

# Advances in Drug Abuse and Addiction Research from NIDA: Implications for Treatment

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**Office of Science Policy and Communications**  
**National Institute on Drug Abuse**  
**National Institutes of Health**  
**Department of Health and Human Services**

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Addiction Medicine: Improving Clinical and Teaching Skills for Generalists  
2011 Chief Resident Immersion Training (CRIT) Program  
Cape Cod, Massachusetts  
May 2011

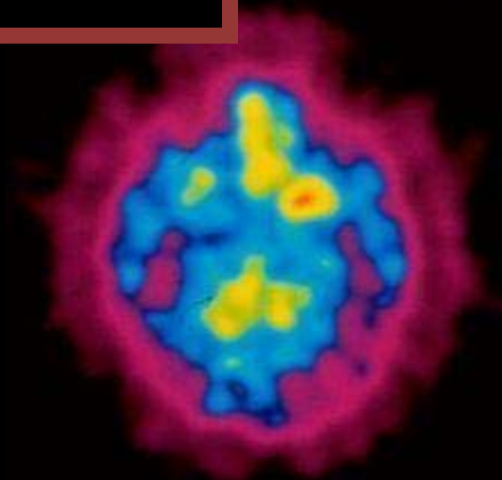
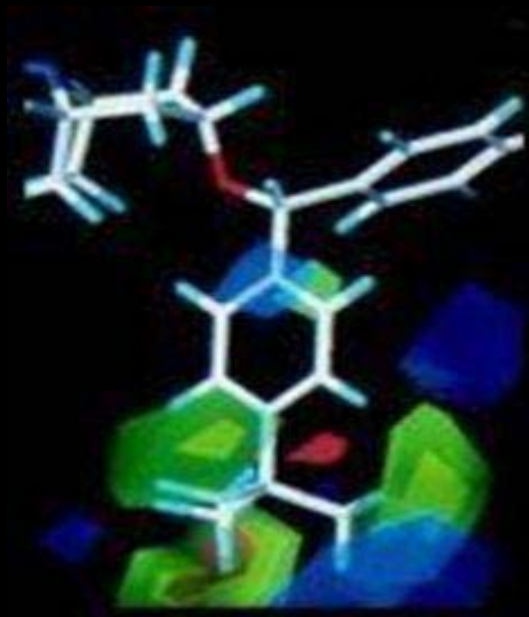
# NIDA

NATIONAL INSTITUTE  
ON DRUG ABUSE

*Bringing the  
Full Power of Science  
to Bear on*



## *Drug Abuse & Addiction*



# *Estimated Economic Cost to Society Due to Substance Abuse and Addiction:*

**Tobacco:                      \$193 billion/year**

**Alcohol:                      \$235 billion/year**

**Illegal drugs:                \$181 billion/year**

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**Total:                        \$609 billion/year**

*Source: ONDCP, 2004; CDC, 2007; Rehm et al., 2009 Lancet 373:2223-33*

**NIDA**

# DRUGS

**Addiction**

**Medical**

**Neurotoxicity**  
**AIDS, Cancer**  
**Mental illness**

**Social**

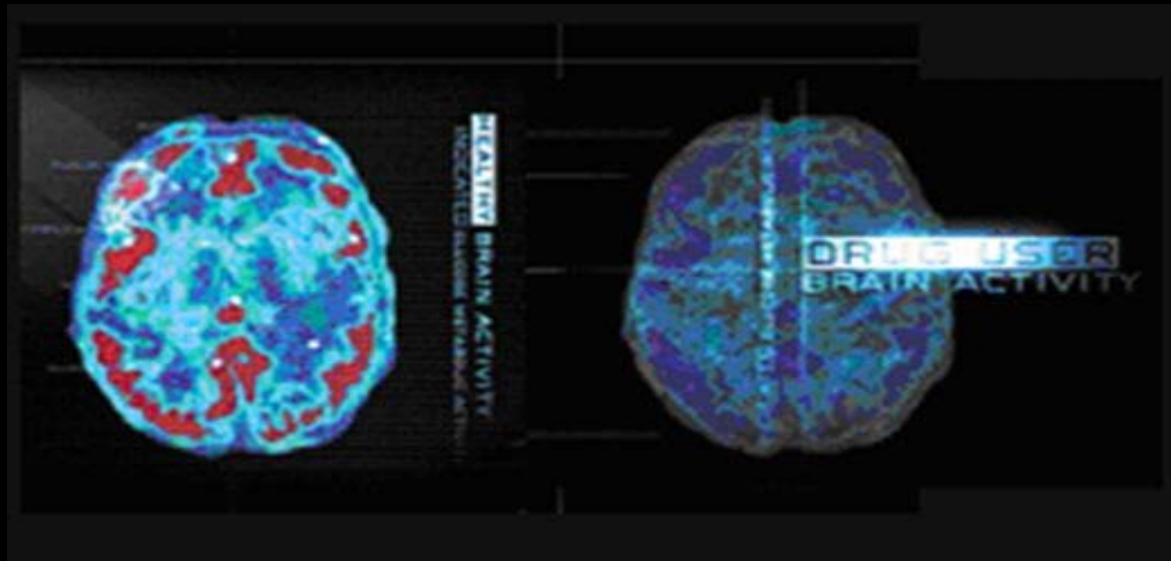
**Economic**

**Homelessness**  
**Crime**  
**Violence**

**Health care**  
**Productivity**  
**Accidents**

# *What is Addiction?*

## *Addiction is A Brain Disease*



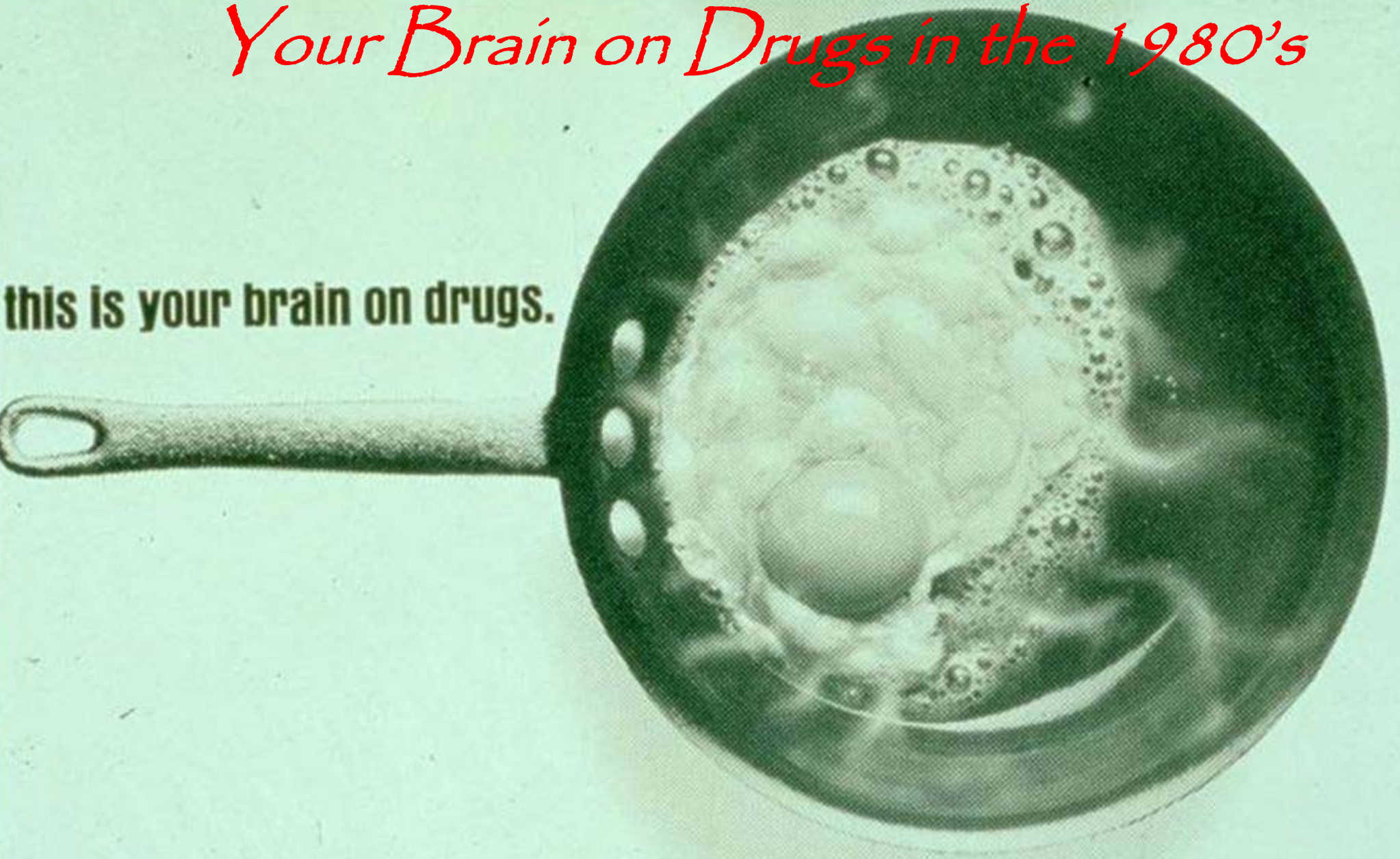
- Characterized by:
  - Compulsive Behavior
  - Continued abuse of drugs despite negative consequences
  - Persistent changes in the brain's structure and function

Advances in science have revolutionized  
our fundamental views of drug abuse and  
addiction.



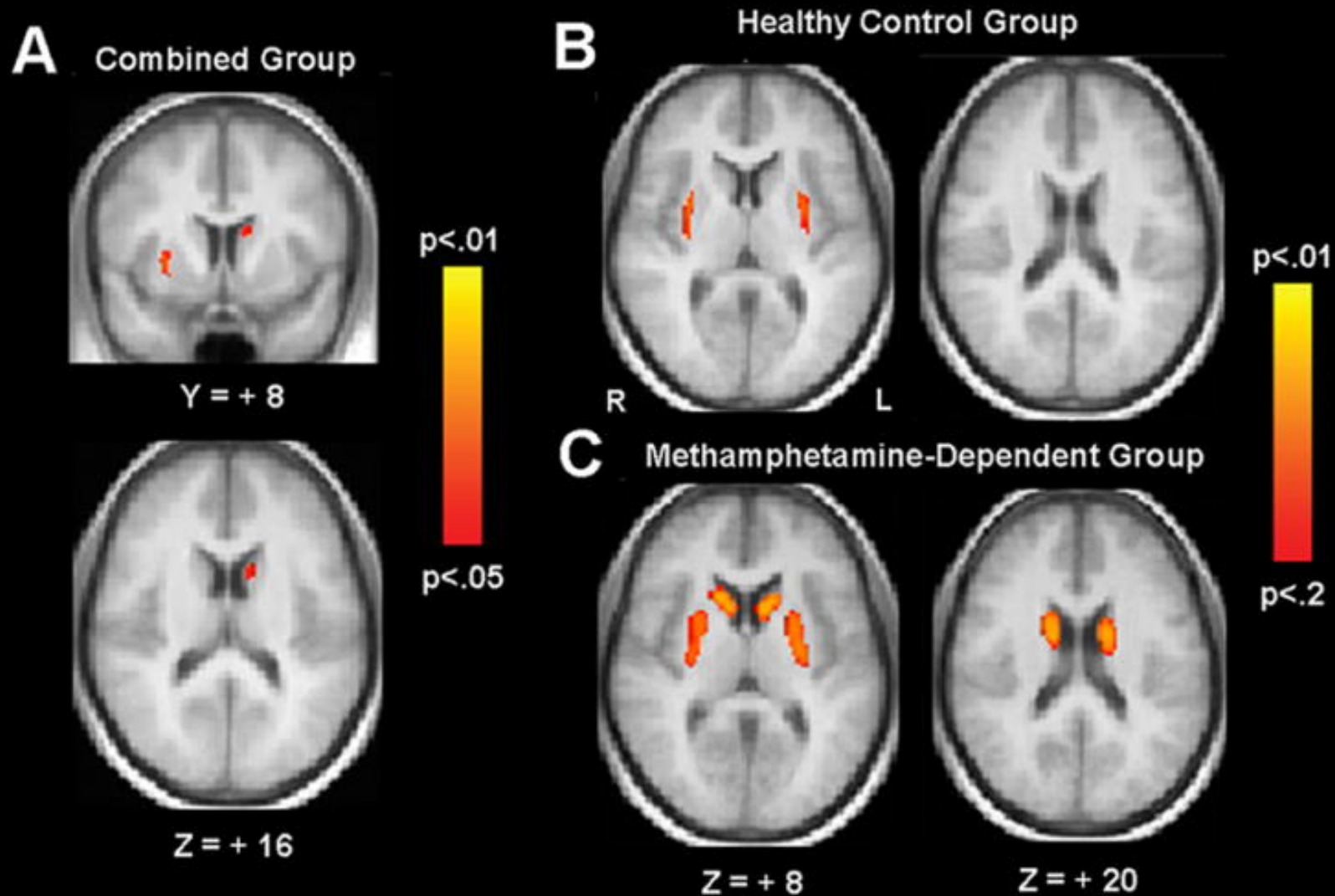
# *Your Brain on Drugs in the 1980's*

this is your brain on drugs.



NIDA

# *Your Brain on Drugs ~ Now*

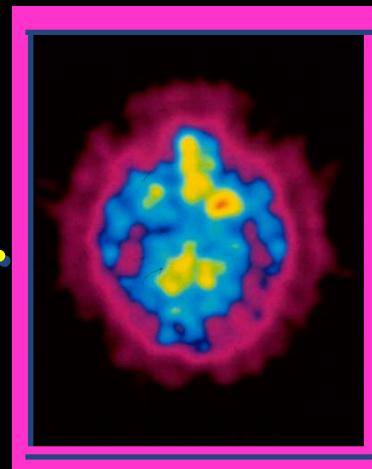


Source: Lee et al., 2009 *J Neurosci* 29:14734-40.



# ***NIDA Research***

***From Molecules...***



***...To Managed Care***  
***...Drug Courts***  
***...Community Coalitions***

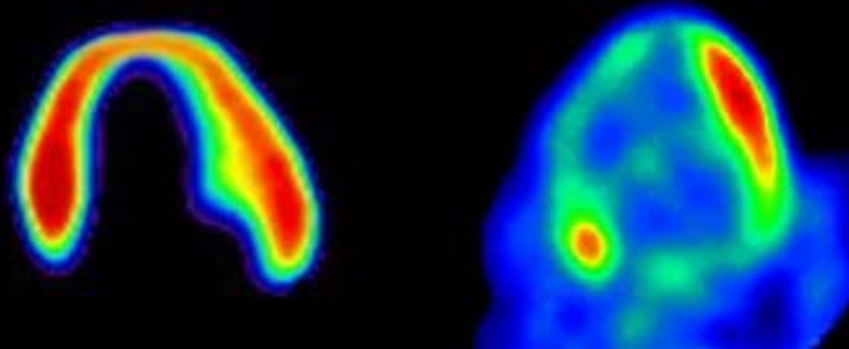


What have we learned?

