

What addiction is (and is not)

**Ulster County Opioid Prevention Task Force
May 24, 2018**

Kurt Grovenburg MD

Definitions of Addiction

Alcoholic Anonymous (Dr. Bob and Bill Wilson)

National Institute on Drug Abuse (NIDA)

Gabor Mate, MD

In the Realm of Hungry Ghosts

Marc Lewis, PHD

The Biology of Desire: *Why Addiction Is Not A Disease*

Definition of Addiction

*Alcoholic Anonymous
(Dr. Bob and Bill Wilson)*

A Three Fold Disease

A Physical Allergy

A Mental Obsession

A Spiritual Malady

Definition of Addiction

National Institute on Drug Abuse
(*NIDA*)

Addiction is defined as a chronic, relapsing **brain disease** that is characterized by compulsive drug seeking and use, despite harmful consequences.

Definition of Addiction

Gabor Mate, MD

In the Realm of Hungry Ghosts (2010)

Identifies the source of addictions in the

“trauma of an emotionally empty childhood”

Definition of Addiction

Marc Lewis , PHD

The Biology of Desire *Why Addiction Is Not A Disease (2015)*

Addiction is an insidious process of change in our habits and our synaptic patterning as a result of the powerful (drug) experiences occurring over and over and forging new synaptic configurations that settle into **habits**.

So what is it ?

Is it a Personal Failing of the Morally
Depraved?

Is it a Mental and Spiritual “Malady”?

Is it a Disease of the Brain?

Is it a form of Self-Medication?

Is it a Habit?

The Question

To Use or Not to Use

To Use or Not to Use

Do we have a Choice?

If we have **CONTROL** then we have a choice.
If we have a choice then we can just say, **No.**

Thus it is a Question of
Control

To Use or Not to Use

Do we Choice to Use?

This is a Question of Desire

Two Questions:

That of Control

That of Desire

The Question of Control

What are we really trying to Control?

Our Drug Use

Our Pain

Our Fears

The Question of Desire

What desires are we really trying to satisfy?

Getting High

Looking for Pleasure

Searching for Feelings of Happiness

Trying to Feel Connected

Understanding Control and Desire

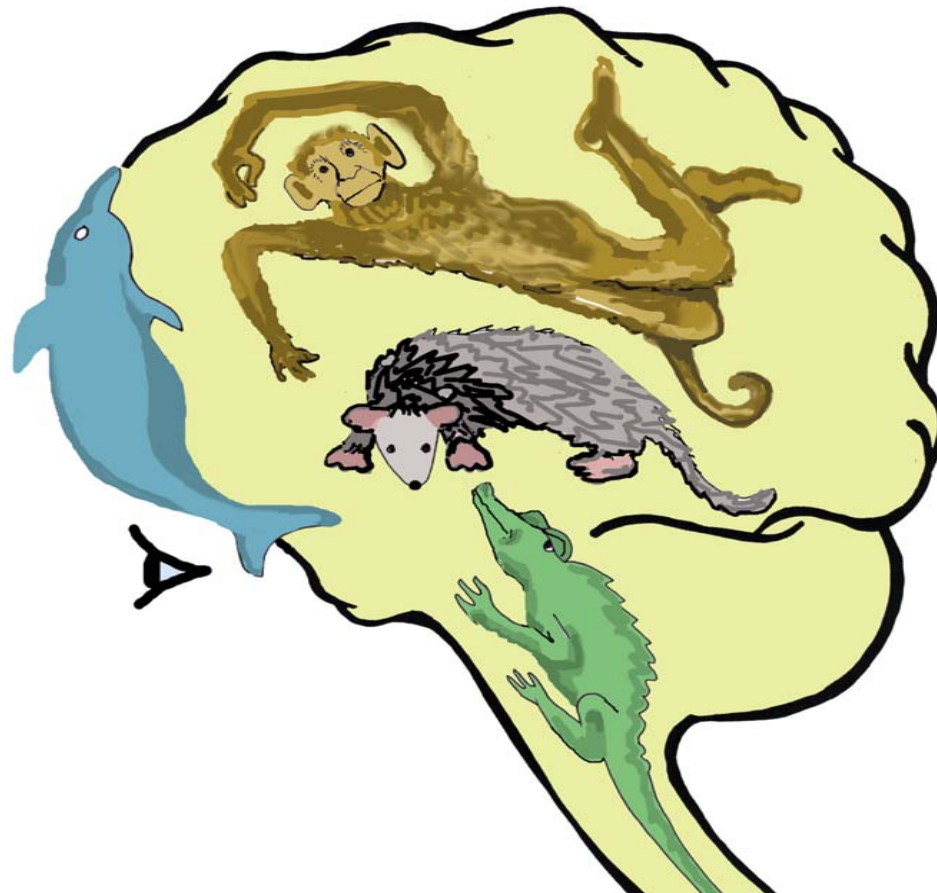
*The
Avoidance and Reward System
Of the Human Brain*

What is the Neurobiology of Control and Desire?

