing to do with spirituality or religion

No use of tobacco

Religious in nature

Non-problematic alcohol or drug use



# RECOVERY = WELLNESS

*Process of change* through which the individual *improves* his health and wellness, live a self directed life and strive to reach their full potential.

- Health
- Home
- Purpose
- Community
- “Spiritual growth”

# RECOVERY = WELLNESS



## RECOVERY = WELLNESS

Abstinence from all drugs *and* behaviors that pathologically stimulates the reward pathways is to be considered an optimal component of wellness (recovery)

## RECOVERY = WELLNESS

- Depending on biopsychosocial and/or economics, medications such as buprenorphine might be necessary for a period of time and sometimes indefinitely to support the best state of wellness



## ***“And”***

Abstinence from the pursuit of ***any behaviors*** that pathologically affect the reward area is to be considered an optimal component of wellness (recovery)



# Treatment

MAT = Medication Assisted Treatment ?



# Treatment

MAR = Medication Assisted Recovery



# MAR = Medication Assisted Recovery

## Buprenorphine +/- Naloxone (Suboxone/Subutex)

- $\mu$ -partial agonist
- High affinity  $\mu$  receptor > most agonist
- Slow dissociation, long T  $\frac{1}{2}$  at receptor
- CYP P450-3A4, minimal drug-drug interaction
- Norbuprenorphine – Active Metabolite
- Hemodialysis safe

# MAR = Medication Assisted Recovery

## Buprenorphine +/- Naloxone (Suboxone/Subutex)



# MAR = Medication Assisted Recovery

## How Buprenorphine Works


**Empty Receptor**  
Opioid receptor in the brain  
Withdrawal Pain

**Full-Agonist Opioid**  
Perfect fit – Maximum opioid effect.  
No Withdrawal Pain  
Euphoric opioid effect

**Imperfect fit – Limited opioid effect**  
Opioids replaced and blocked by buprenorphine. Buprenorphine competes with the full agonist opioids for the receptor. Since buprenorphine has a higher affinity (stronger binding ability) it expels existing opioids and blocks others from attaching. As a partial agonist, the buprenorphine has a limited opioid effect, enough to stop withdrawal but not enough to cause intense euphoria.

**Buprenorphine still blocks opioids as it dissipates.**  
Over time (24-72 hours) buprenorphine dissipates, but still creates a limited opioid effect (enough to prevent withdrawal) and continues to block other opioids from attaching to the opioid receptors.

*The above illustrations are for educational purposes and do not accurately represent the true appearance.*

 The National Alliance of Advocates for Buprenorphine Treatment  
naabt.org

10M 6/07  
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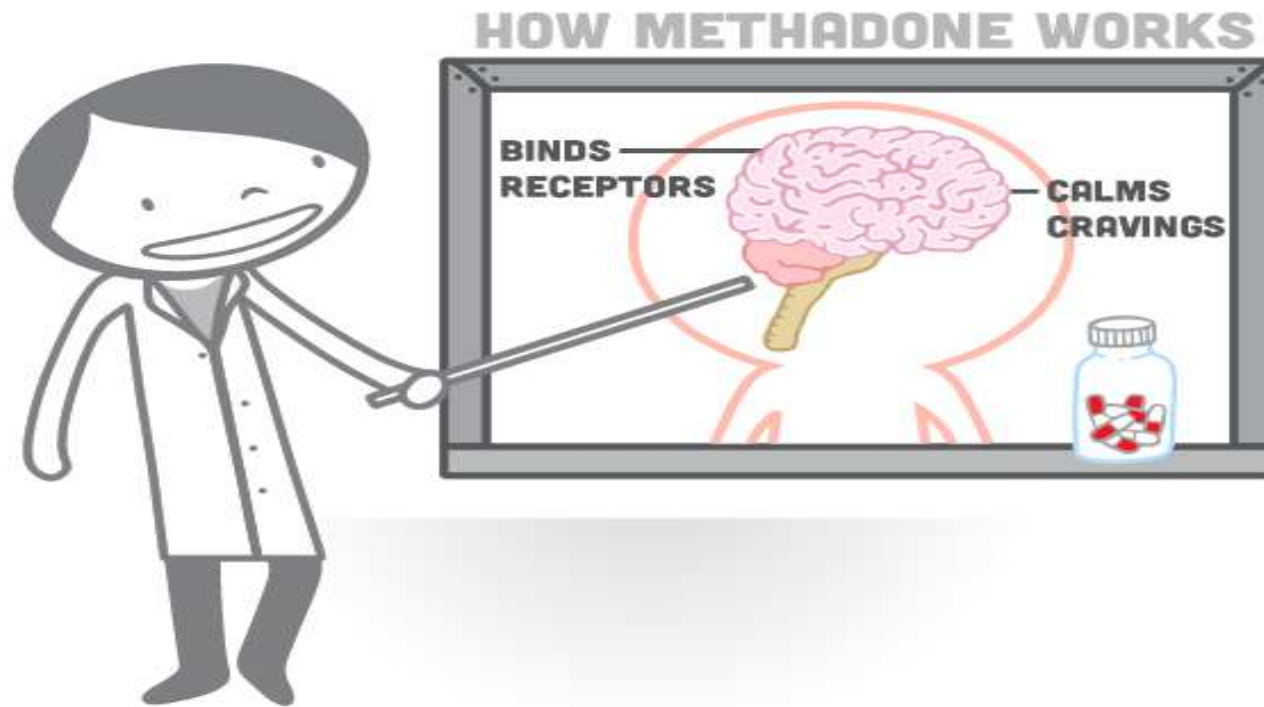
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# MAR = Medication Assisted Recovery