# *Addiction is Like Other Diseases...*

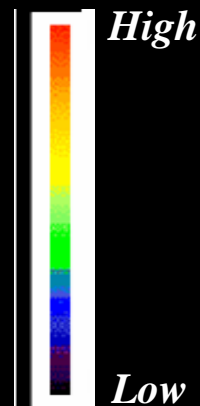
- *It is preventable*
- *It is treatable*
- *It changes biology*
- *If untreated, it can last a lifetime*

*Decreased Heart Metabolism in  
Heart Disease Patient*

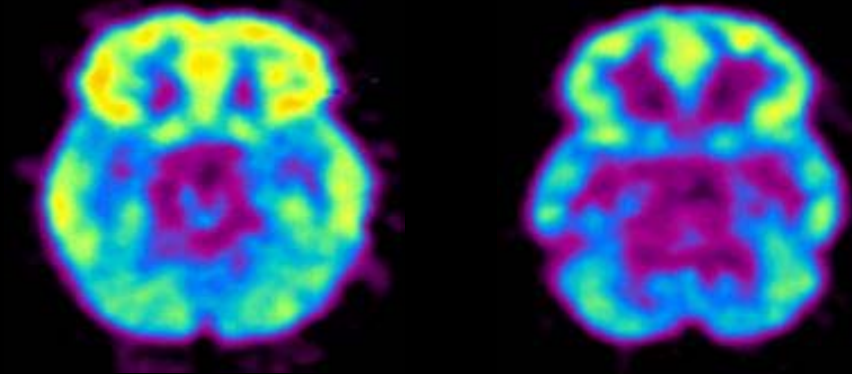


*Healthy Heart*

*Diseased Heart*



*Decreased Brain Metabolism  
in Drug Abuser*



*Healthy Brain*

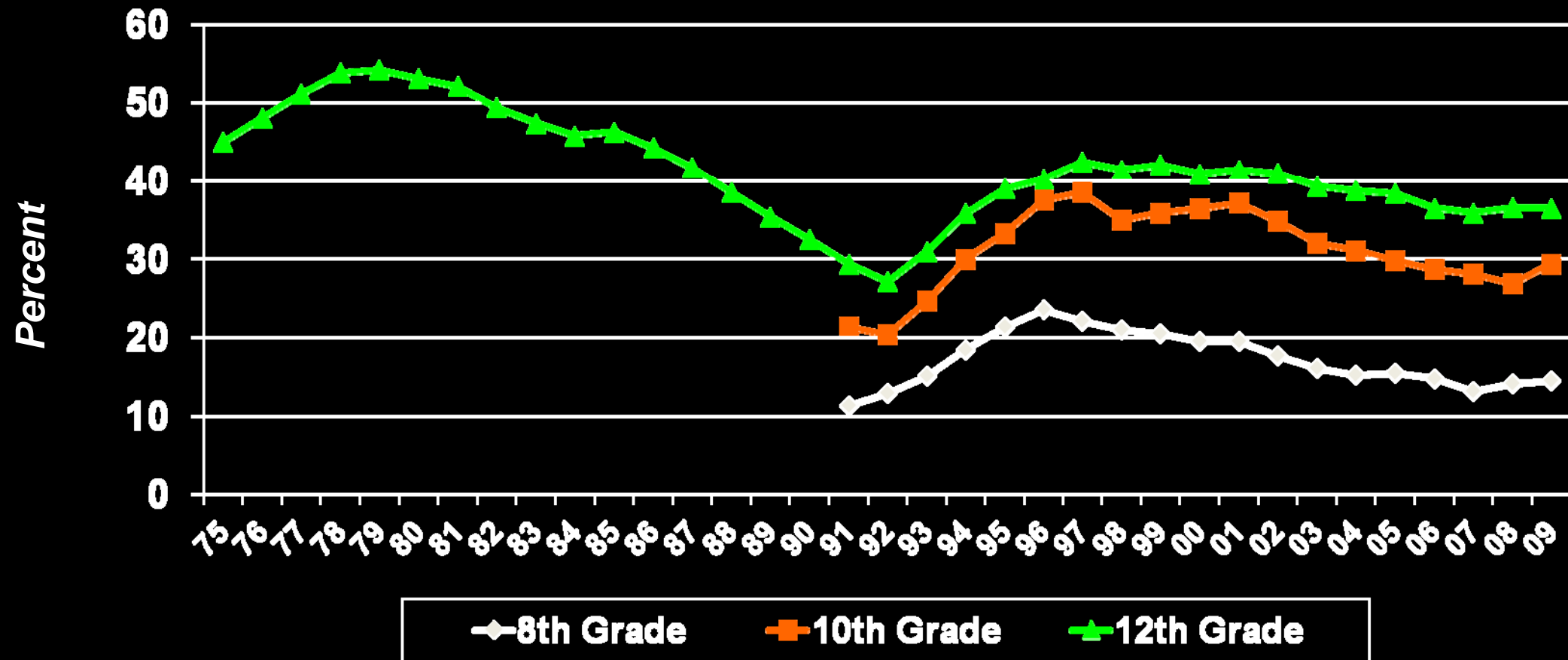
*Diseased Brain/  
Cocaine Abuser*

In 2009, an estimated 21.8 million Americans, or 8.7 percent of the population aged 12 or older, were current illicit drug users.

Source: National Survey on Drug Use and Health (NSDUH), SAMHSA, 2010

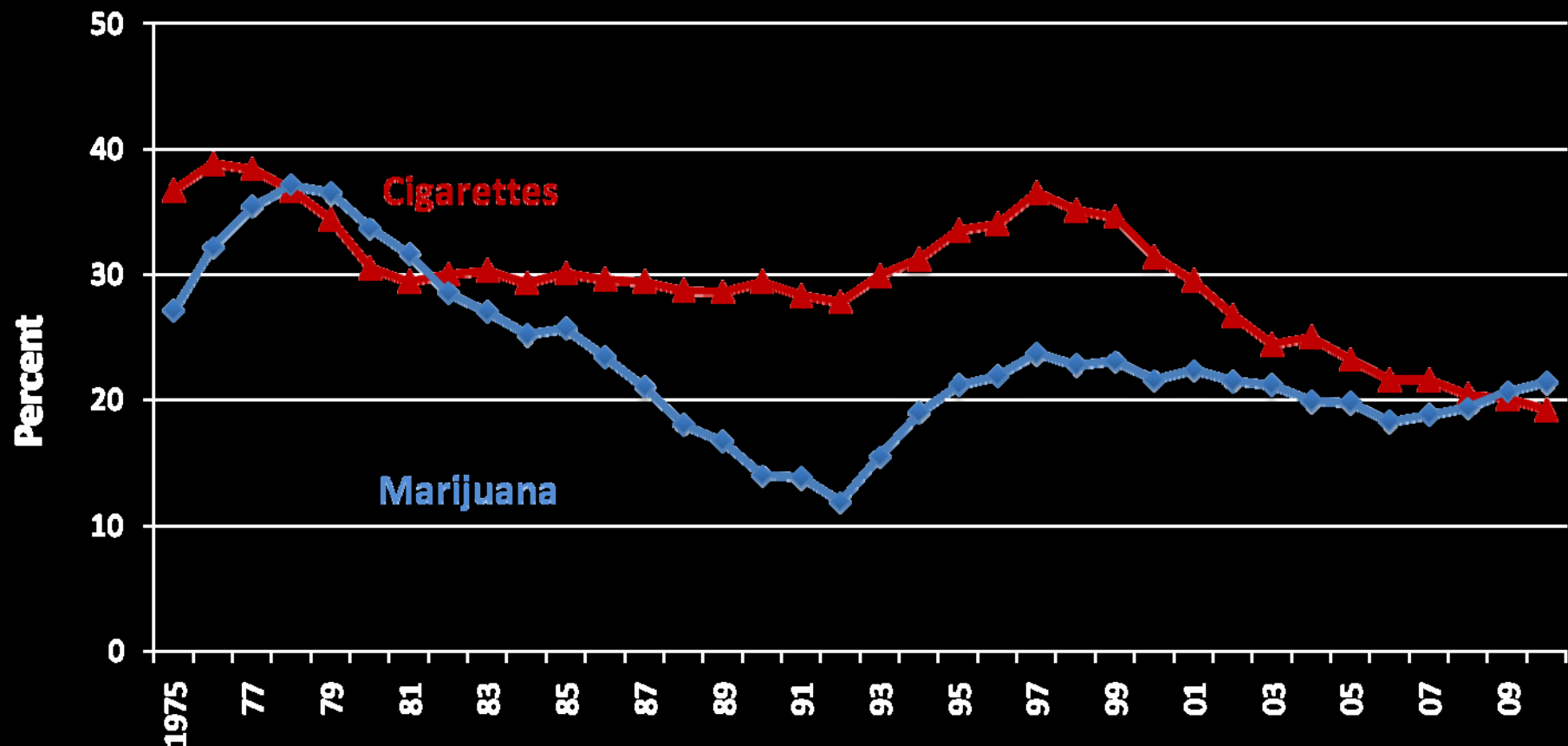


# Percent of Students Reporting Any Illicit Drug Use in Past Year, by Grade



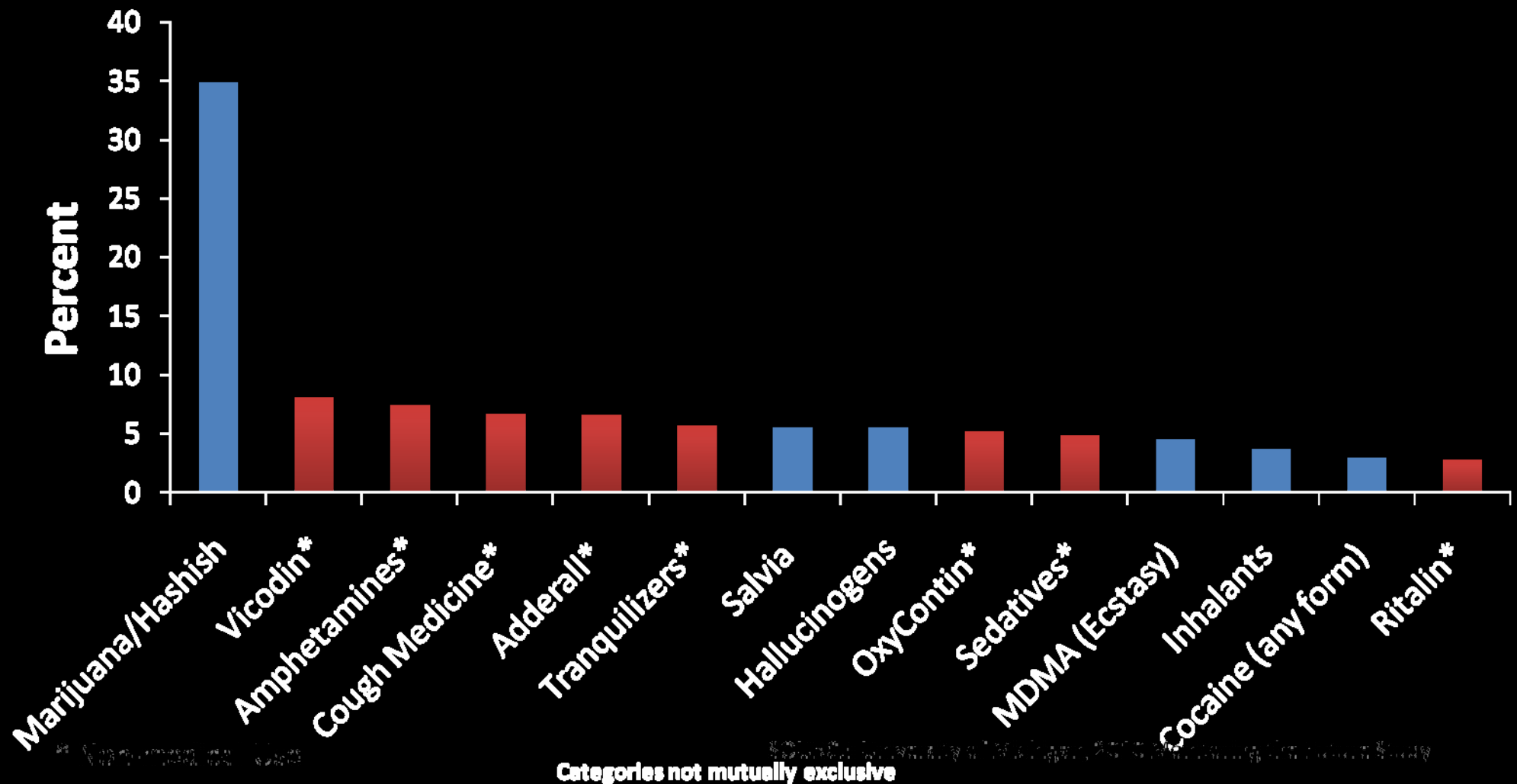
SOURCE: University of Michigan, 2009 Monitoring the Future Study

# Percentage of U.S. 12th Grade Students Reporting Past Month Use of Cigarettes and Marijuana, 1975 to 2010



SOURCE: University of Michigan, 2010 Monitoring the Future Study

# After Marijuana, Prescription and Over-the-Counter Medications\* Account for Most of the Commonly Abused Drugs Prevalence of Past Year Drug Use Among 12th Graders



# *Why Do People Take Drugs in The First Place?*

## *To Feel Good*

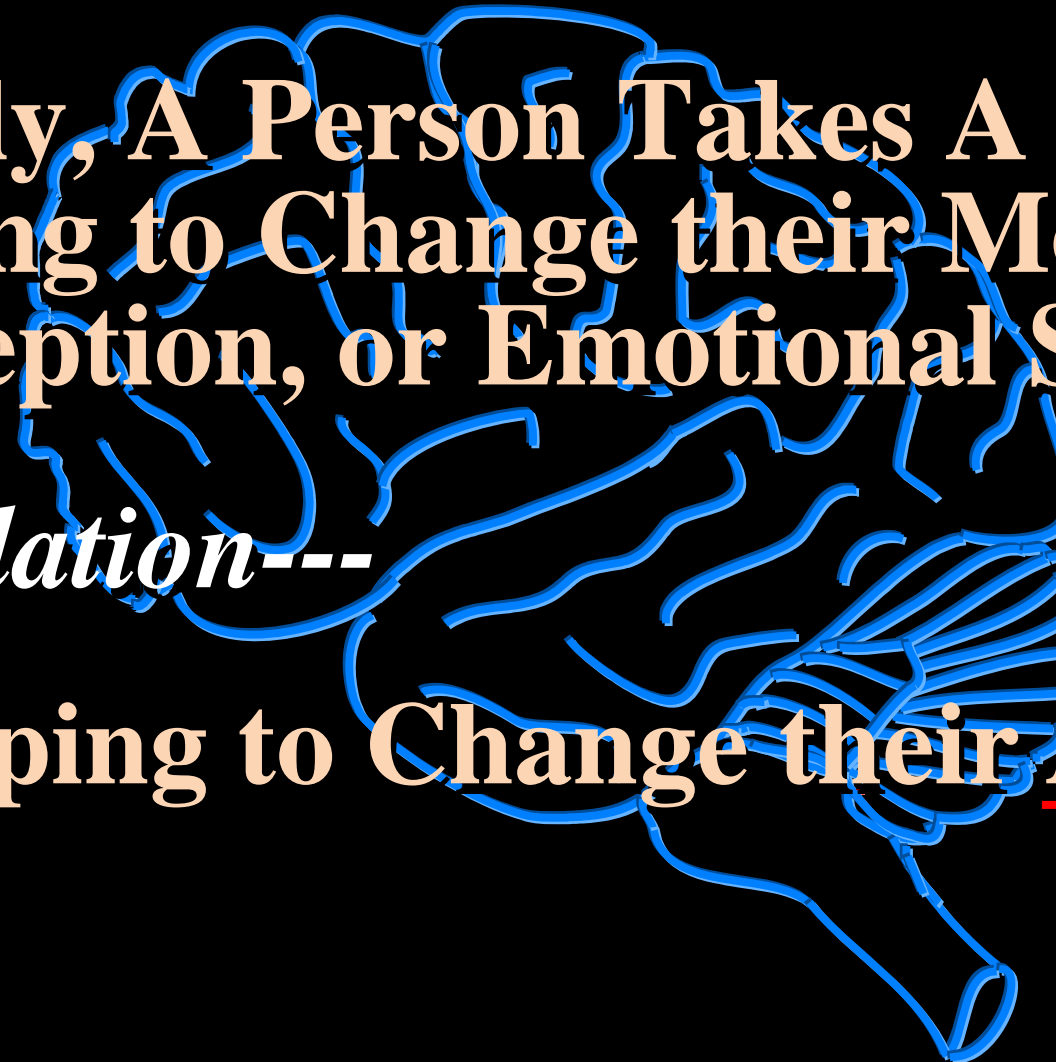
*To have novel:  
feelings  
sensations  
experiences  
AND  
to share them*



## *To Feel Better*

*To lessen:  
anxiety  
worries  
fears  
depression  
hopelessness*





Initially, A Person Takes A Drug  
Hoping to Change their Mood,  
Perception, or Emotional State