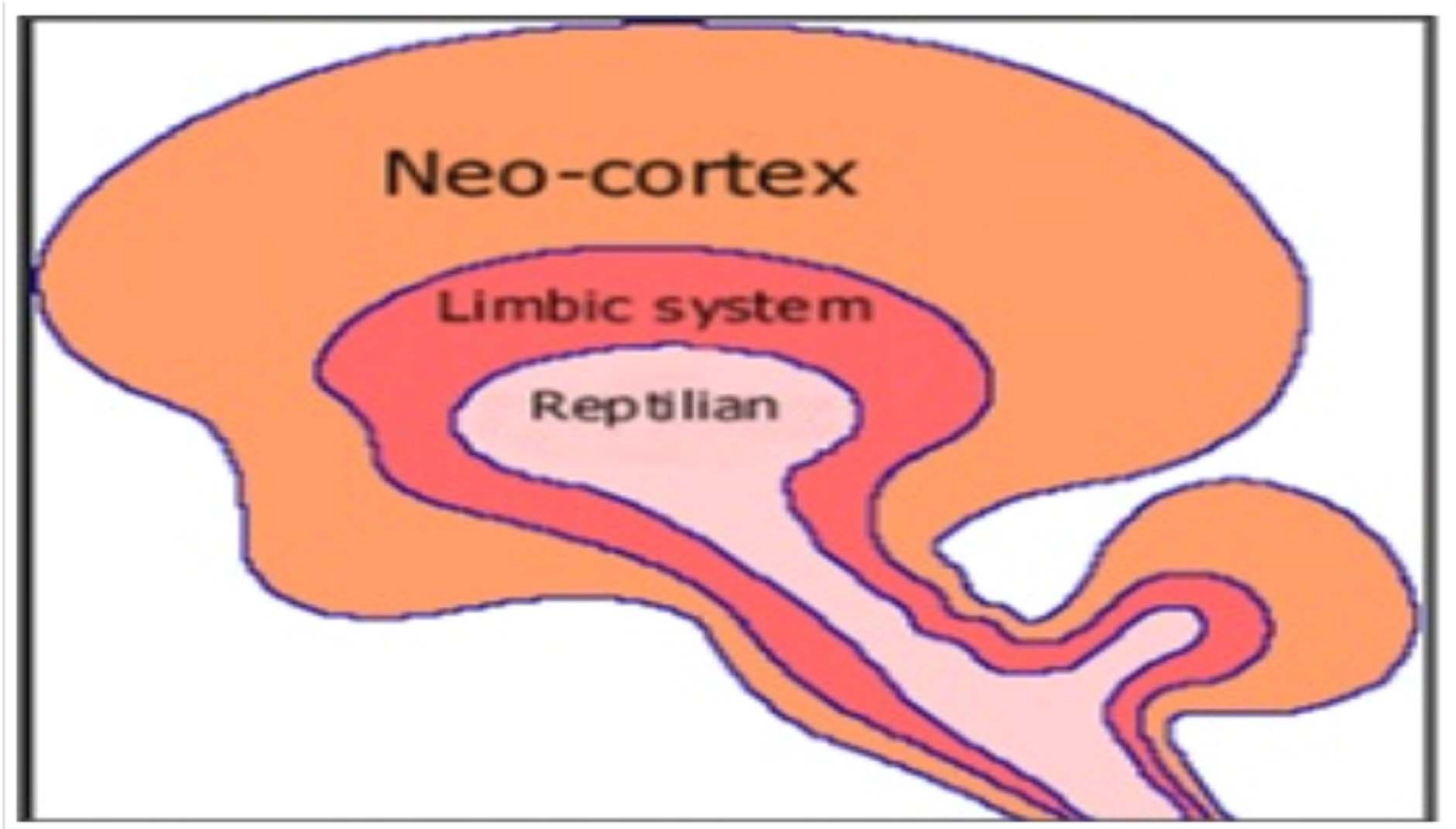
(Our Avoidance and Reward Systems)

Understanding the Function and
Dysfunction of the Avoidance and
Reward Centers of our Human
Brains in **Health** and in **Addiction**.