## Methadone

- Full opiate agonist
- reduces the cravings and withdrawal symptoms
- blocking the "high" and preventing the intense euphoric rush of drugs
- long T  $\frac{1}{2}$

# MAR = Medication Assisted Recovery



## MAR = Medication Assisted Recovery

### Naltrexone

- opiate antagonists
- prevent opiate effects
- decrease cravings
- not addictive
- no withdrawal when stops abruptly
- Reduces “pleasures” or “high” with alcohol
- may work on amphetamines/stimulants \*off label

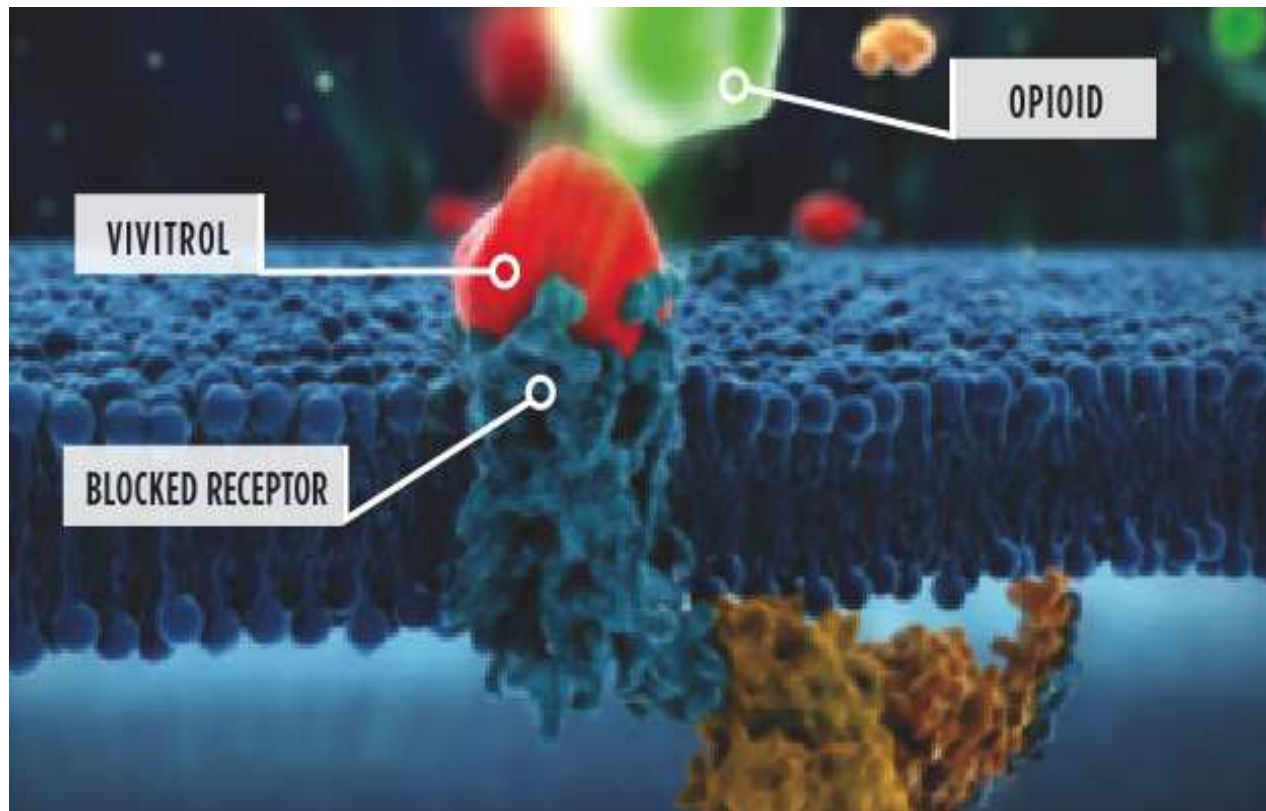


# MAR = Medication Assisted Recovery

## Naltrexone



# MAR = Medication Assisted Recovery



# Pathology/Symptoms

Addiction Consequences	Medication	Psychosocial / Spirituality
Acute withdrawal symptoms	X	X
Post acute withdrawal symptoms	X	X
Craving	X	X
Psychiatric Problems	X	X
Response to environmental cues		X
Rewired brain and altered neural humoral		X
Change in gene expression		X
Addiction interactive disorder		X
Emotional damage, shame, guilt		X
Unmanageability of life		X
Damaged families & other relationship		X
Characterologic/personality		X

# Psychosocial Intervention

Goal is to help patient control urges to use drugs and remain abstinent, while serving to patients in coping with emotional strife that accompanies addiction.

# Psychosocial Intervention

## Treatment Modalities

- Outpatient
- Inpatient
- Residential



# Psychosocial Intervention

## Formats:

- Social skills training
- Individual therapy
- Group therapy
- Couple counseling
- Cognitive-behavioral therapy (CBT)
- Contingency management (CM)
- 12 Step Facilitation therapy
- Motivational Interviewing
- Family Therapy

## Standard Methadone Maintenance Treatment (MMT) vs MMT plus CBT (Kouimtsidis 2012)

### Standard MMT

- 30 minute manual-guided sessions every 2 weeks, in addition to receiving standard MMT

### MMT plus CBT

- weekly CBT sessions of 50mins for up to 24 sessions



Standard Methadone Maintenance Treatment (MMT) vs  
MMT plus CBT (Kouimtsidis 2012)

## **Result:**

No significant between-group differences on days of heroin use, abstinence rates, psychosocial problems severity, quality of life, psychological symptoms or MMT compliance

\*CBT participant displayed significant improvement in their positive appraisal (6 months) & lower emotional discharge (12m)

## MMT vs. MMT plus Recovery Line (Moore,2013)

### Standard MMT

- Received 1 individual psychosocial session/month
- Encourage to attend open access group, range of topics (skills sets, activity scheduling, spirituality, etc)

### MMT + Recovery Line (RL)

- RL is CBT base therapeutic interactive voice response system designed for MMT px who continue to use illicit substance use while enrolled in treatment
- Orientation
- Weekly reminder to use the system

## MMT vs. MMT plus Recovery Line (Moore,2013)

### **Results:**

No significant differences between the groups in MMT satisfaction, study retention, self reported substance use, urinalysis-verified opioid & cocaine abstinence, number of counseling sessions attended beyond the minimum requirement and coping skills.

## Drug Counseling vs. Acceptance and Commitment Therapy (Stotts 2012)

### **Drug counseling (DC)**

- 24 weekly 50 minutes sessions
- Focusing on abstinence-oriented behaviors and supports during methadone dose reduction period

### **Acceptance and Commitment Therapy (ACT)**

- 24 weekly 50 minutes sessions
- Targeting experiential avoidance & fear of the detoxification process in the stabilization period & continuing through dose reduction period

## Drug Counseling vs. Acceptance and Commitment Therapy (Stotts 2012)

### **Results**

There were no significant group differences in treatment attendance or completion, opioid use, treatment success, severity of opioid withdrawal or engagement in HIV/HCV risk behaviors