*Translation---*

...Hoping to Change their *Brain*

# *Drugs can be “Imposters” of Brain Messages*

**Brain's Chemical**



**Anandamide**

**Drug**



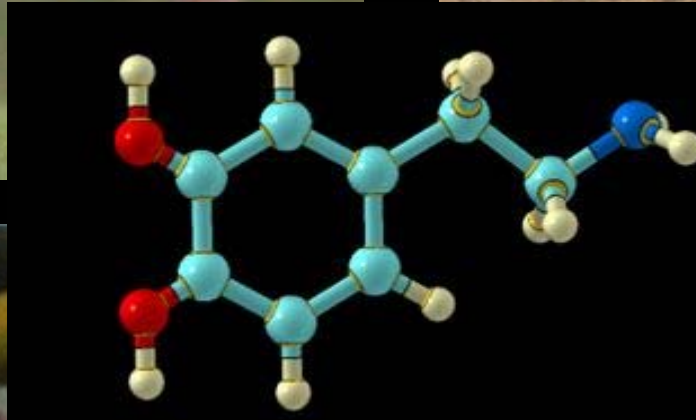
**THC**



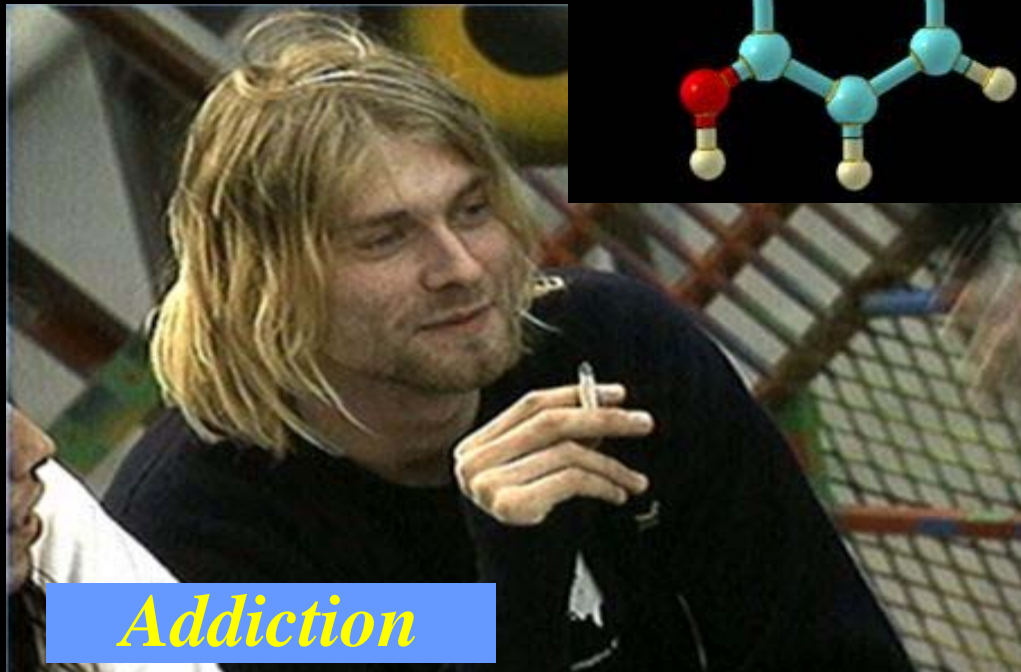
*Movement*



*Motivation*



*Dopamine*

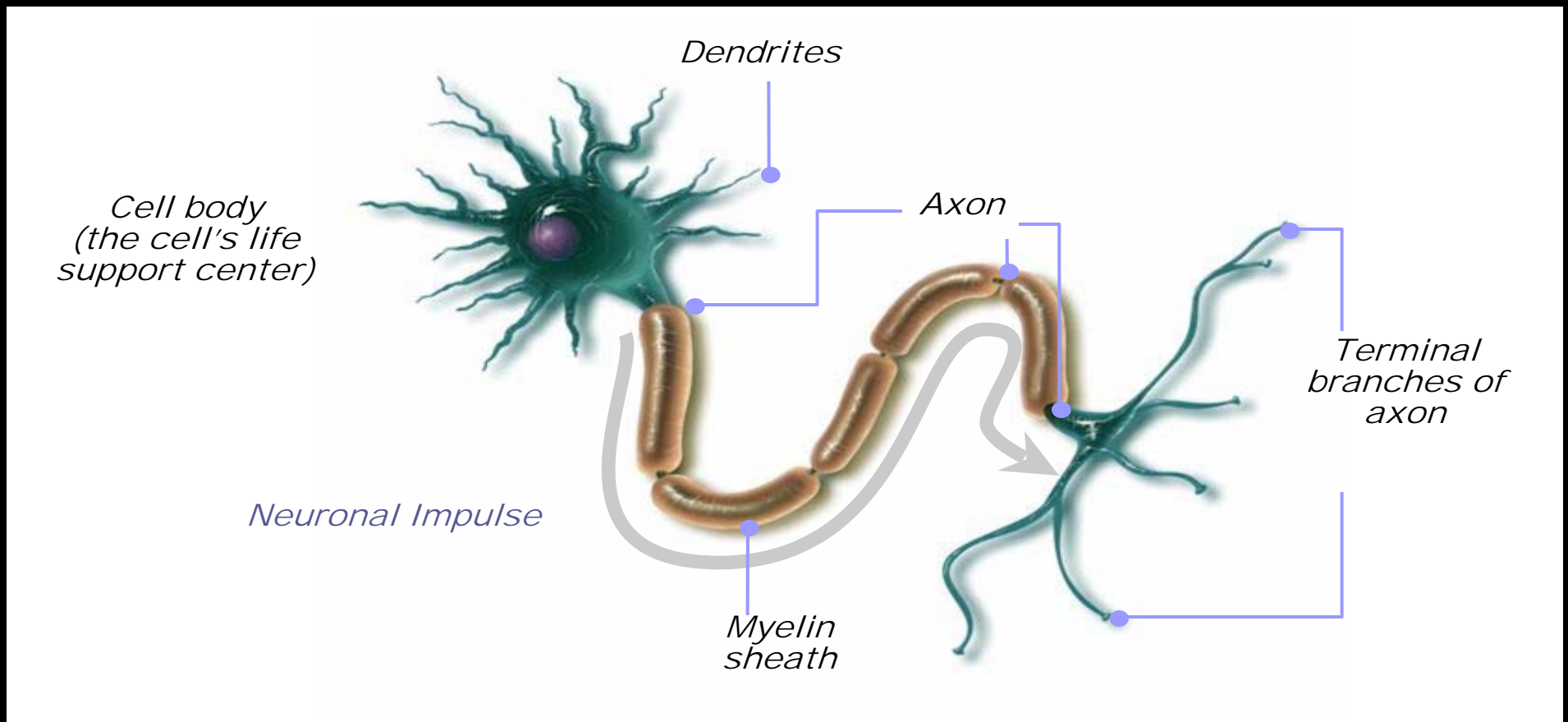


*Addiction*

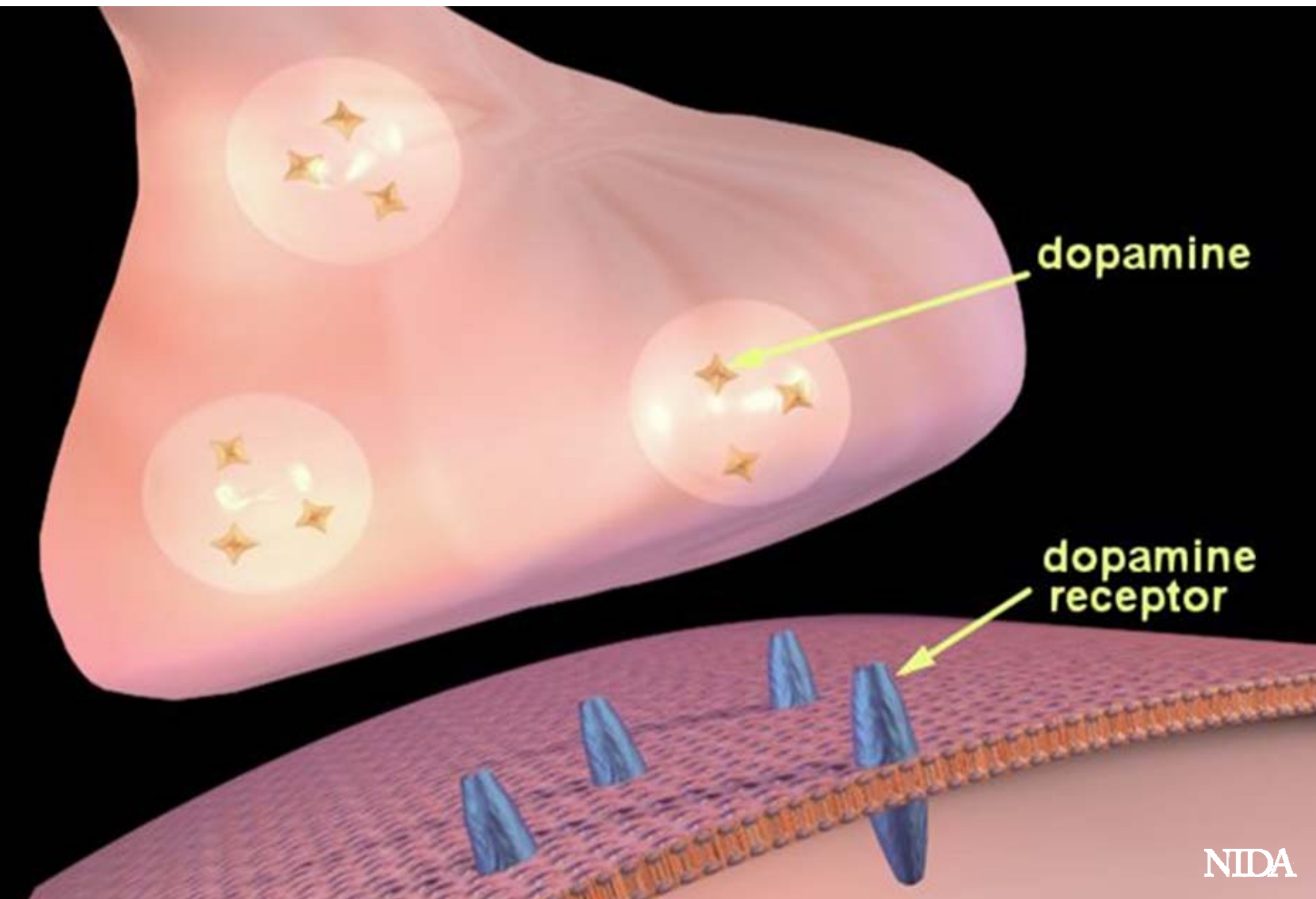


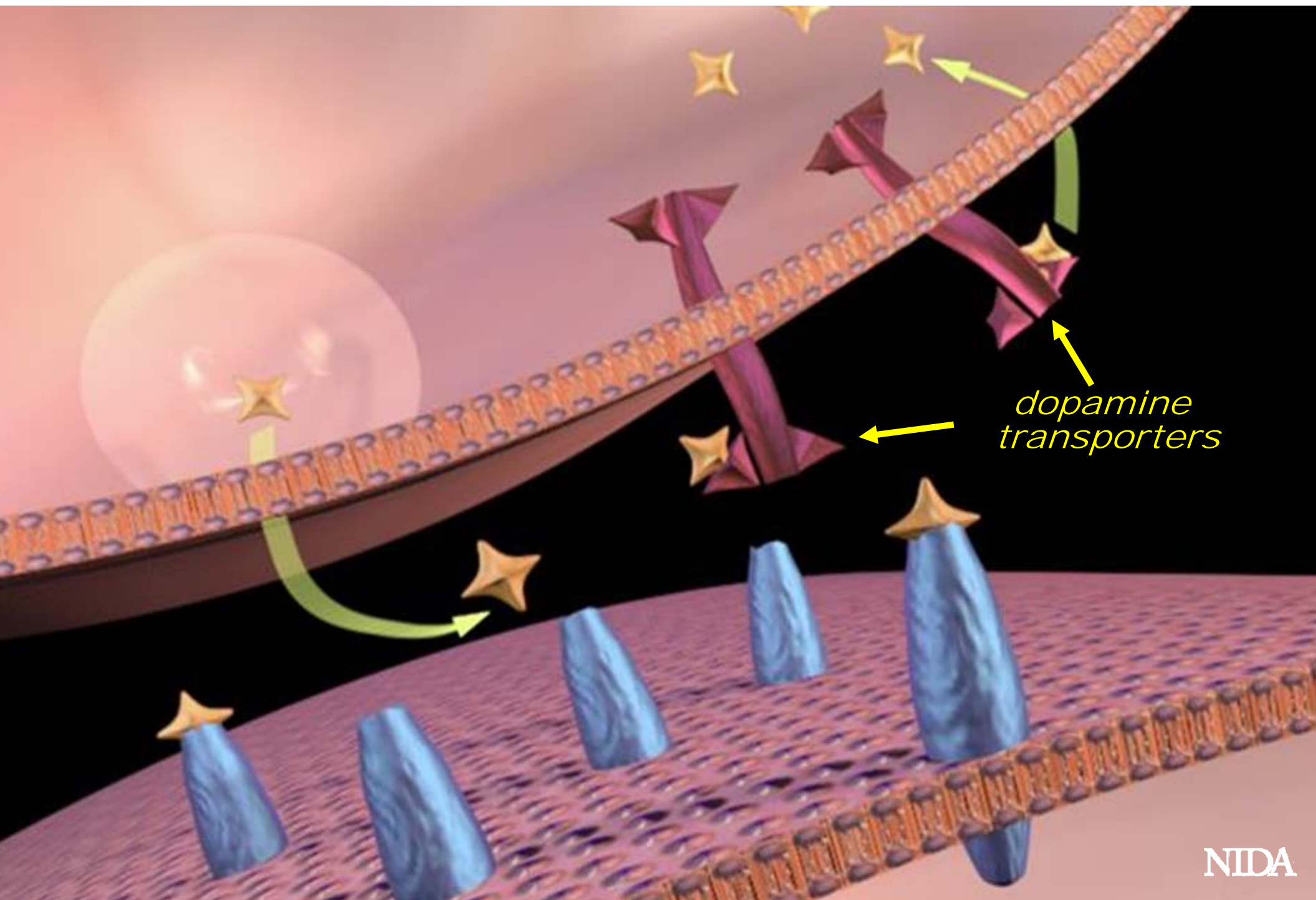
*Reward & well-being*

# *The Neuron: How the Brain's Messaging System Works*

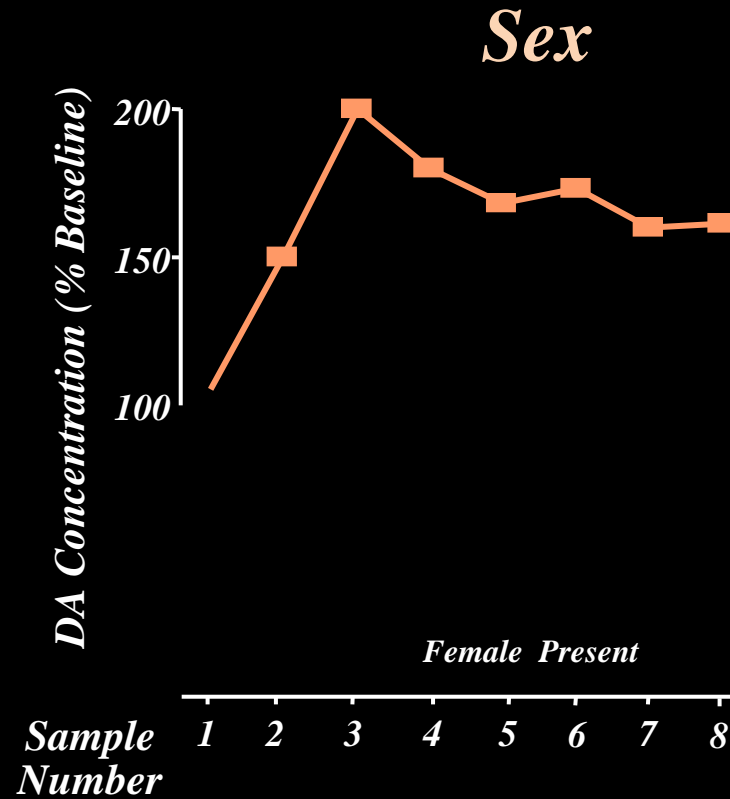
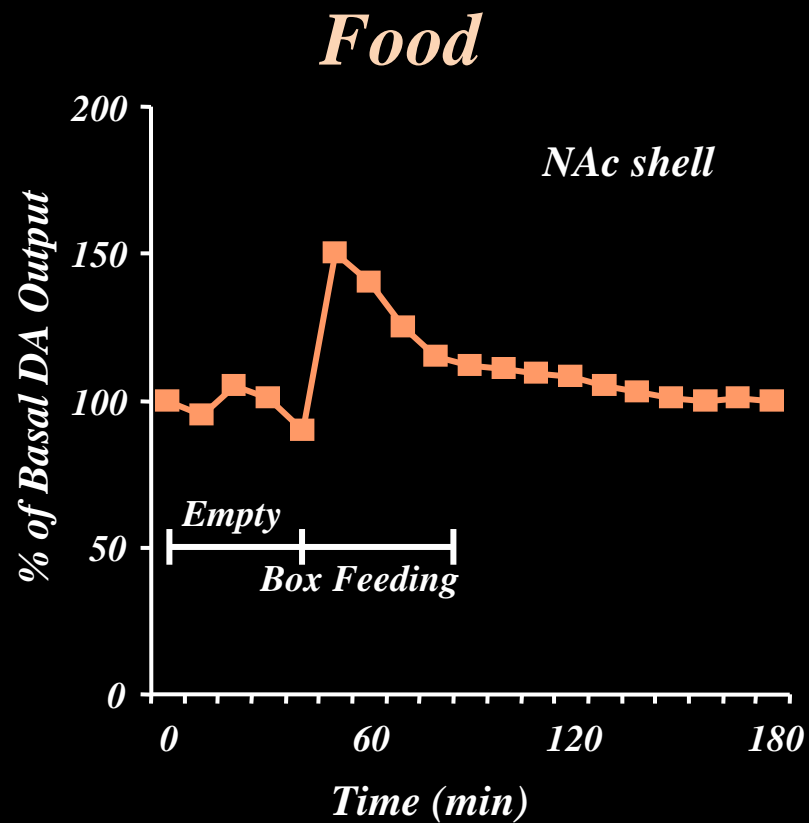