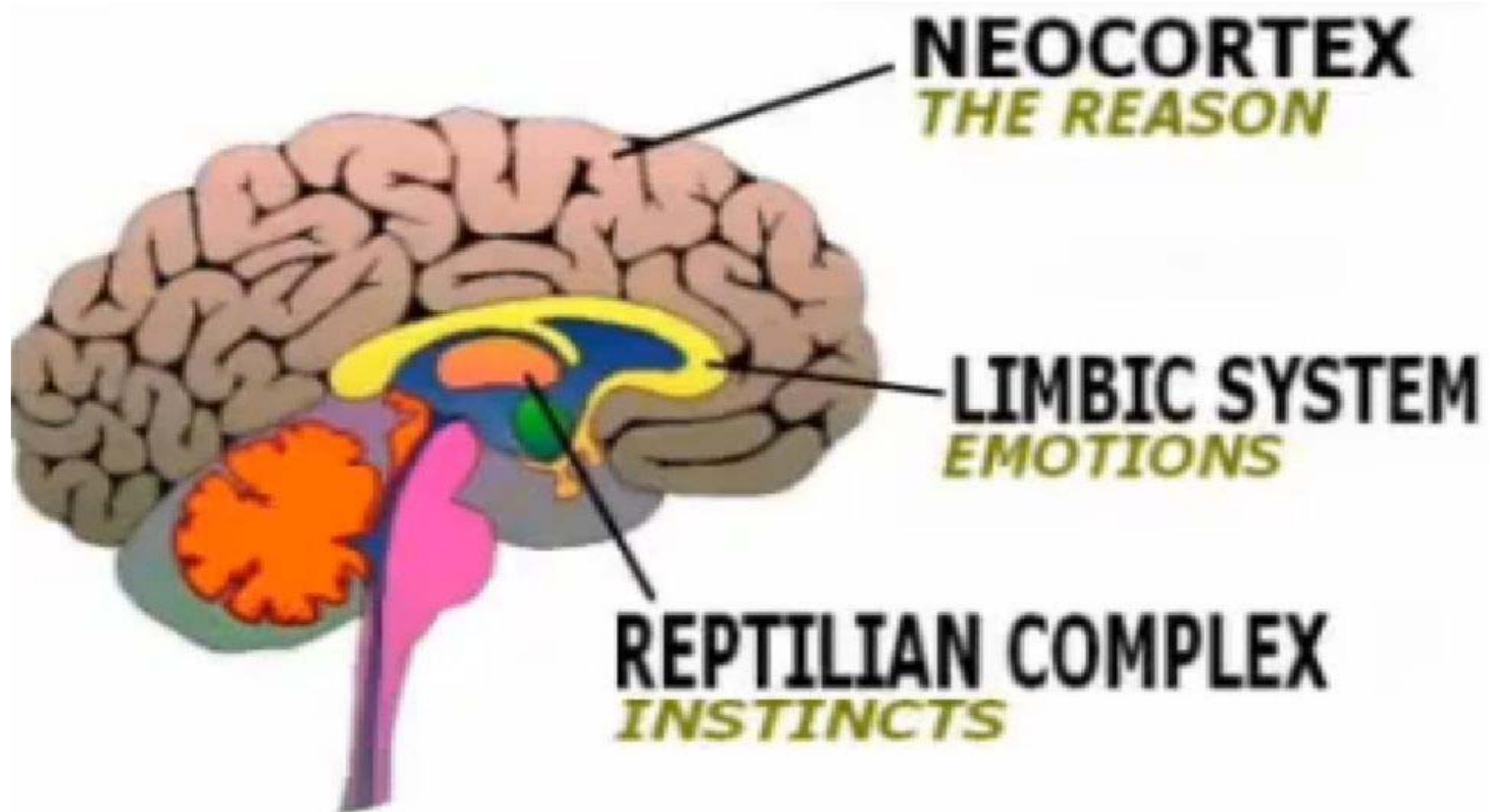
A Brief Review of the Evolution, Anatomy and Function of the Human Brain



Evolution of the Brain