## General Supportive Counseling w/MMT vs. MMT (Gu 2013)

### MMT only

- Brief 5 to 15 minute introduction to MMT services and programmatic rules
- No other counseling services

### General Supportive Counseling + MMT

- Behavior maintenance therapy intervention (BMT), 20 approximately 30 min counseling sessions delivered by social worker 6 months
- Goals of intervention: enhance expectation, self-efficacy of maintenance, and satisfaction and experiences related to the particular health related outcome
- Address misconception of MMT, increase family support

General Supportive Counseling w/MMT vs. MMT  
(Gu 2013)

## **Results**

BMT participant attended significantly more days MMT treatment during the study and were less likely to drop out of treatment than MMT only.

# Peer Recovery Support

A set of nonclinical, peer based activities that engage, educate, and support individuals as they make life changes necessary to recover from substance use disorder or co occurring and mental d/o





# Peer Recovery Support

## Support

1. Emotional
2. Informational (ex. skill building)
3. Instrumental (ex. assistance w/specific needs)
4. Affiliational (ex. social connectedness & inclusion)

# Peer Recovery Support

- Act as recovery and empowerment catalyst
- Guiding the recovery process
- Supporting the individuals goal and decisions



# Peer Recovery Support

## Evidence Base?

Peer Recovery Support for Individuals with Substance Use  
Disorders: Assessing the Evidence

(Reif et al. 2014)

# Peer Recovery Support

Evidence base? (Reif et al. 2014)

**MODERATE** Level

# Peer Recovery Support

Primary Outcomes: (Reif et al. 2014)

- Improved relationships with providers and social supports
- Reduced rates of relapse
- Increased satisfaction with the overall treatment experience
- Increase treatment retention

## **Spirituality & 12 Steps Recovery**

- Instillation of hope
- Sense of belonging (connection)
- Relationship with higher power (comfort)
- Development of greater purpose
- Reduction of shame
- Bringing secret into light
- Transformation of a maladaptive personality
- Help others

## *twelve steps mechanisms*



No one knows why it works  
when it does work  
(Kaskutas)

## *twelve steps mechanisms*

### Mechanism of Action

- Increased self-efficacy, coping and motivation for abstinence (Kelly 2009, Morgestern 2002)
- Facilitating changes in social networks (Bond 2003)
- Reducing Depression (Kelly 2010)
- ***Unconditional acceptance***



## *Power of the 4<sup>TH</sup> & 5<sup>TH</sup> Step*

### 4<sup>th</sup> Step

*“Made a searching and fearless moral inventory of ourselves (courage)”*

## *Power of the 4<sup>TH</sup> & 5<sup>TH</sup> Step*

### 4<sup>th</sup> Step

- Examine self
- Identify triggers of relapse
  - a) *Esteem*
  - b) *Resentments, fears, insecurities*
  - c) *Old wounds*
- Identify defective character traits
- Identify and deal with barriers to recovery