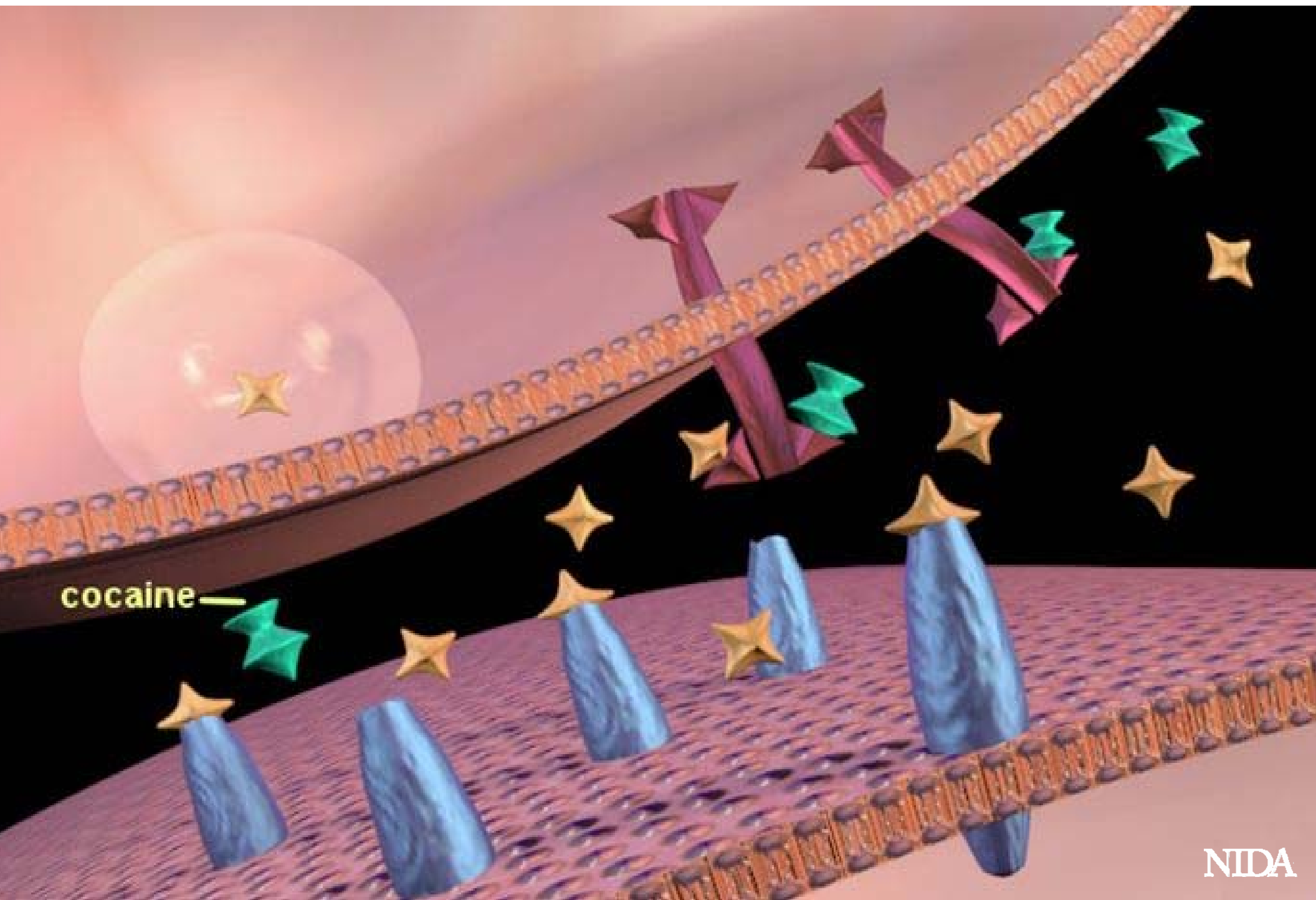




# Natural Rewards Elevate Dopamine Levels



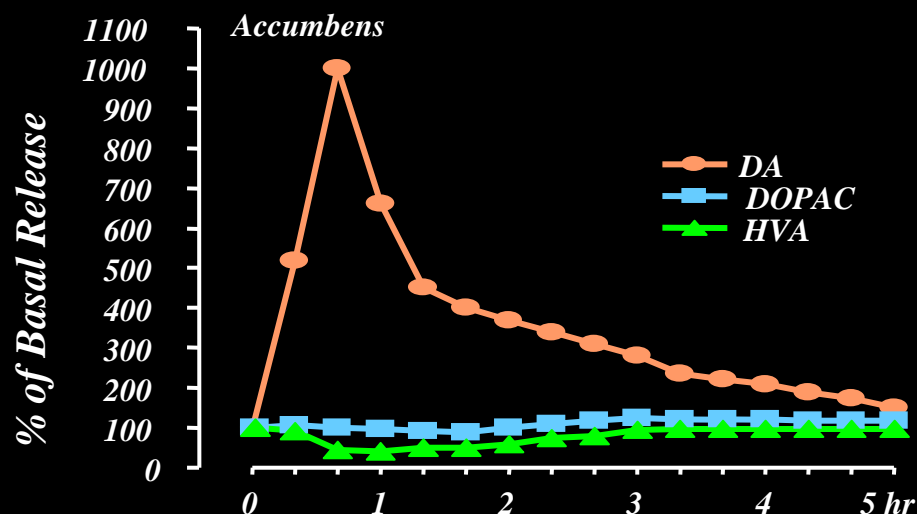
*Di Chiara et al., Neuroscience, 1999., Fiorino and Phillips, J. Neuroscience, 1997.*



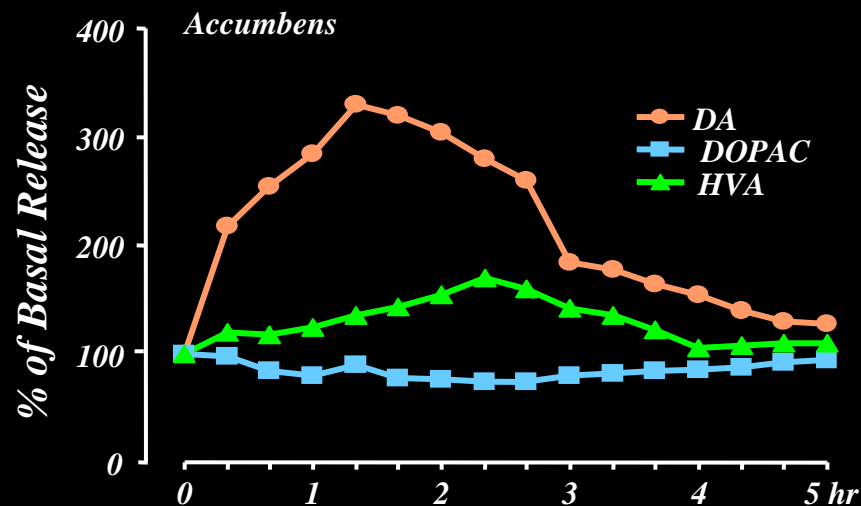


# Effects of Drugs on Dopamine Release

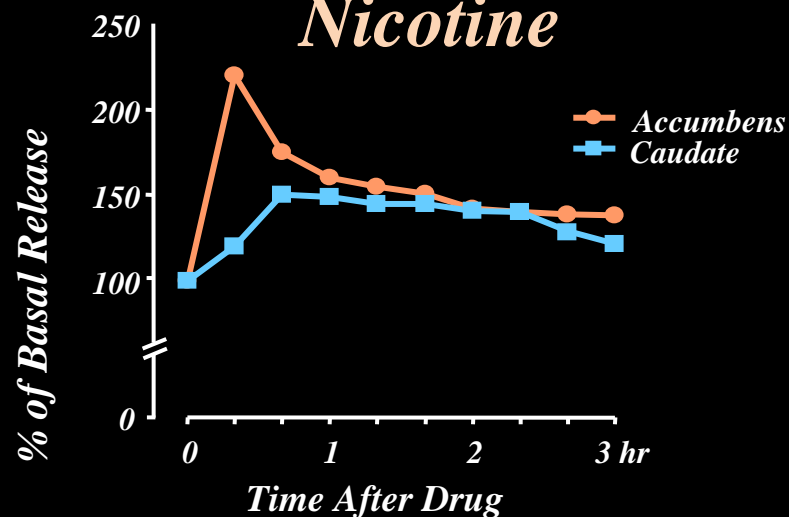
## Amphetamine



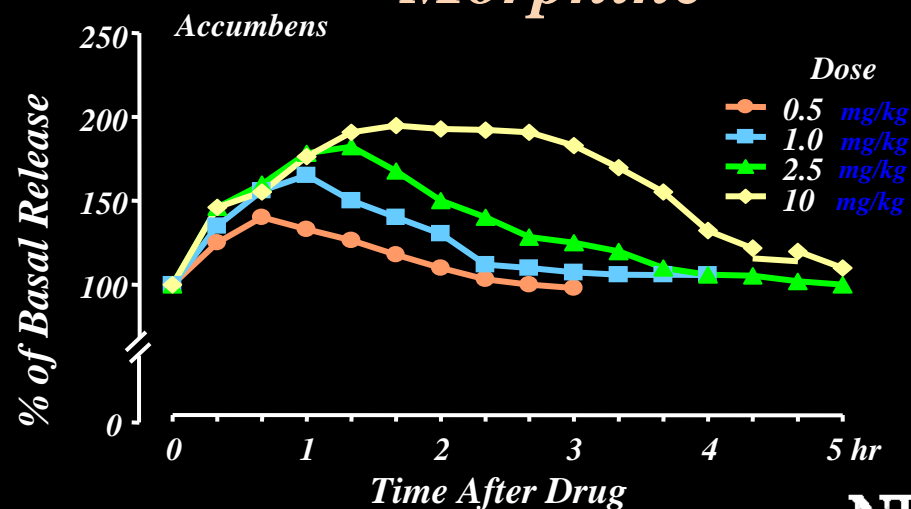
## Cocaine



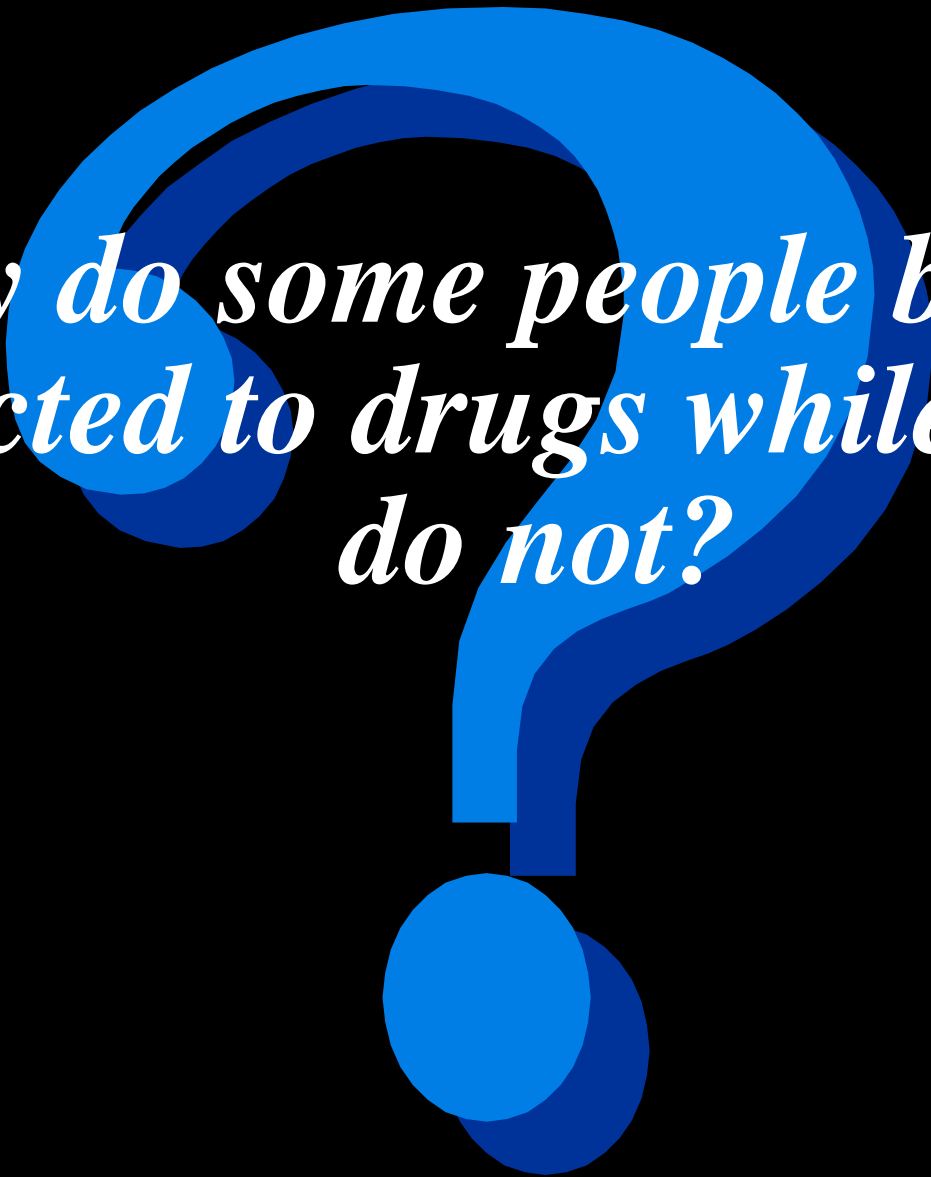
## Nicotine



## Morphine

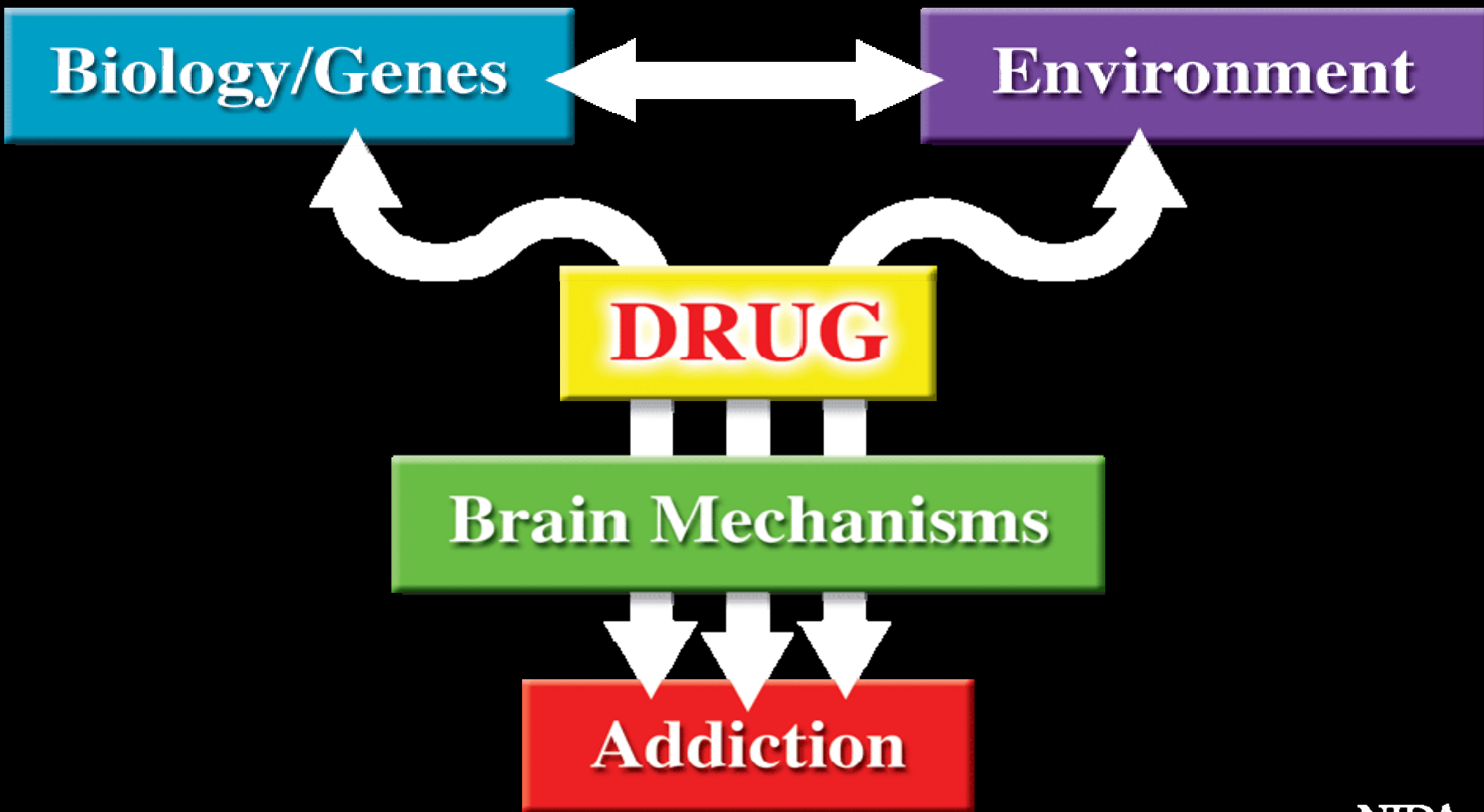


# *Vulnerability*



*Why do some people become  
addicted to drugs while others  
do not?*

# *Addiction Involves Multiple Factors*



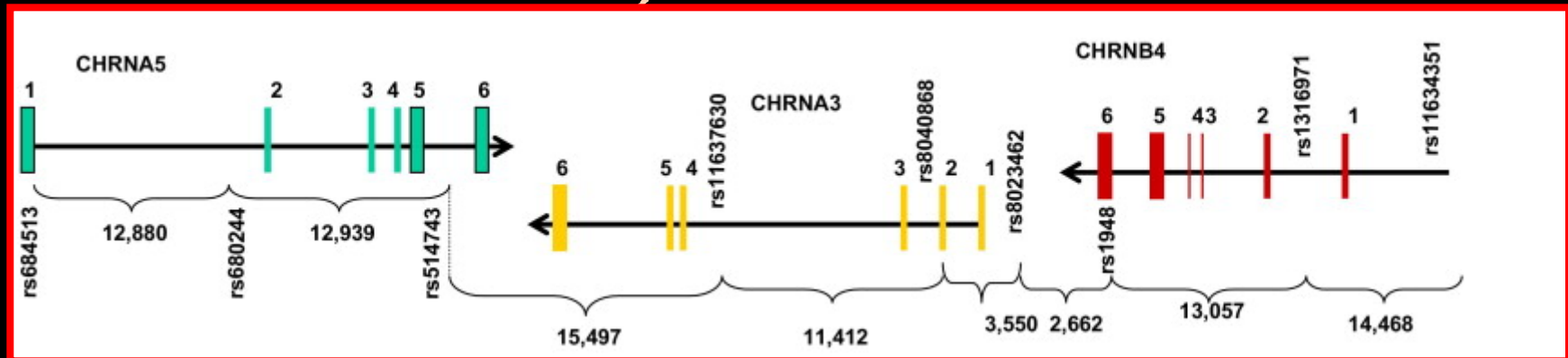


*Genetics is a Big Contributor to the Risk  
of Addiction...*

*And...*

*The Nature of this Contribution  
Is Extremely Complex*

# Gene Cluster is Associated with Nicotine Dependence



*Human Molecular Genetics*, 2007, Vol. 16, No. 1  
doi:10.1093/hmg/ddl441  
Advance Access published on December 7, 2006