Function of the Different Sections of the Brain

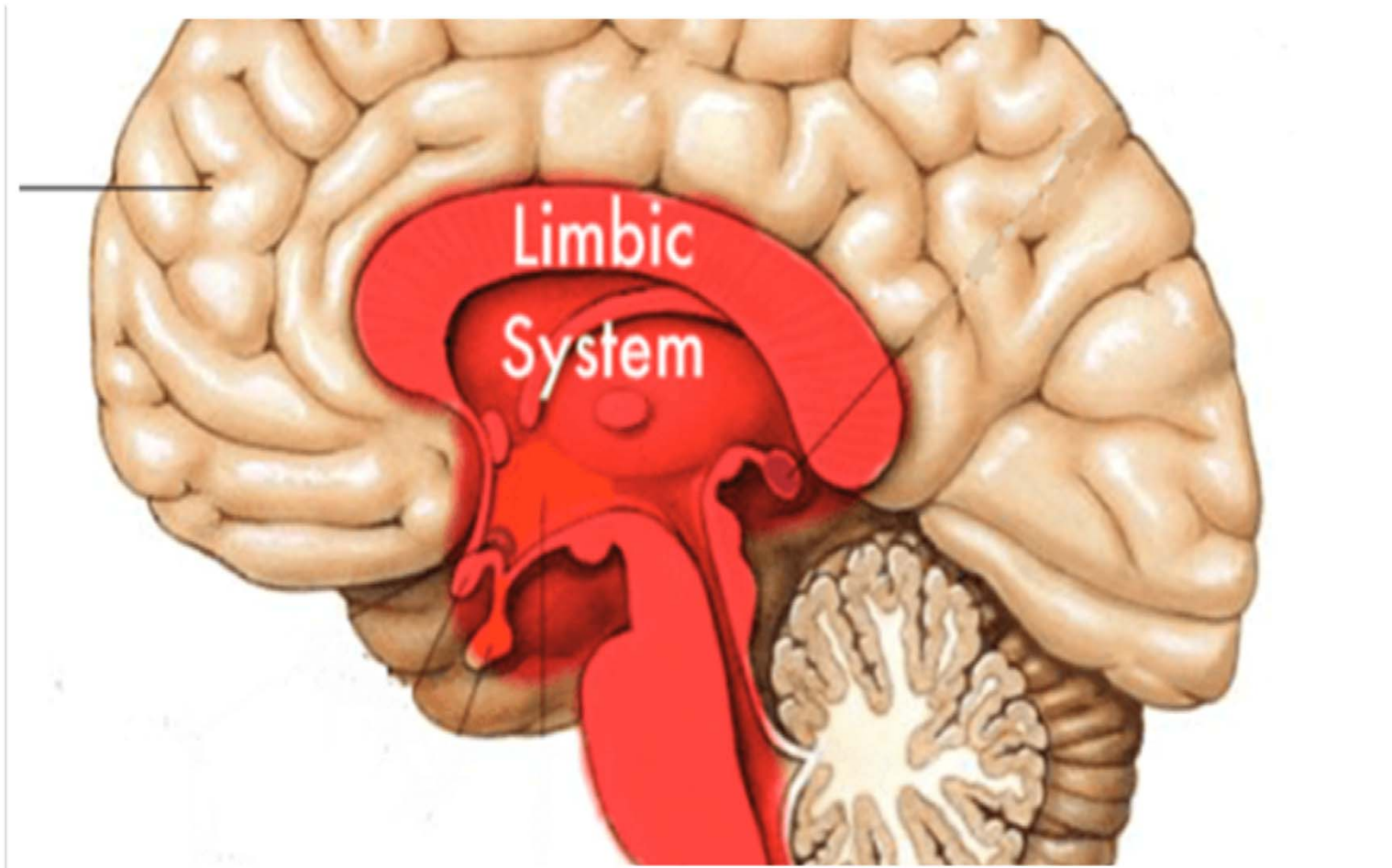


The Avoidance Center of the Brain “ The Lizard Brain”