## *Power of the 4<sup>TH</sup> & 5<sup>TH</sup> Step*

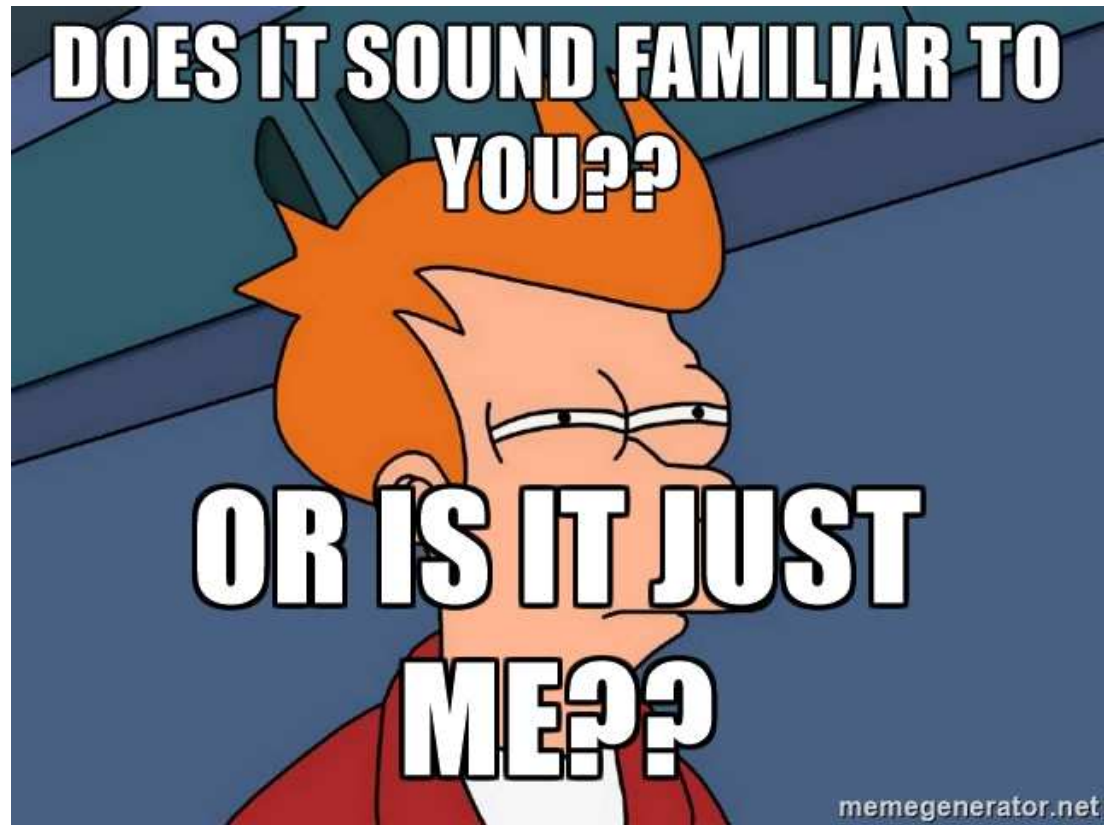
### 5<sup>th</sup> Step