*Molecular Psychiatry* (2008), 1–6  
© 2008 Nature Publishing Group All rights reserved 1359-4184/08 \$30.00  
www.nature.com/mp

## Novel genes identified in a high-density genome wide association study for nicotine dependence

Laura Jean Bierut<sup>1,\*</sup>, Pamela A.F. Madden<sup>1</sup>, Naomi Breslau<sup>2</sup>, Eric O. Johnson<sup>3</sup>,  
Dorothy Hatsudis<sup>1</sup>, Louis Fox<sup>1</sup>, Nicholas G. Martin<sup>1</sup>, Jen C. Wang<sup>1</sup>

ARTICLE IN PRESS

## The CHRNA5/A3/B4 Gene Cluster Variability as an Important Determinant of Early Alcohol and Tobacco Initiation in Young Adults

Isabel R. Schlapfer, Nicole R. Hoft, Allan C. Collins, Robin P. Corley, John K. Hewitt, Christian J. Hoffer, Jeffrey M. Lessem, Matthew B. McQueen, Soo Hyun Rhee, and Marissa A. Ehringer

## IMMEDIATE COMMUNICATION

## $\alpha$ -5/ $\alpha$ -3 nicotinic receptor subunit alleles increase risk for heavy smoking

W Berrettini<sup>1,2,3</sup>, X Yuan<sup>2,3</sup>, F Tozzi<sup>2,3</sup>, K Song<sup>2,3</sup>, C Francks<sup>2,3</sup>, H Chilcoat<sup>4</sup>, D Waterworth<sup>2,3</sup>, P Muglia<sup>2,3,5</sup> and V Mooser<sup>2,3</sup>

Vol 452 | 3 April 2008 | doi:10.1038/nature06846

## A variant associated with nicotine dependence, lung cancer and peripheral arterial disease

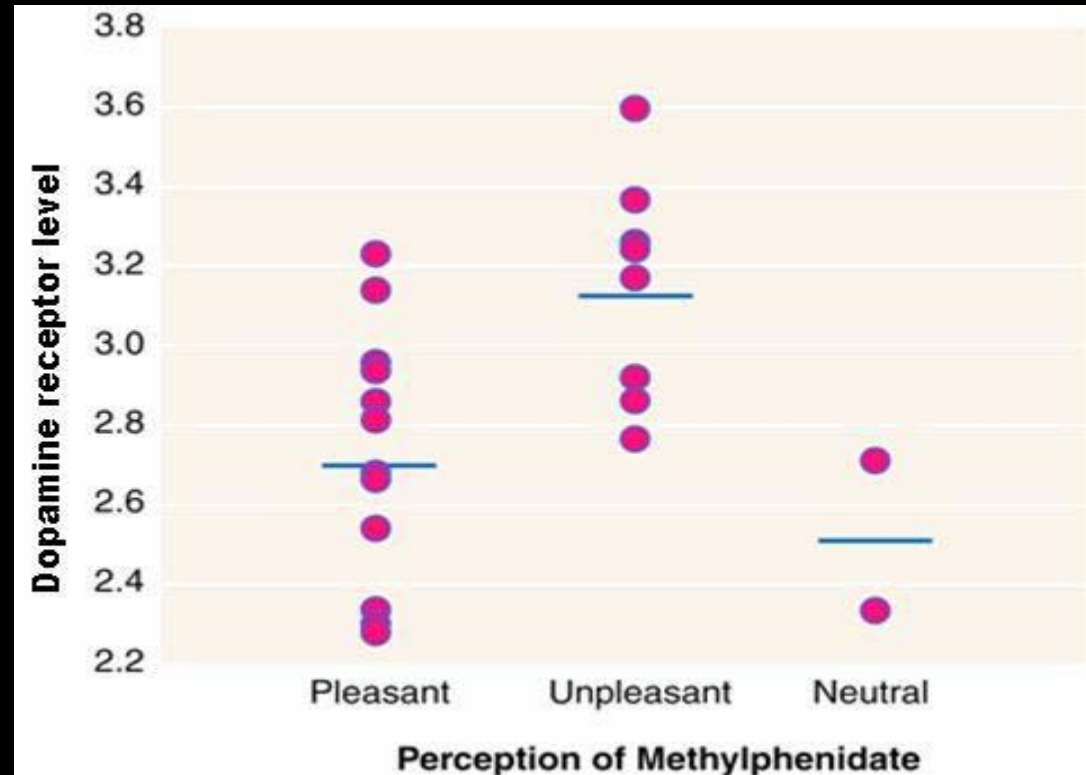
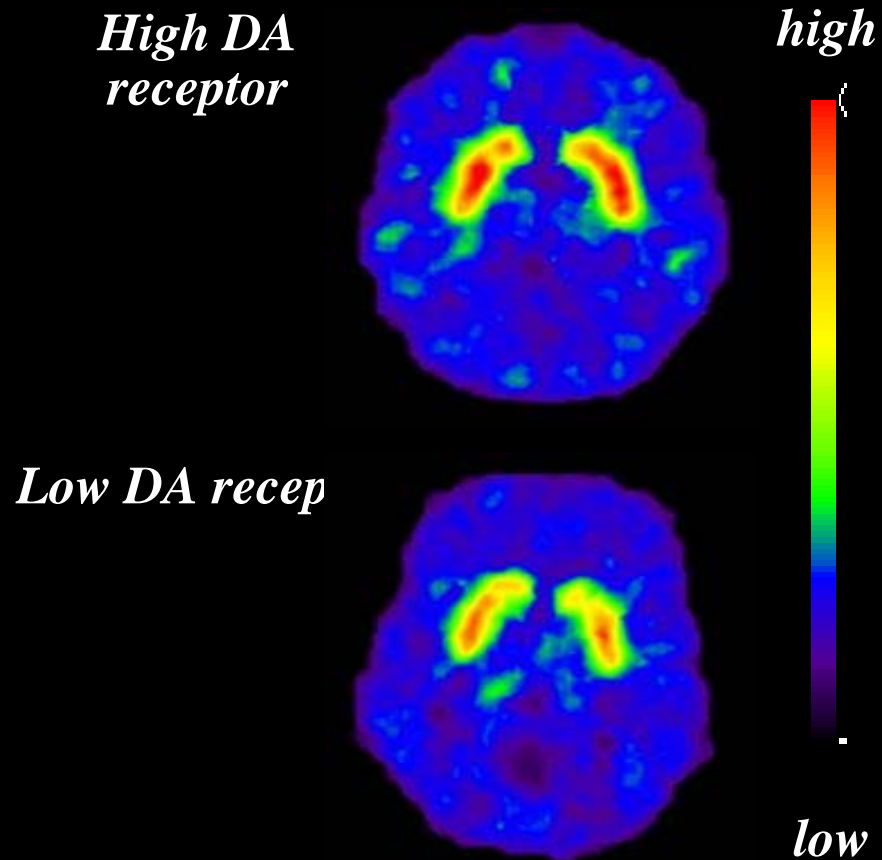
Thorgeir E. Thorgeirsson<sup>1,\*</sup>, Frank Geller<sup>1,\*</sup>, Patrick Sulem<sup>1,\*</sup>, Thorunn Rafnar<sup>1,\*</sup>, Anna Wiste<sup>1,2</sup>, Kristinn P. Magnusson<sup>1</sup>, Andrei Manolescu<sup>1</sup>, Gudmar Thorleifsson<sup>1</sup>, Hreinn Stefansson<sup>1</sup>, Andres Ingason<sup>1</sup>, Simon N. Stacey<sup>1</sup>, Jon T. Bergthorsson<sup>1</sup>, Steinunn Thorlacius<sup>1</sup>, Julius Gudmundsson<sup>1</sup>, Thorlakur Jonsson<sup>1</sup>



# Some Gene Variants Implicated in Addiction

- **FAAH** - associated with drug dependence
- **OPRM1** - associated with opiates and alcoholism
- **CYP2A6, CYP2B6** - associated with smoking and smoking cessation
- **ALDH2** - associated with protection against alcoholism
- **DBH** (Dopamine beta-hydroxylase) – cocaine-induced paranoia
- **DRD2, DRD4** (Dopamine receptors) - reward, craving
- **NrCAM, neurexins** (Cell adhesions genes) - assoc with drug abuse and addiction
- **Prodynorphin gene** - associated with protection against cocaine dependence
- **Nicotinic alpha 7 promoter** – assoc. with decreased expression of its message in different brains regions and with sensory gating defects in schizophrenics
- **Alpha 5 and beta 3** (nicotinic receptors) – assoc. with nicotine dependence
- **5HT1B** (serotonin receptor) - associated with conduct disorder and alcoholism

# *Individual Differences in Response to Drugs: DA Receptors influence drug liking*



*As a group, subjects with low receptor levels found MP pleasant while those with high levels found MP unpleasant*

*But it isn't all genetics*

# Drug Abuse Risk Factors

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**Community**



**Peer Cluster**



**Family**



**Individual**

# *What Environmental Factors Contribute to Addiction?*

Drug availability

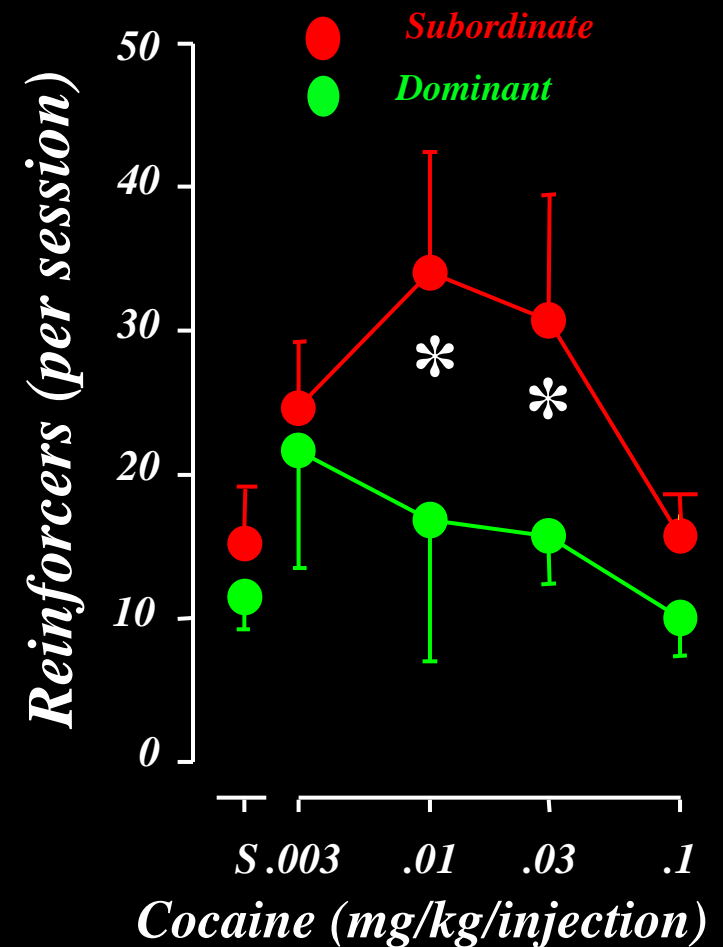
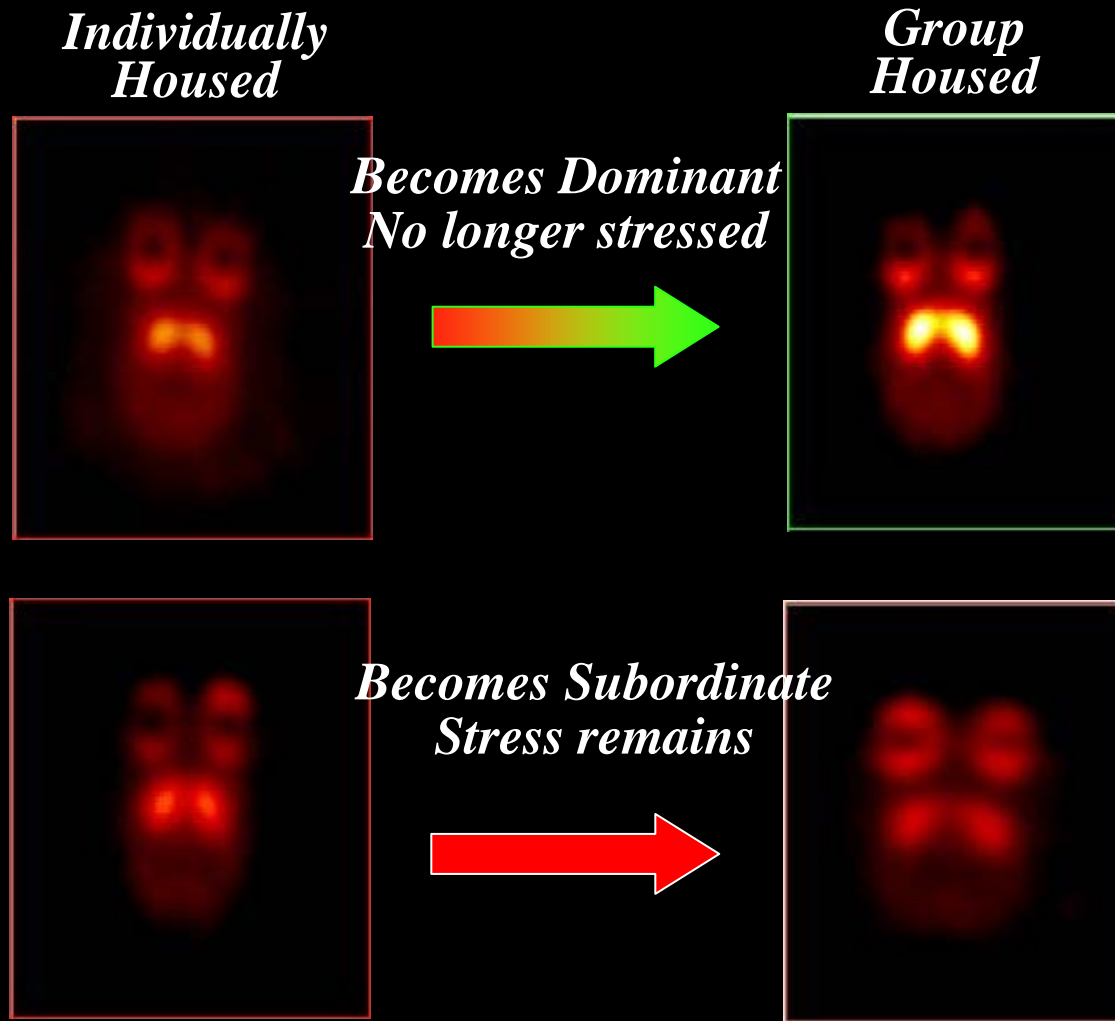
Peers who use drugs