The Feeling Brain

(The Limbic Brain)



The Feeling Brain

(The Limbic Brain)



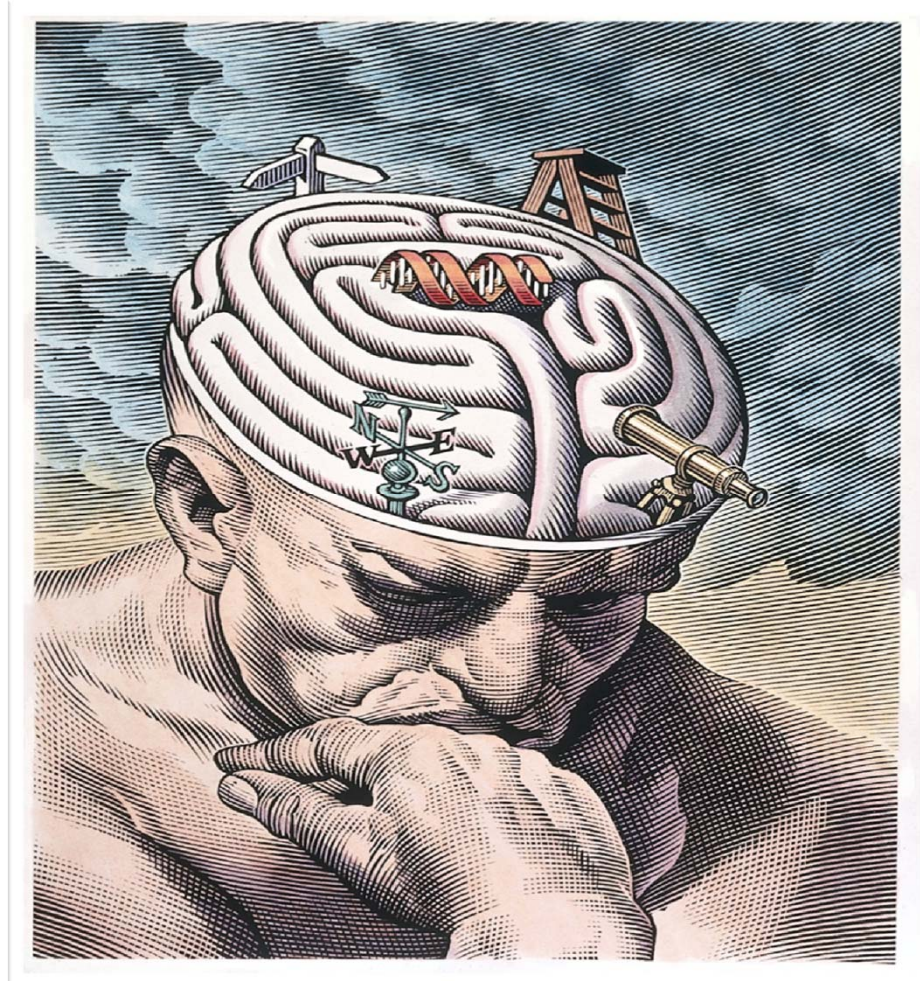
The Feeling Brain

(The Limbic Brain)