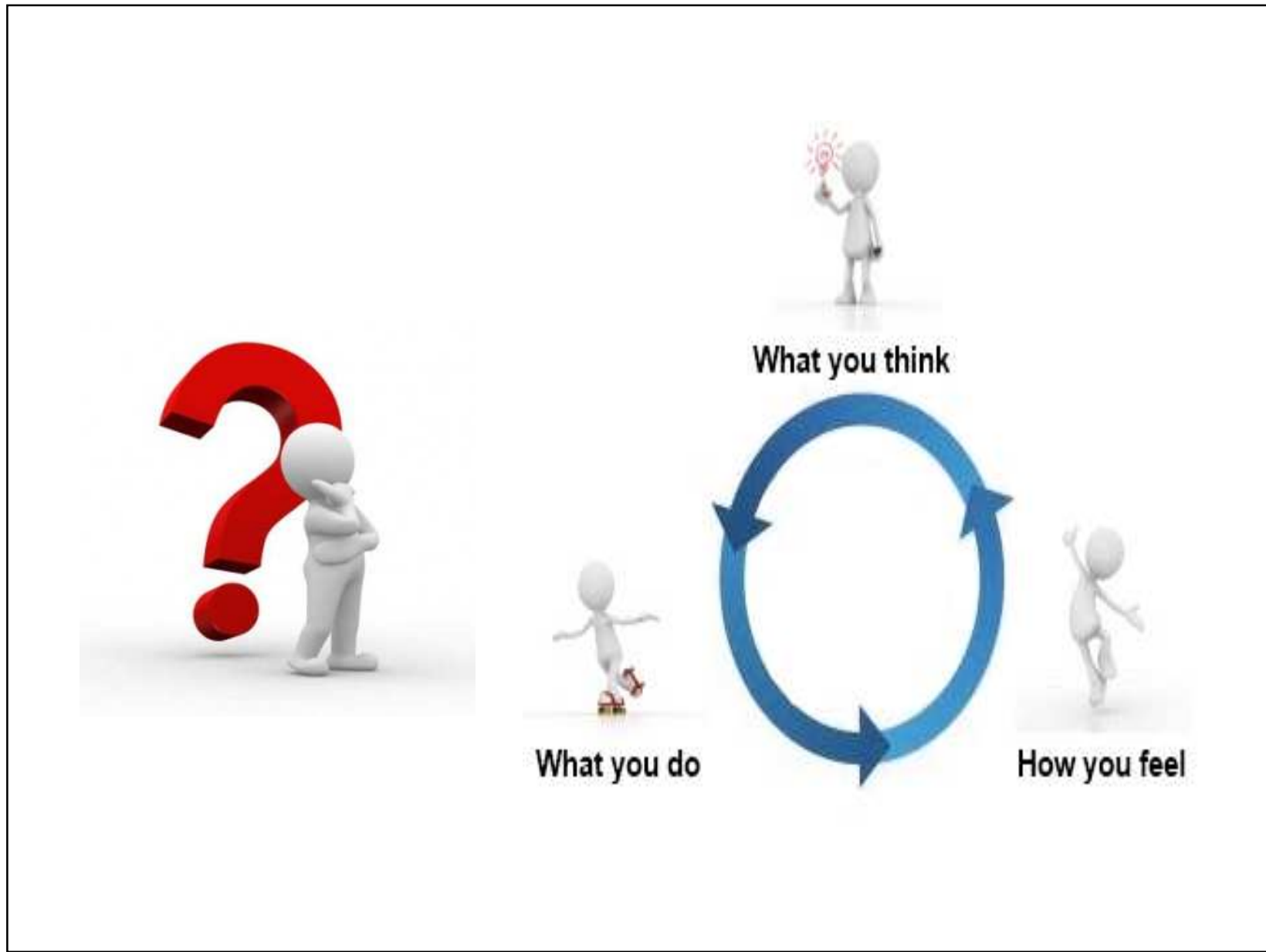
“Admitted to ~~God~~, to ourselves and to another human being the exact nature of our wrongs”  
(integrity)