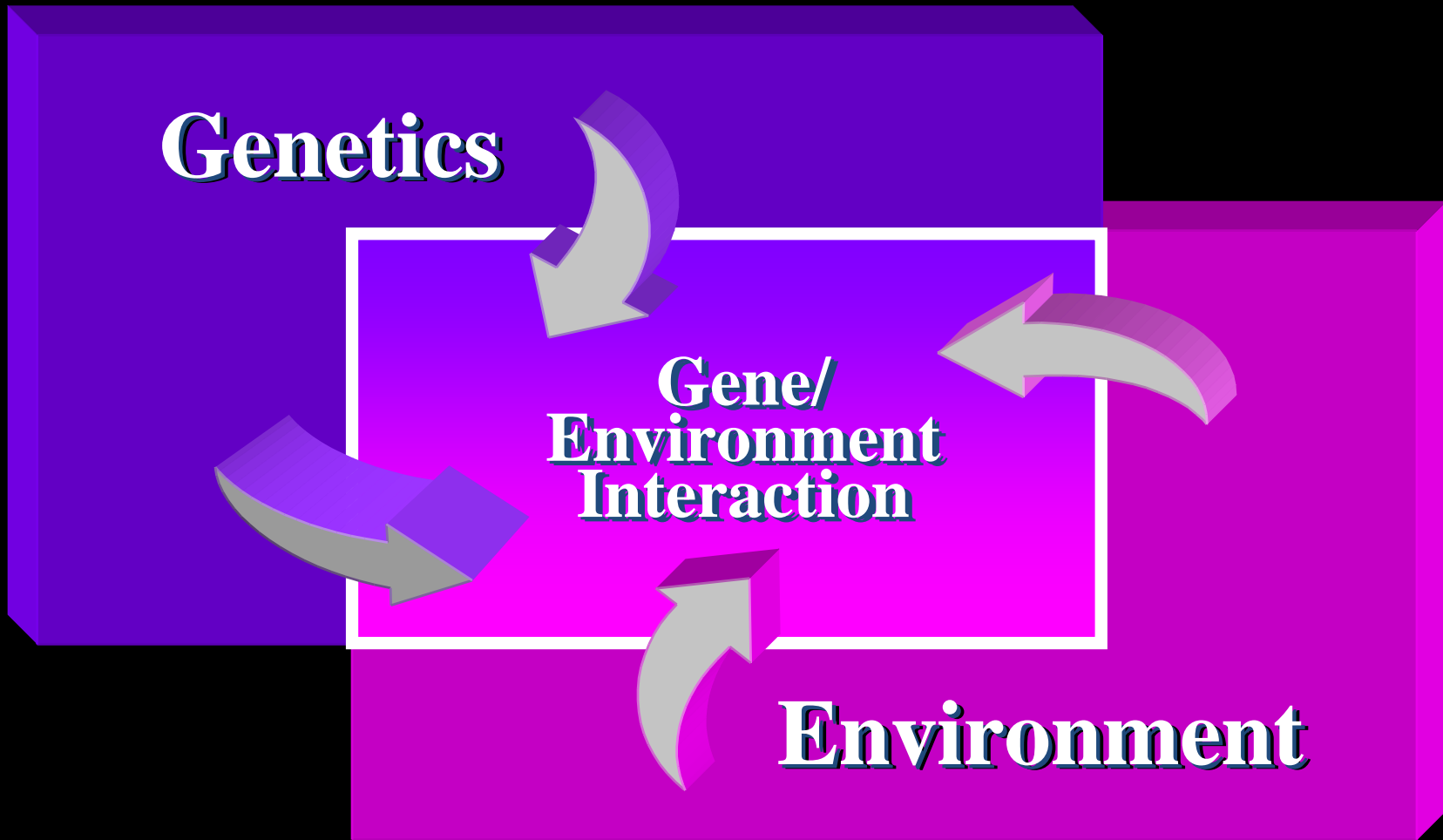
Early physical or sexual abuse

Stress



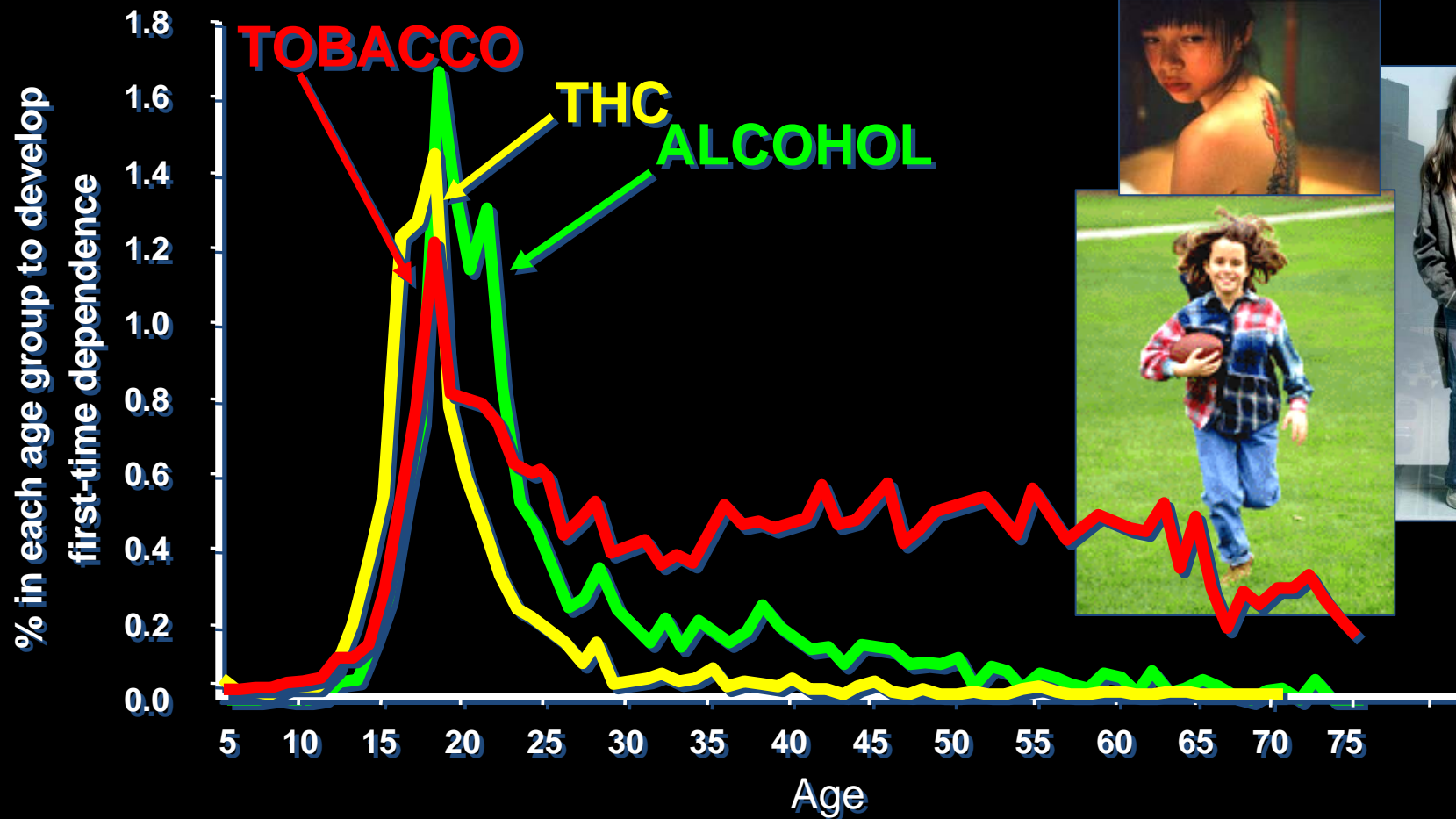
# *Social Stressor Affects Brain DA D2 Receptors and Drug Self-Administration*





*What have we learned about  
other aspects of vulnerability?*

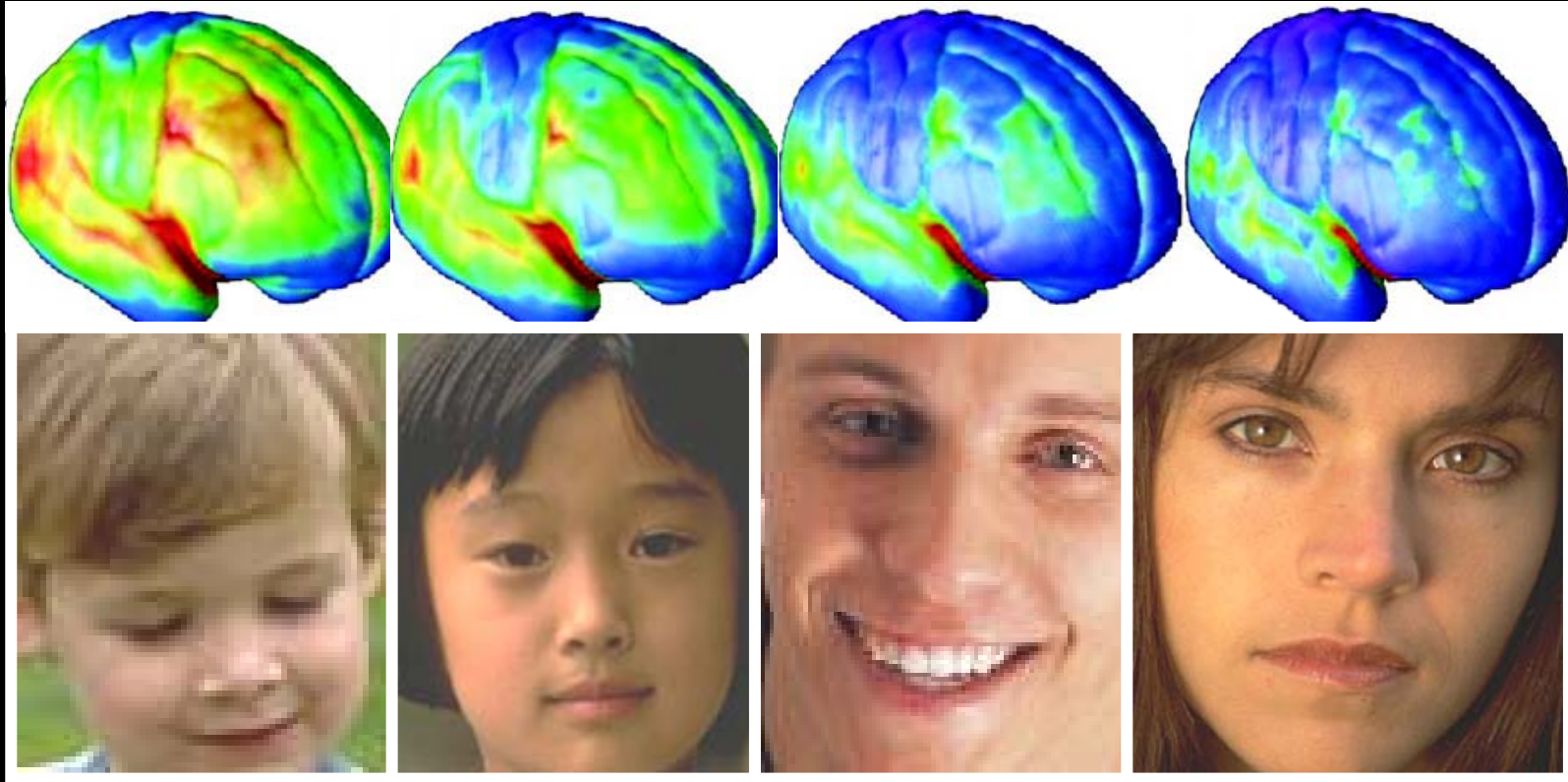
# Addiction Is a Developmental Disease *starts in childhood and adolescence*