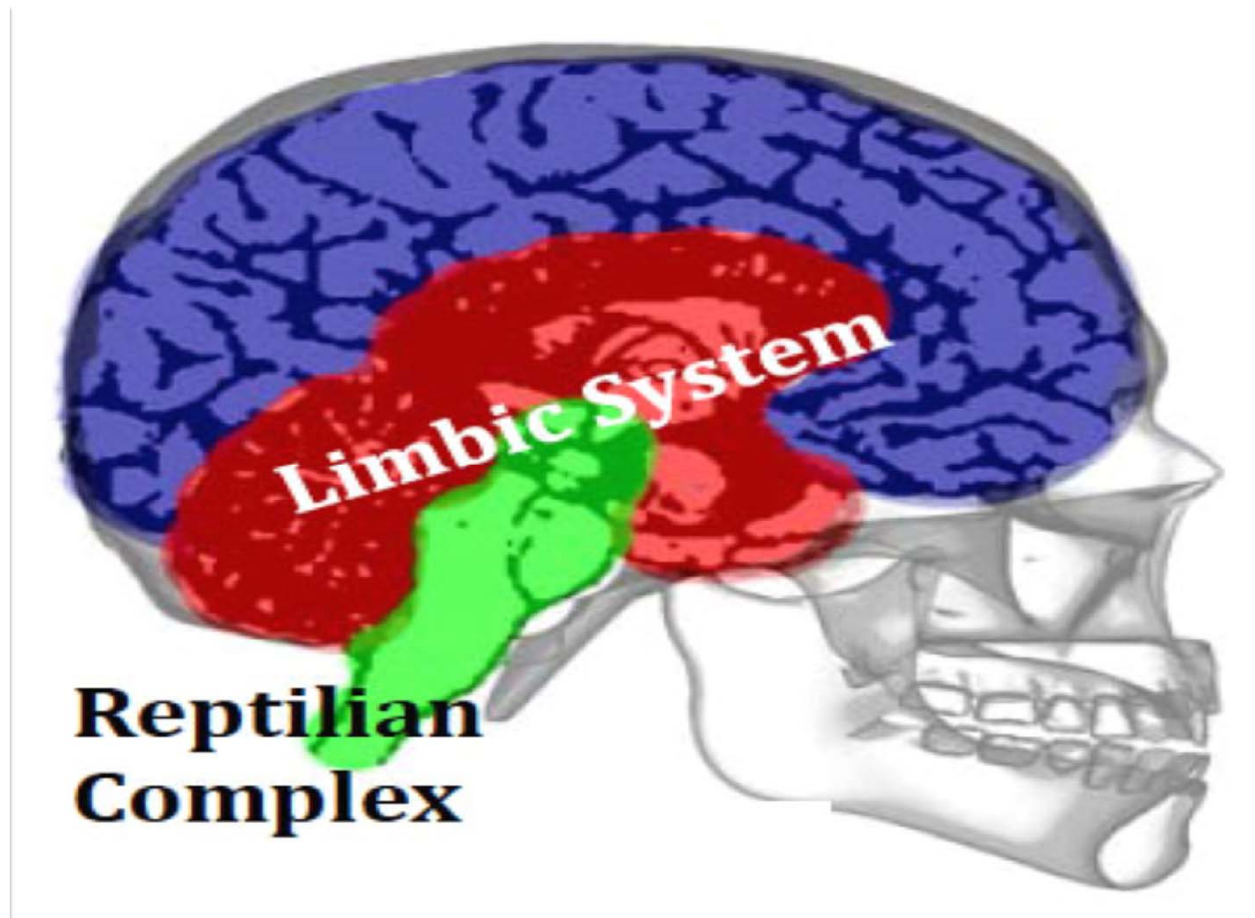


The Thinking Brain

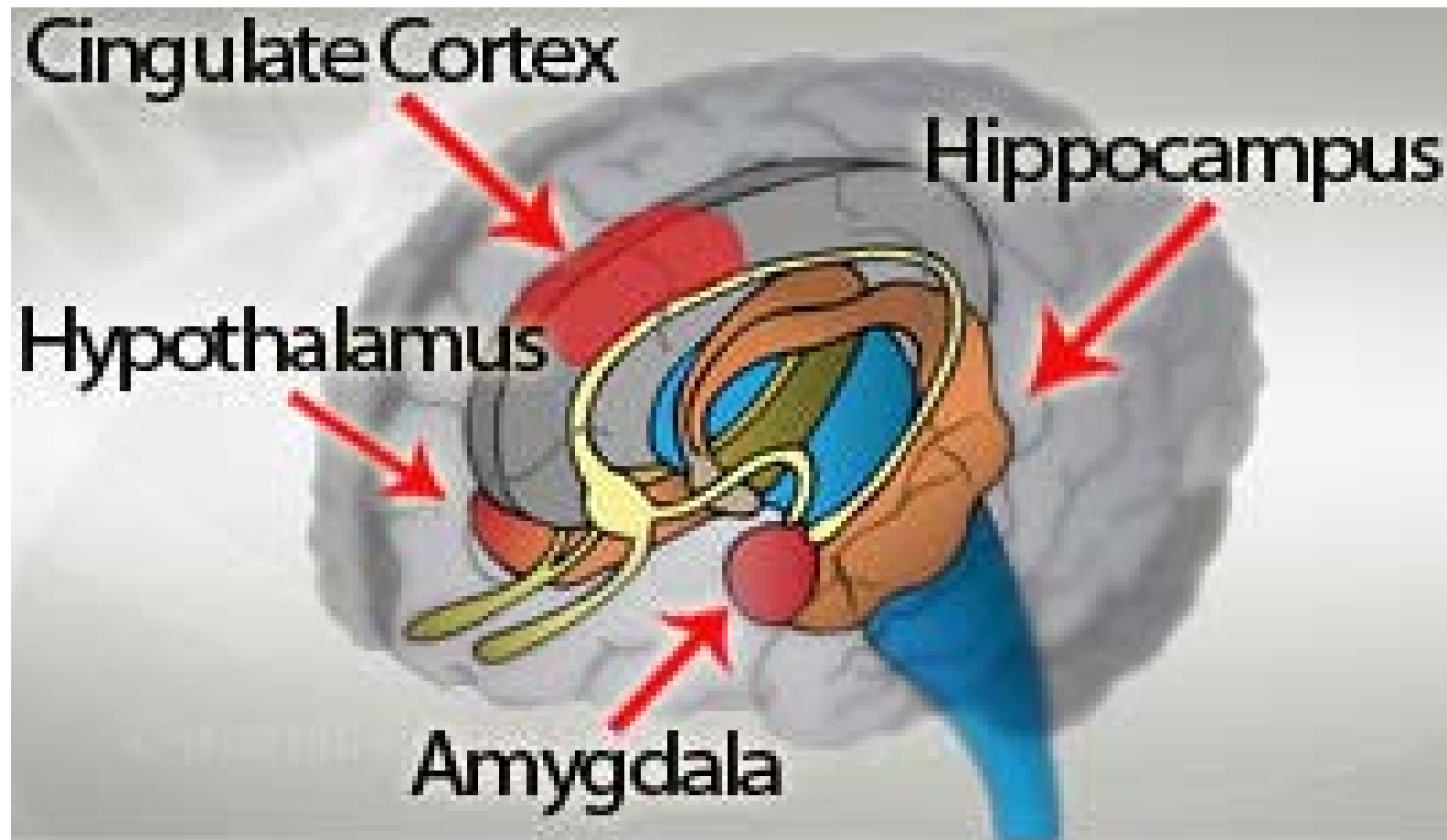
(The Neo-cortex)