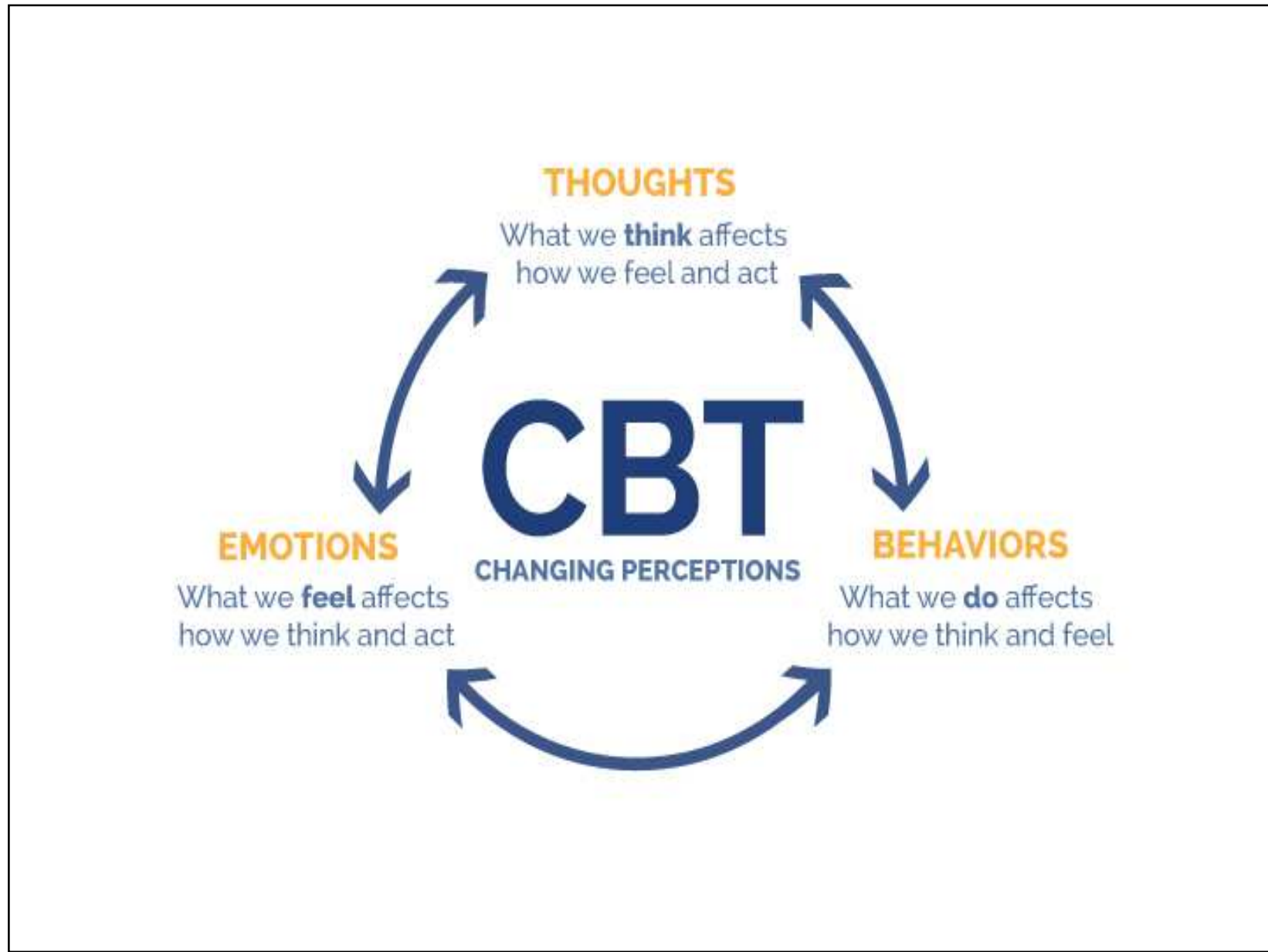
## *Power of the 4<sup>TH</sup> & 5<sup>TH</sup> Step*