Age at **tobacco**, at **alcohol** and at **cannabis** dependence, as per DSM IV

*National Epidemiologic Survey on Alcohol and Related Conditions, 2003*

# *Adolescents' Brains Are Still Developing...*

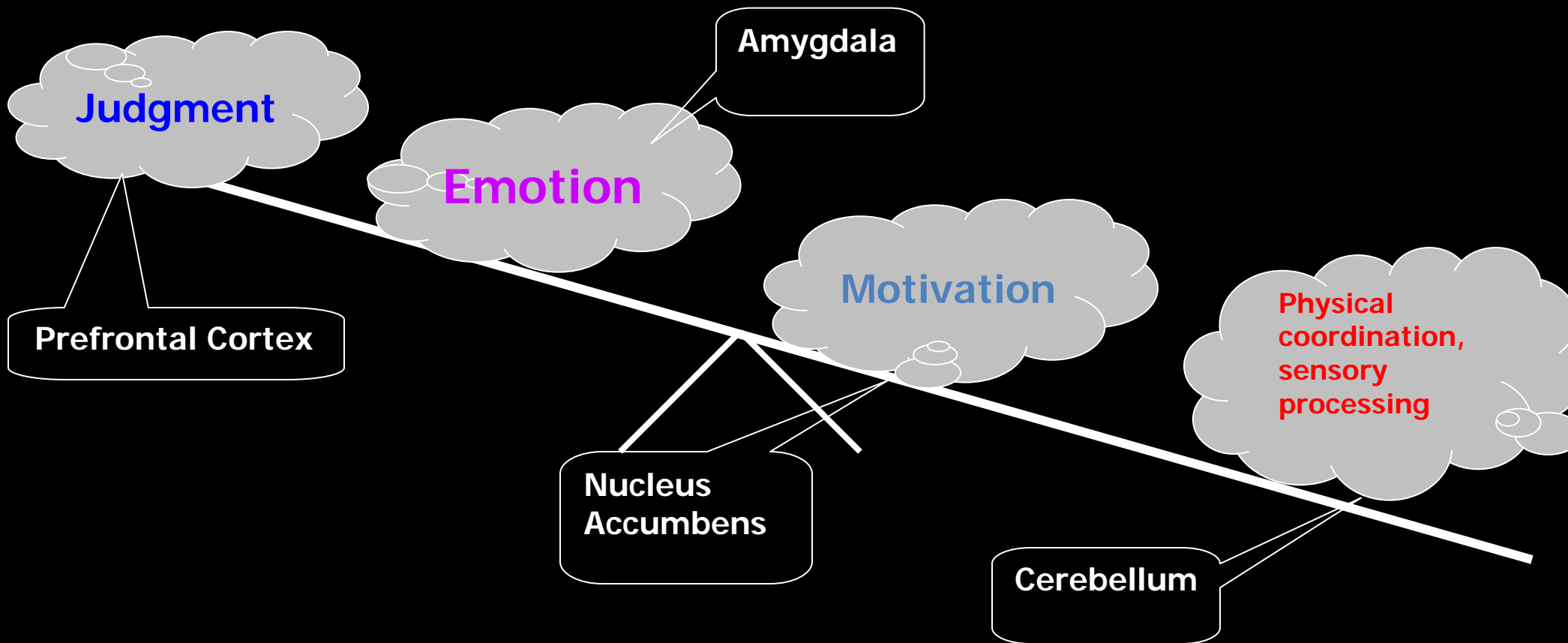


*Implications for prevention and Treatment?*

Source: Gogtay, Nitin et al. (2004) *Proc. Natl. Acad. Sci. USA* 101, 8174-8179



**Maturation starts at the back of the brain ...  
and moves to the front**

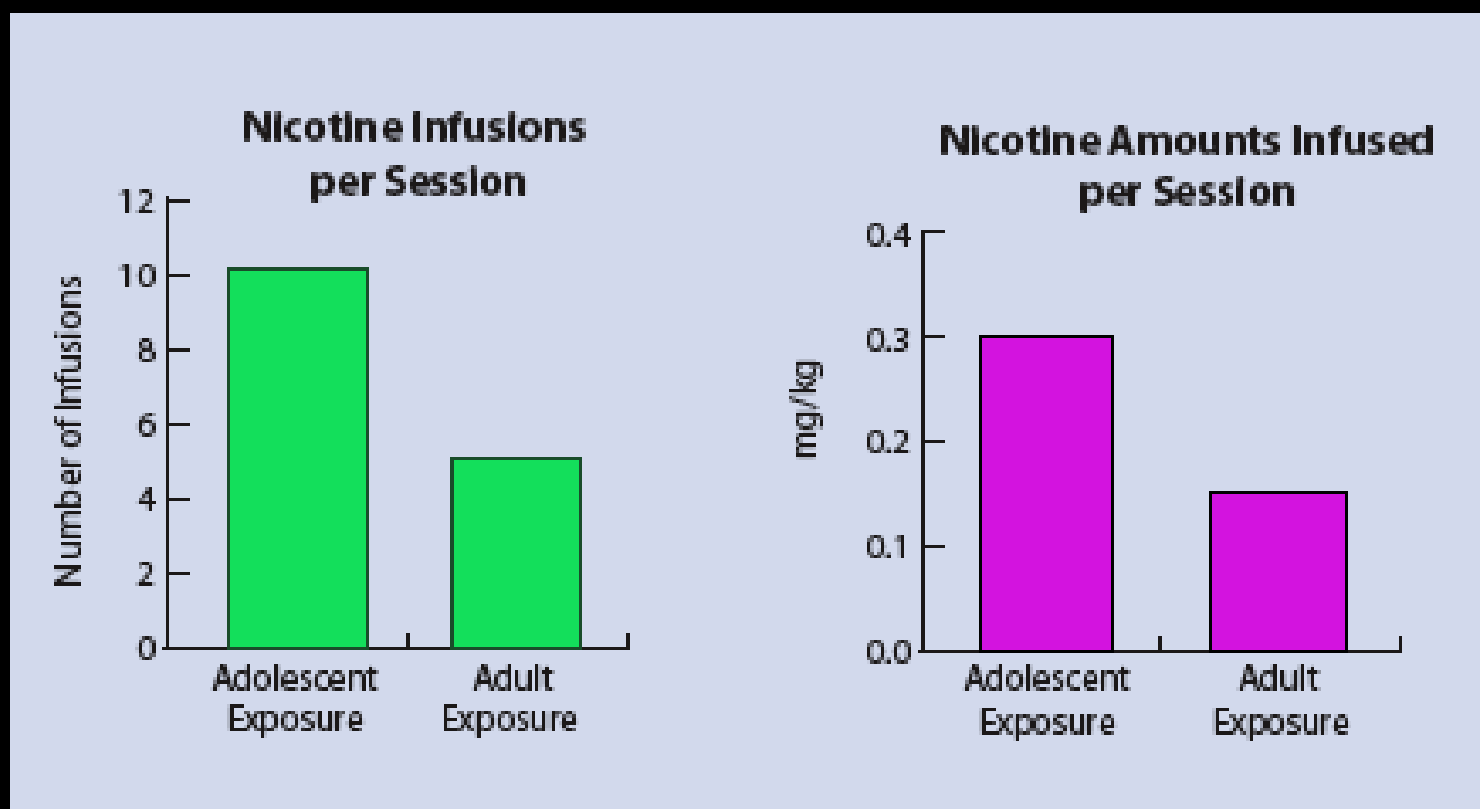


**Notice: Judgment is last to develop!**

Source: K. Winters

*Do Adolescents React Differently  
than Adults to  
Substances of Abuse?*

# *Rats Exposed to Nicotine in Adolescence Self-Administer More Nicotine Than Rats First Exposed as Adults*





# *Do We Need Fundamentally Different Strategies For Adolescents?*

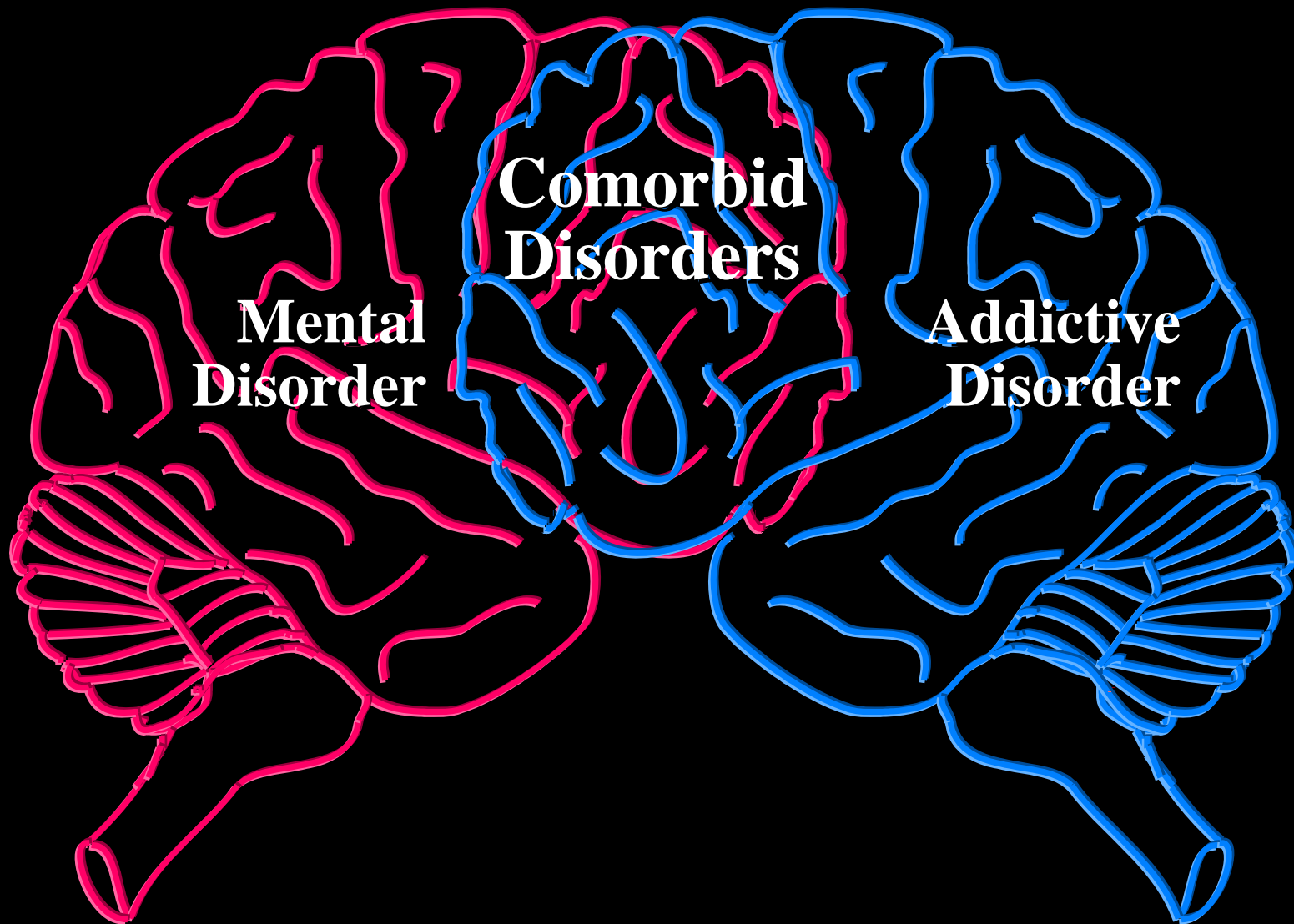


NIDA

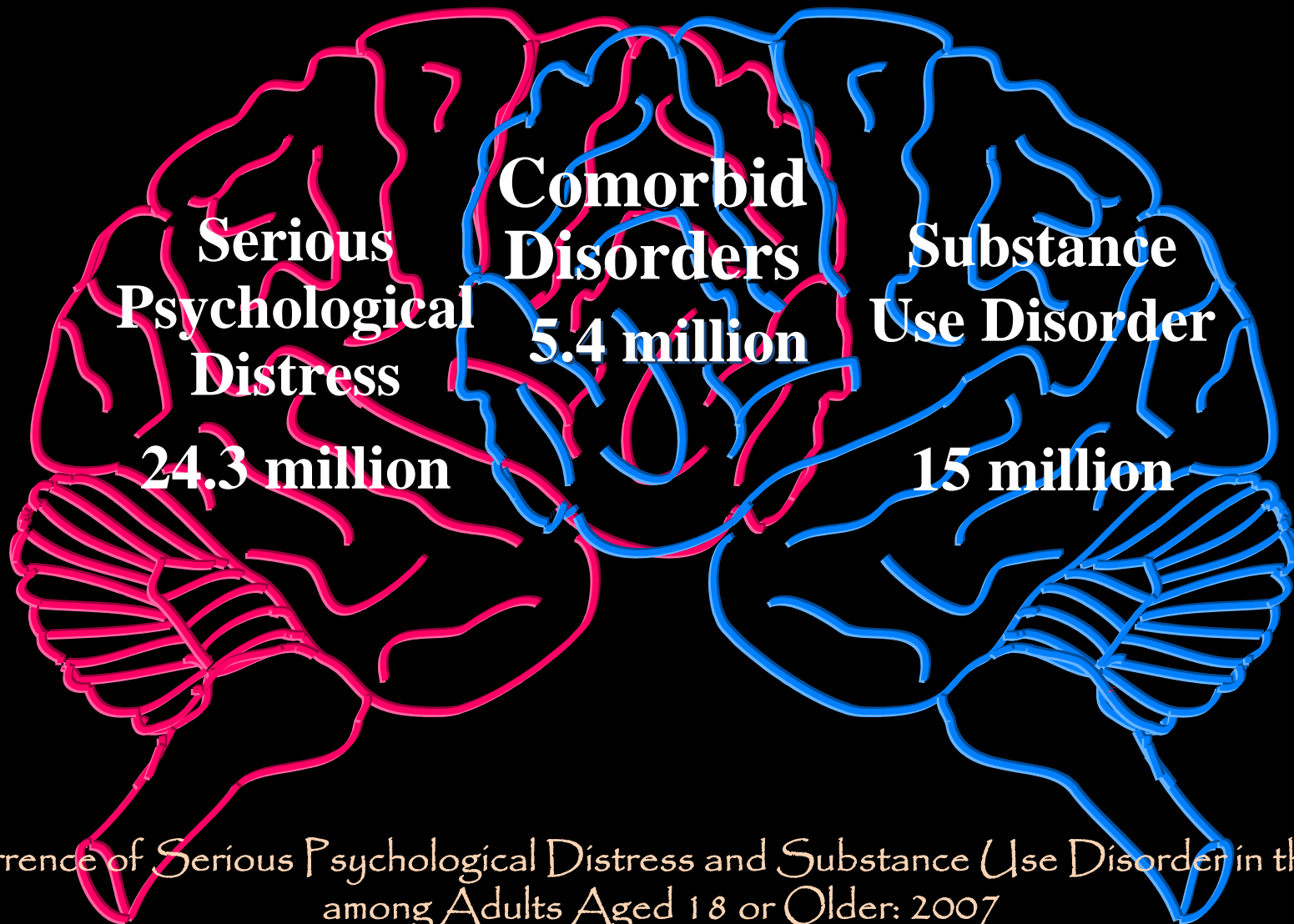
What Else Have We Learned?



# Addictive Disorders Often *Co-Exist* With Mental Disorders

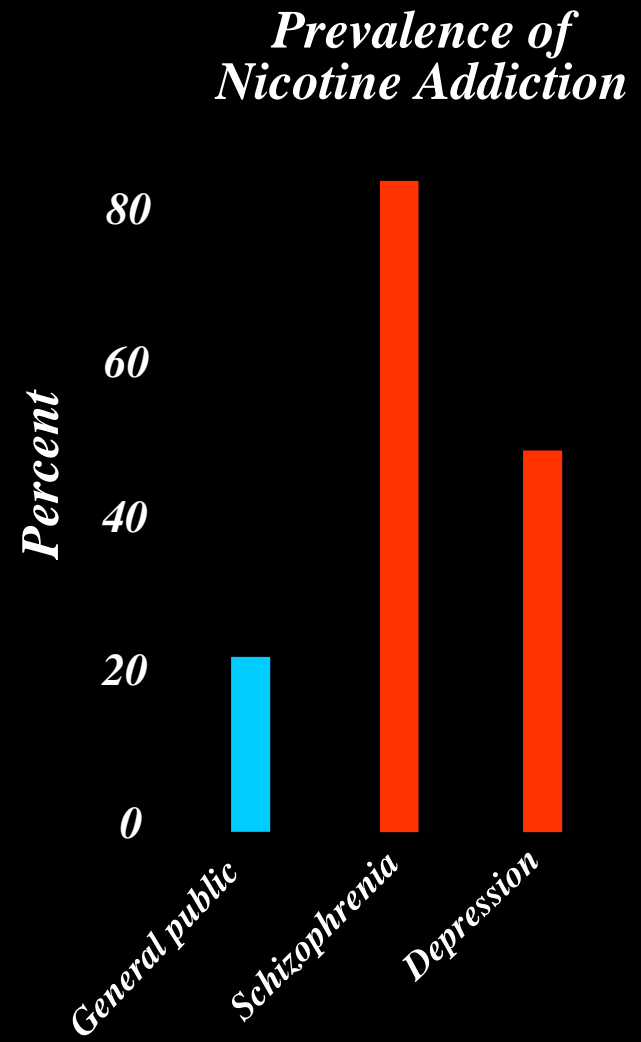
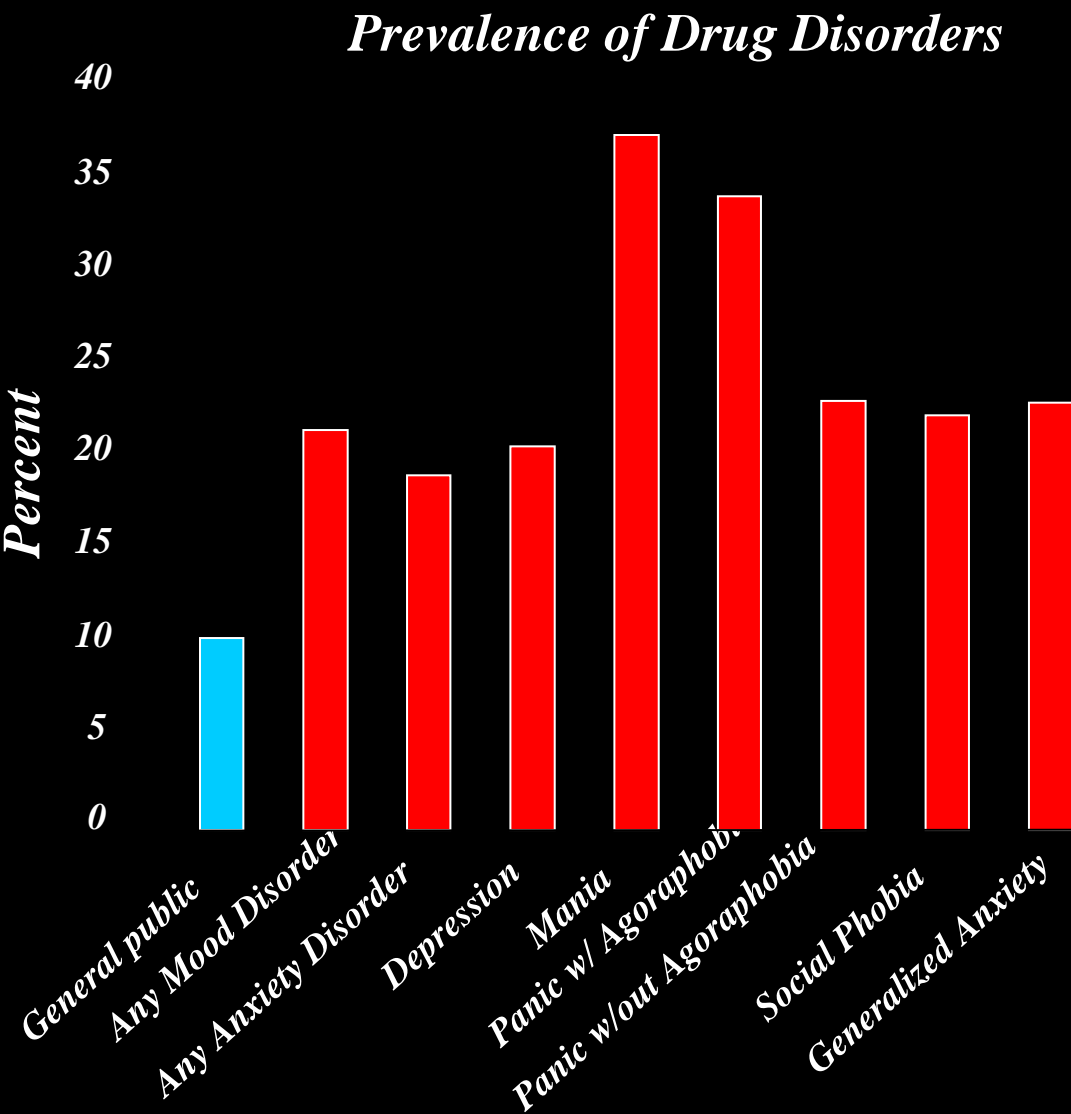


# Addictive Disorders Often *Co-Exist* With Mental Disorders



Co-Occurrence of Serious Psychological Distress and Substance Use Disorder in the Past Year among Adults Aged 18 or Older: 2007

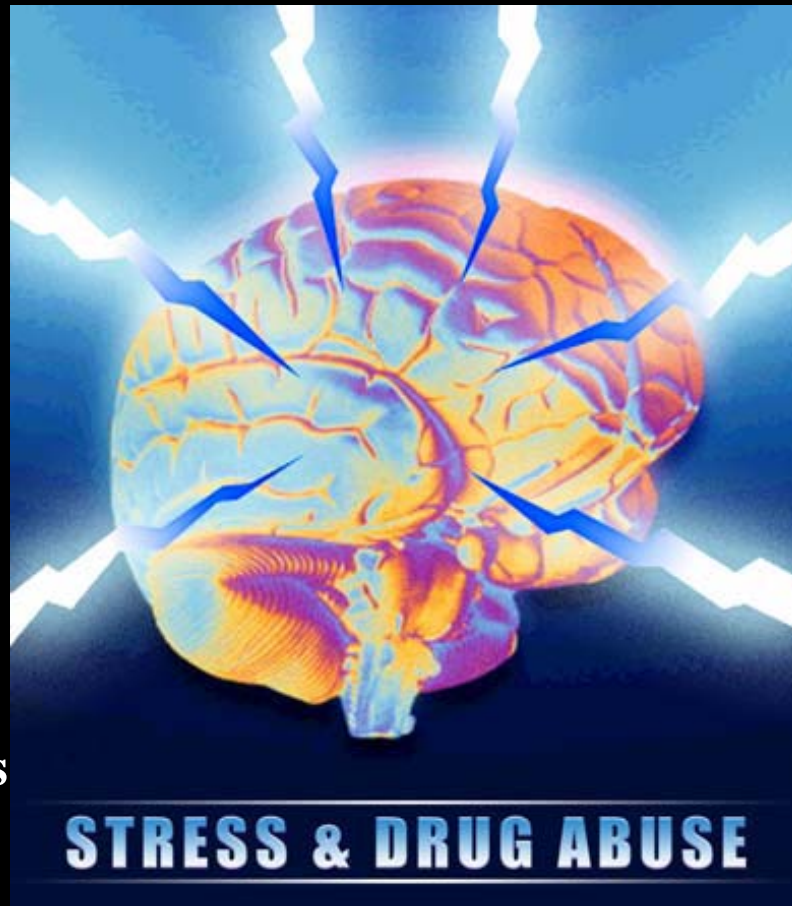
# *What Other Biological Factors Contribute to Addiction-Comorbidity*