Summary of the Three Brain Areas

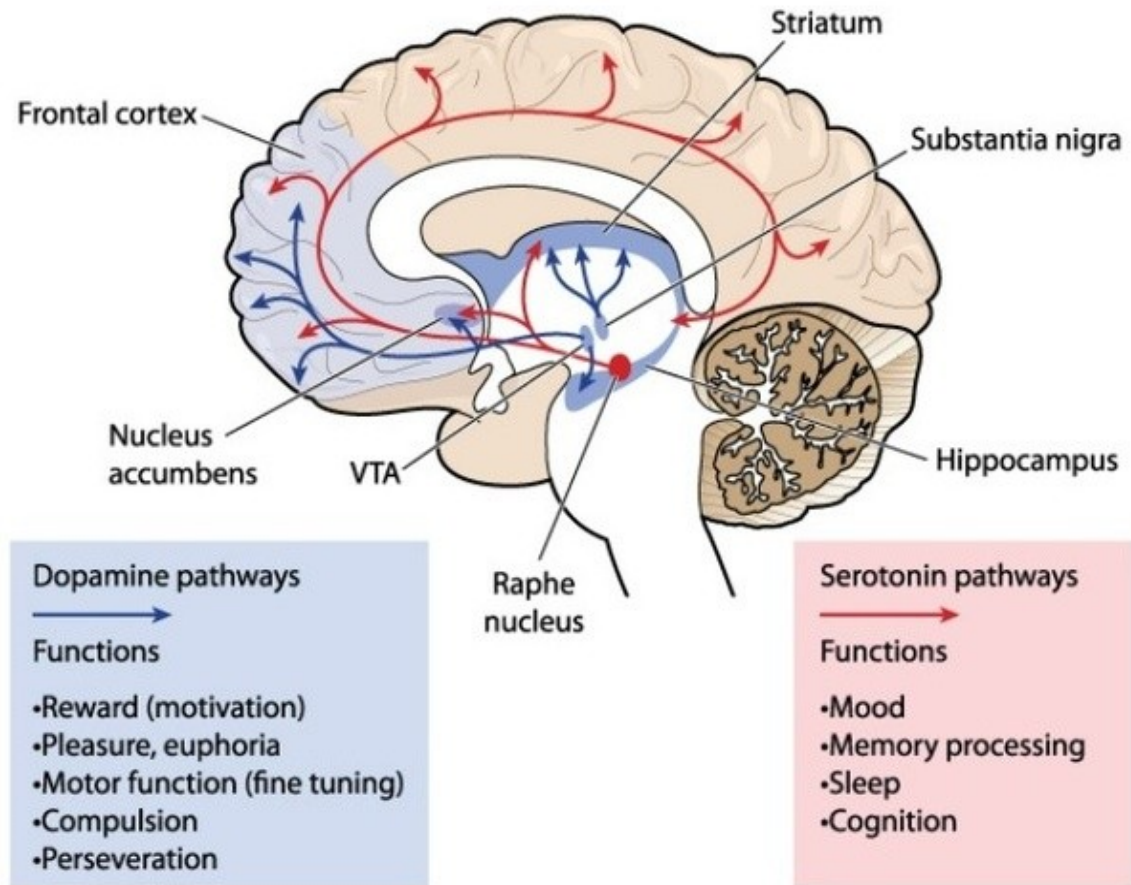


A Closer Look at the Limbic Brain



The Limbic Brain

The Reward Center of the Brain



Addiction

Dysregulation of the Reward and
Avoidance Centers of the Primitive
Brain

Excessive Drug Use and Abuse

Other Causes of Dysregulation of the Reward and Avoidance Centers

Toxins

Trauma

Terror

Toxins, Trauma and Terror

Toxins

Excessive Drug Use and Abuse

Traumas

Traumatic Brain Injuries
Chronic Pain Syndromes

Terror

PTSD

Dysregulation of the Reward and Avoidance Center

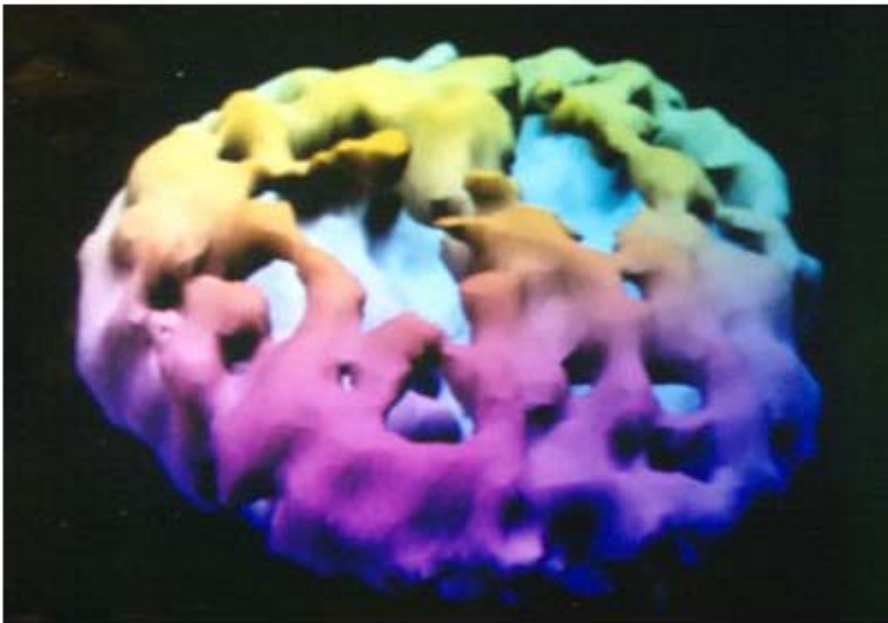
The Void
Loss of Control



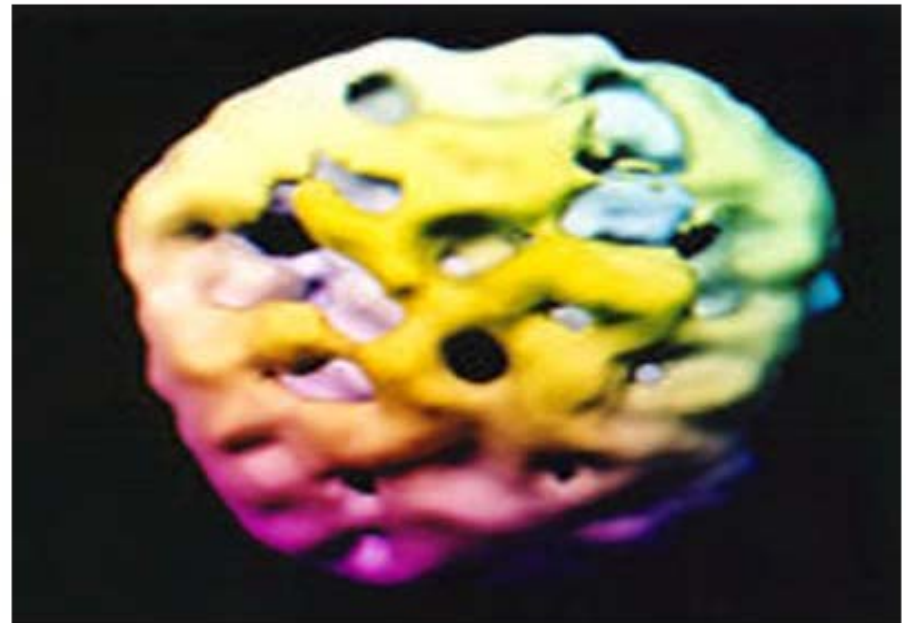
Structural Changes of the Brain Related to Opiate Drug Addiction