### 5<sup>th</sup> Step

- Confession – unload secrets
- Shame reduction
- See self as normal, not defective
- Recognizes maladaptive characteristic
- Revitalized the Prefrontal Cortex (Positivity)







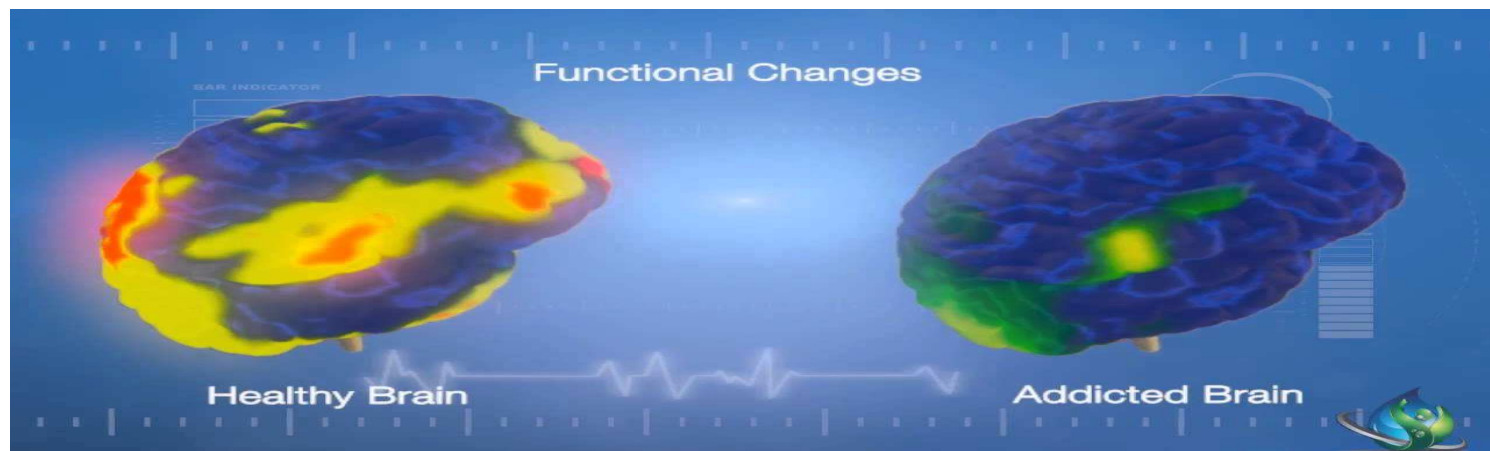
## *Mechanism of Meetings*

- Warm & soothing
- Social support
- Reduces shame from common bond
- Provides hope – success of others
- Safe place
- Wisdom from other
- Process anger, resentment, negative emotion
- Reminder – witness relapse
- Groups provides higher consciousness

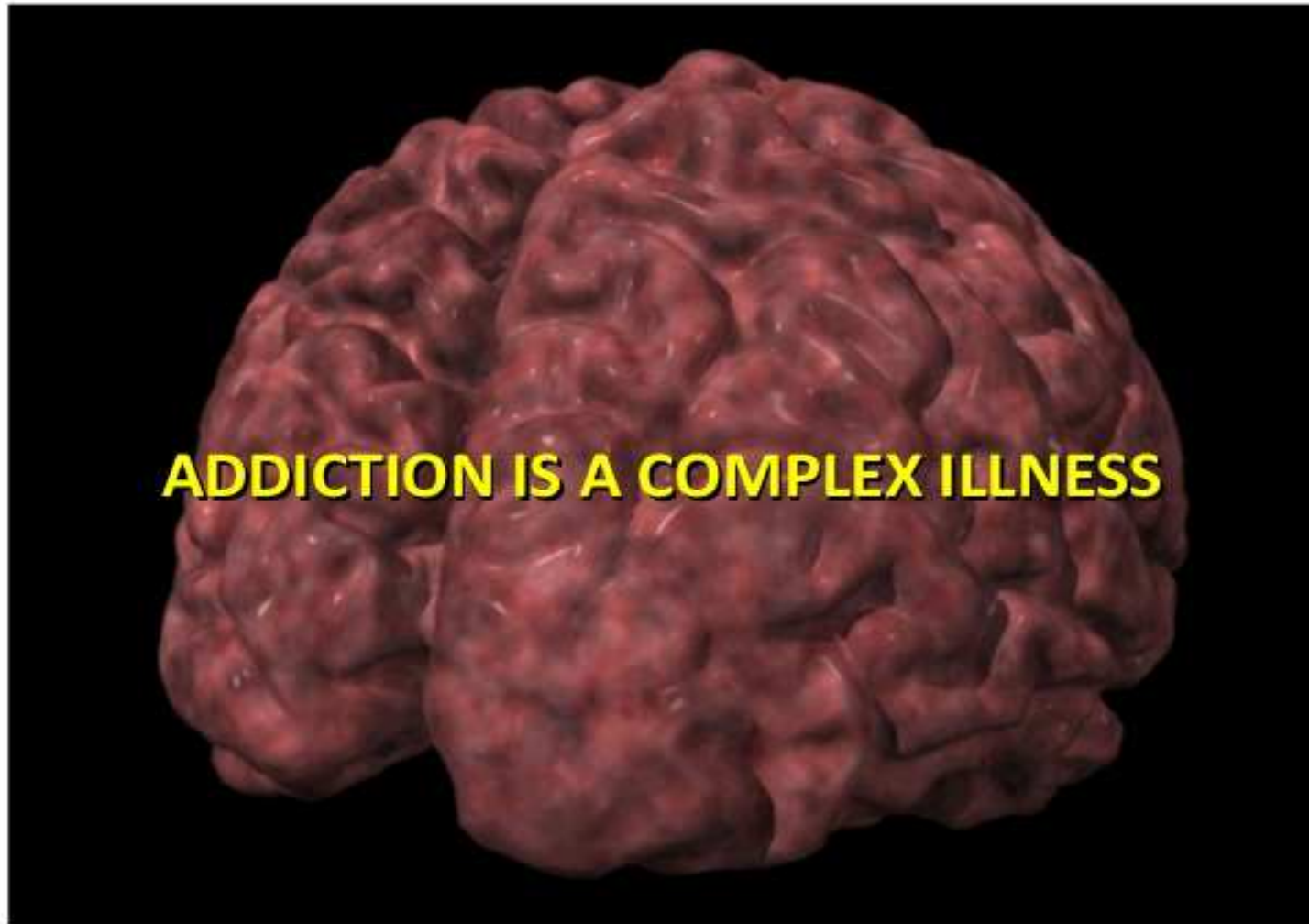


## *Mechanism of Action Meetings*

- Socialization hard-wired in our brain
- Activation of limbic reward centers seen in fMRIs
- Increases Oxytocin, decrease cortisol







*Treating a Biobehavioral Disorder Must Go Beyond Just Fixing the Chemistry*

**We Need to Treat the Whole Person!**



**Pharmacological Treatments (Medications)**      **Behavioral Therapies**

**Medical Services**      **Social Services**

**In Social Context**







# Rural Wisconsin