Brain Imaging with SPECT Scans

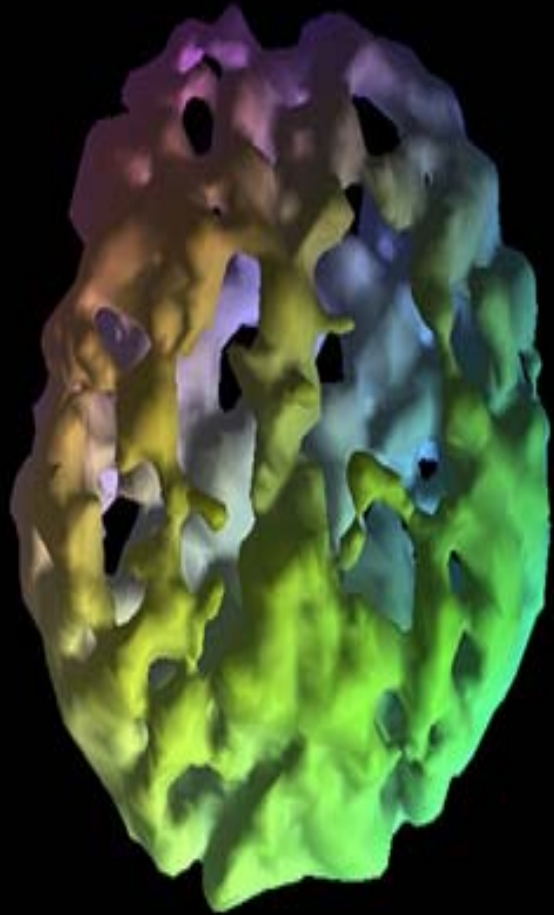
Brain Imaging SPECT



39 y/o -- 25 yrs. of frequent heroin use



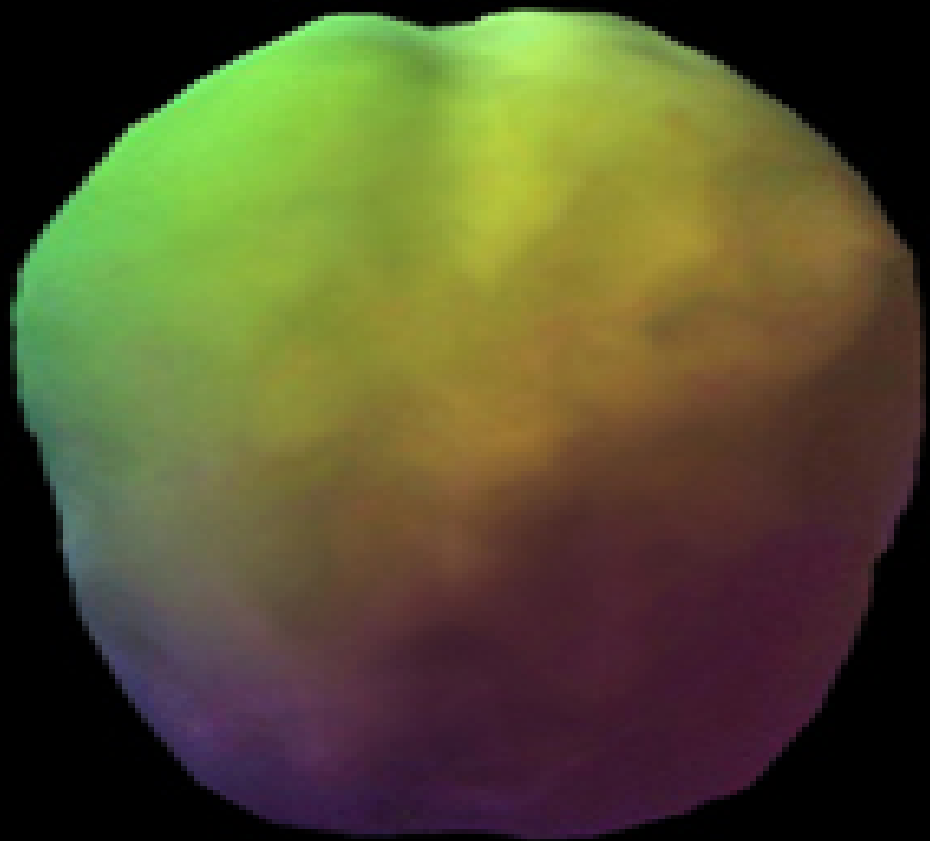
40 y/o, 7 yrs. on methadone
heroin 10 yrs. prior



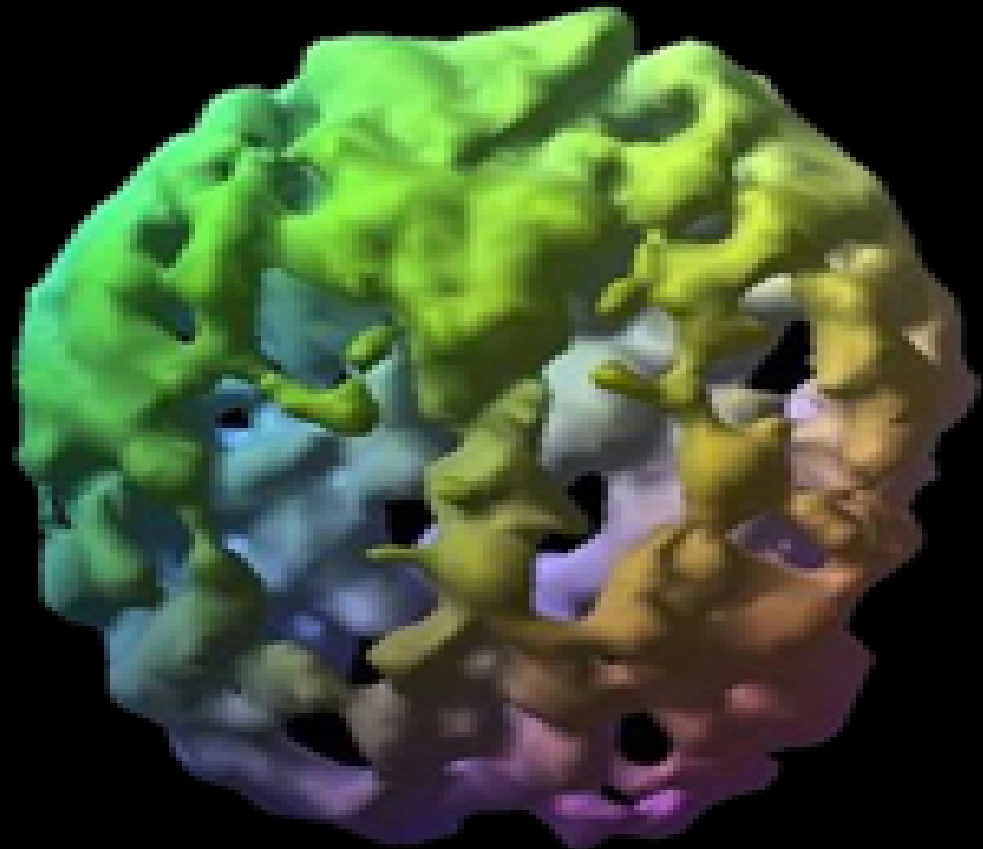
WHOSE BRAIN ARE WE LOOKING AT?

40-YEAR-OLD WITH 7 YEARS ON METHADONE AND HEROIN FOR 10 YEARS PRIOR. NOTE THE DECREASED OVERALL ACTIVITY

Healthy Brain



**7 years Methadone use,
some prior Heroin**



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The Lizard Brain



THAT'S RIGHT, BLAME
THE LIZARD BRAIN.
IT'S ALL MY FAULT.



W. M. Meach