# Many Common Factors Are Involved in Addiction and Mental Illness

## Addiction:

- Early Physical or Sexual Abuse
- Stress
- Family History
- Mental Illness
- Peers who use Drugs



## Mental Illness:

- Early Physical or Sexual Abuse
- Stress
- Family History
- Drug and Alcohol Abuse

# *Why do Mental Illnesses and Substance Abuse Co-occur?*

- **Self-medication**
  - substance abuse begins as a means to alleviate symptoms of mental illness
- **Causal effects**
  - Substance abuse may increase vulnerability to mental illness
- **Common or correlated causes**
  - the risk factors that give rise to mental illness and substance abuse may be related or overlap



*These may contribute to vulnerability  
to initial drug use*

*But what happens to the brain over time?*



*Science Has Generated Much  
Evidence Showing That...*

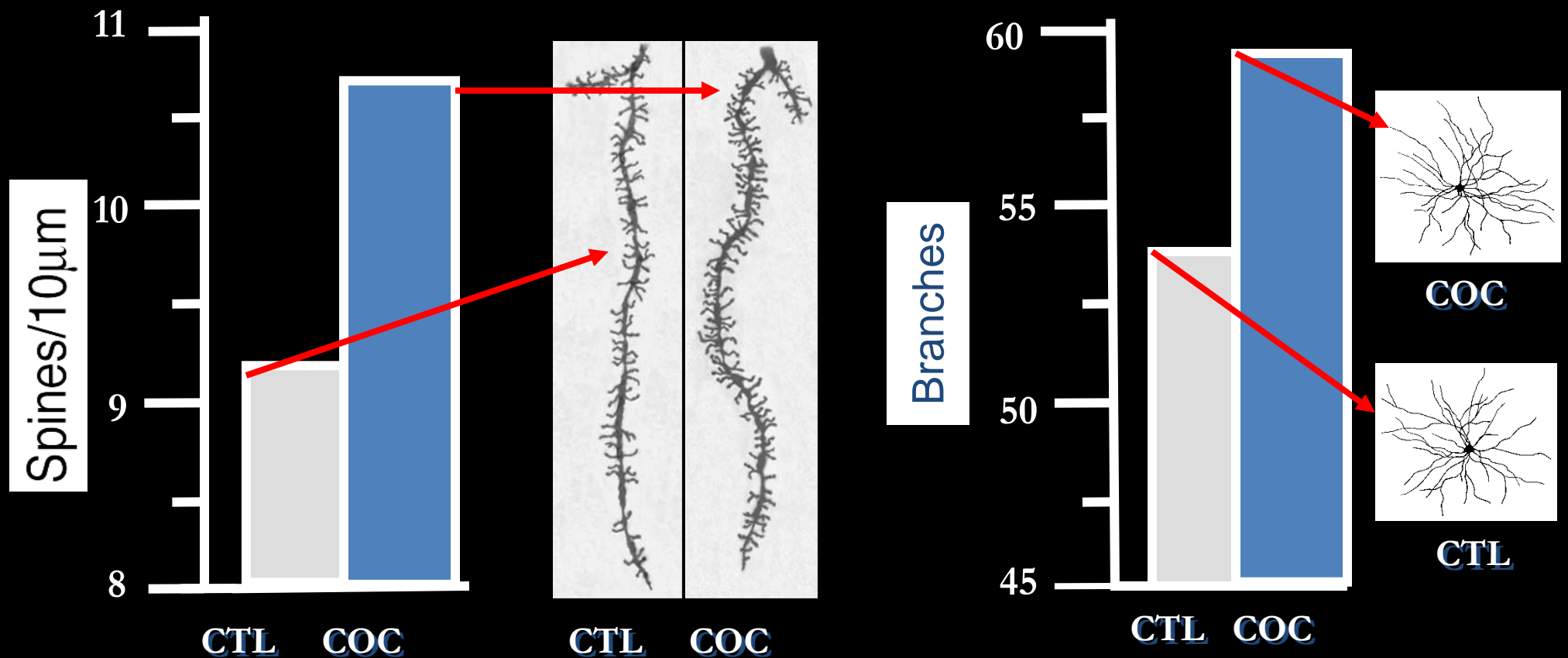
*Prolonged Drug Use Changes  
the Brain In Fundamental  
and Long-Lasting Ways*

*AND...*

*We Have Evidence That  
These Changes Can Be Both  
Structural and Functional*

# Structurally...

Chronic cocaine increases density of dendritic spines and neuronal branching in the nucleus accumbens



Robinson, T.E. & Kolb, B. *Eur. J. of Neuro.* 1999.  
Ferrario, C.R. et al. *Biol. Psychiatry*, 2005.

*Functionally...*

*Dopamine D2 Receptors are Decreased by Addiction*

*Cocaine*



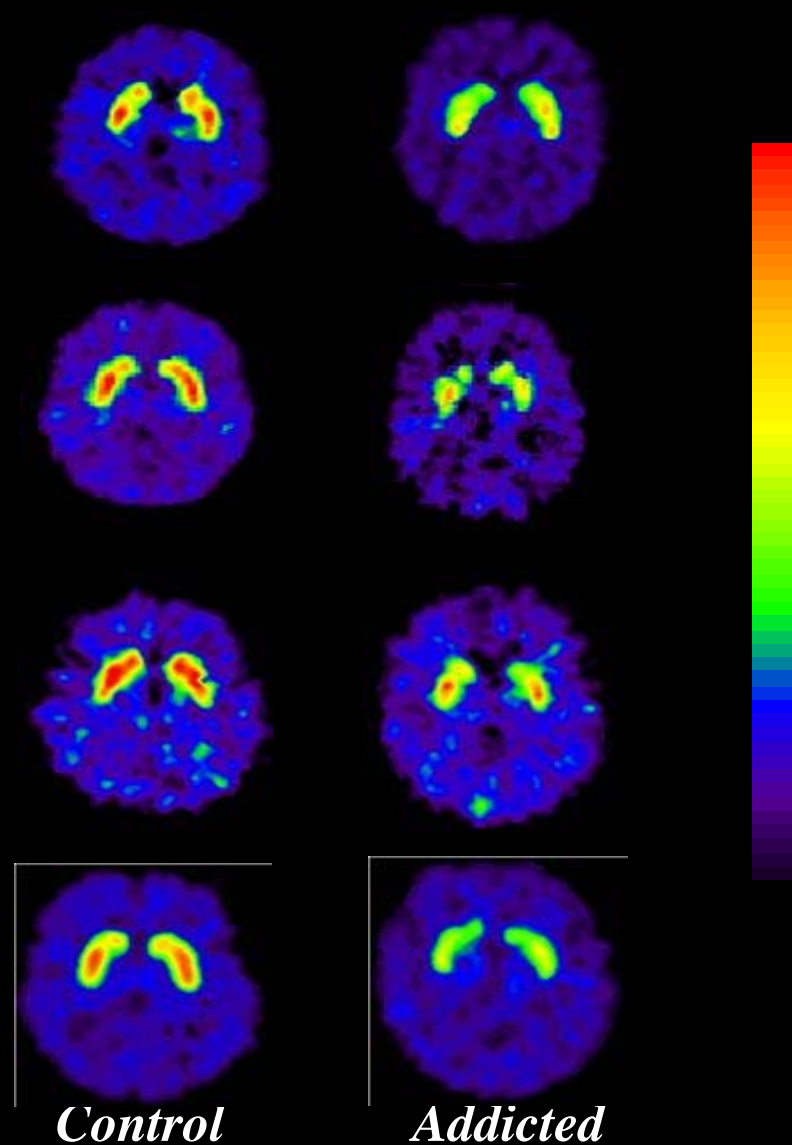
*Meth*



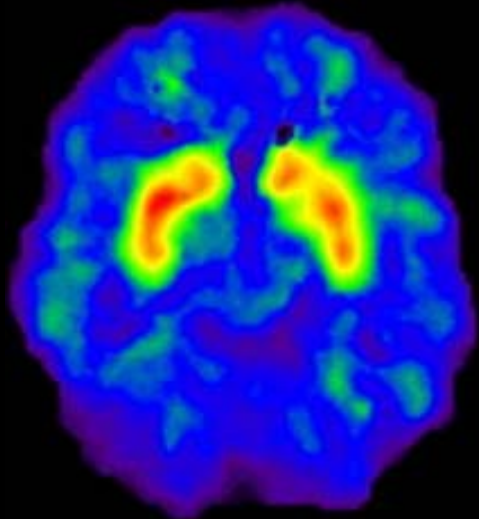
*Alcohol*



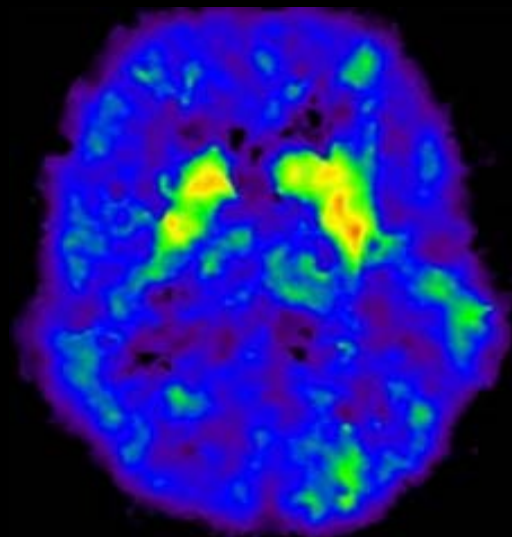
*Heroin*



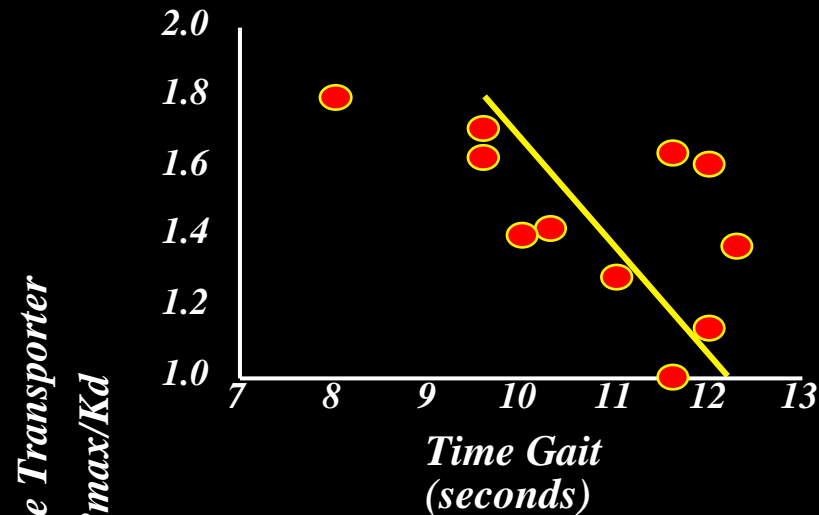
# Dopamine Transporters in Methamphetamine Abusers



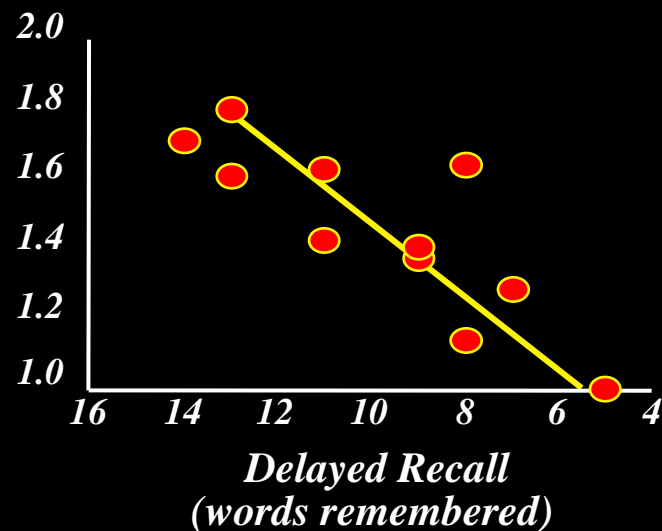
*Normal Control*



*Methamphetamine Abuser*



Motor Task  
Loss of dopamine transporters in methamphetamine abusers may result in slowing of motor reactions.



Memory Task  
Loss of dopamine transporters in methamphetamine abusers may result in memory impairment.

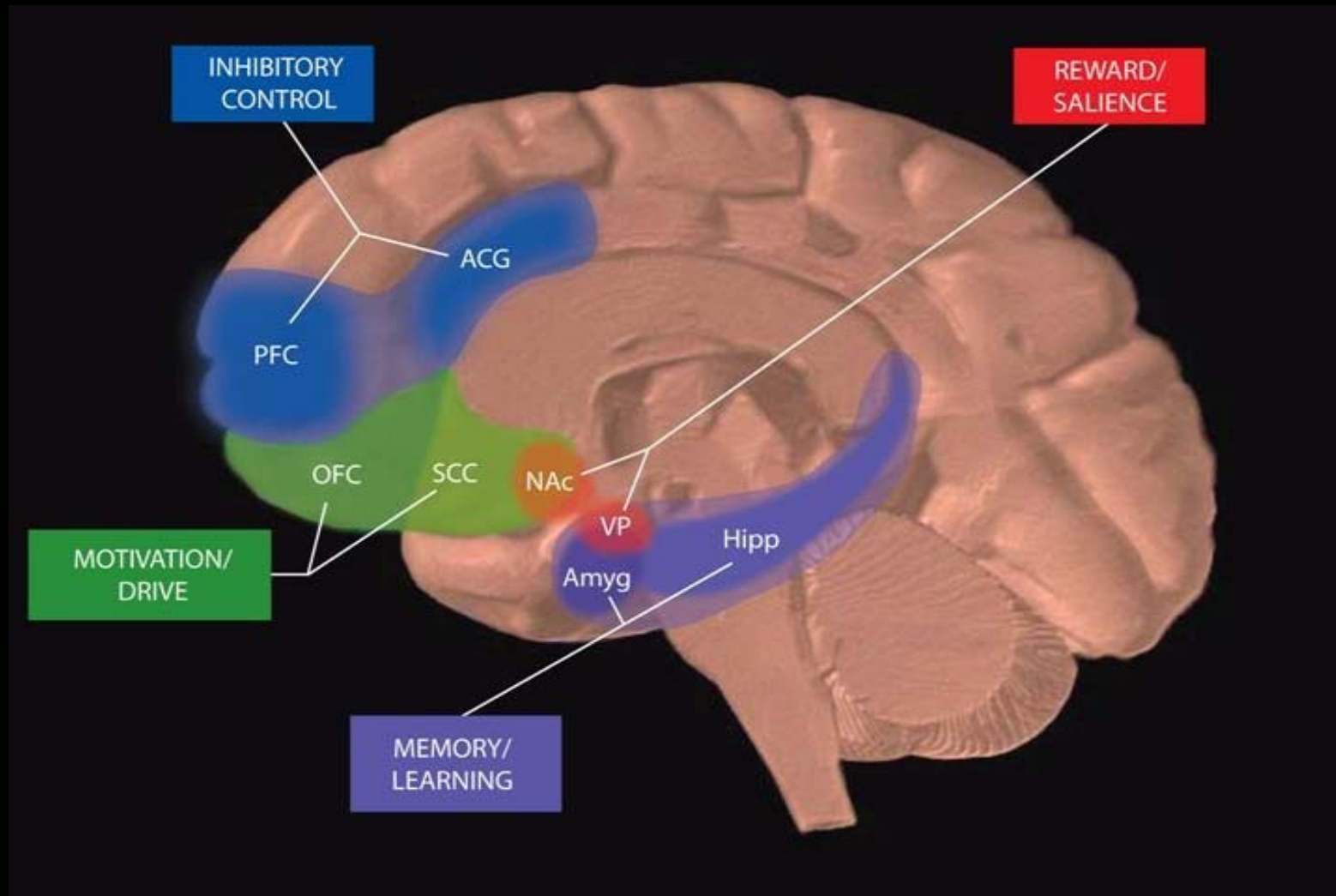
Volkow et al., Am. J. Psychiatry, 2001.

# *But Dopamine is only Part of the Story*

- Scientific research has shown that other neurotransmitter systems are also affected:
  - Serotonin
    - Regulates mood, sleep, etc.
  - Glutamate
    - Regulates learning and memory, etc.

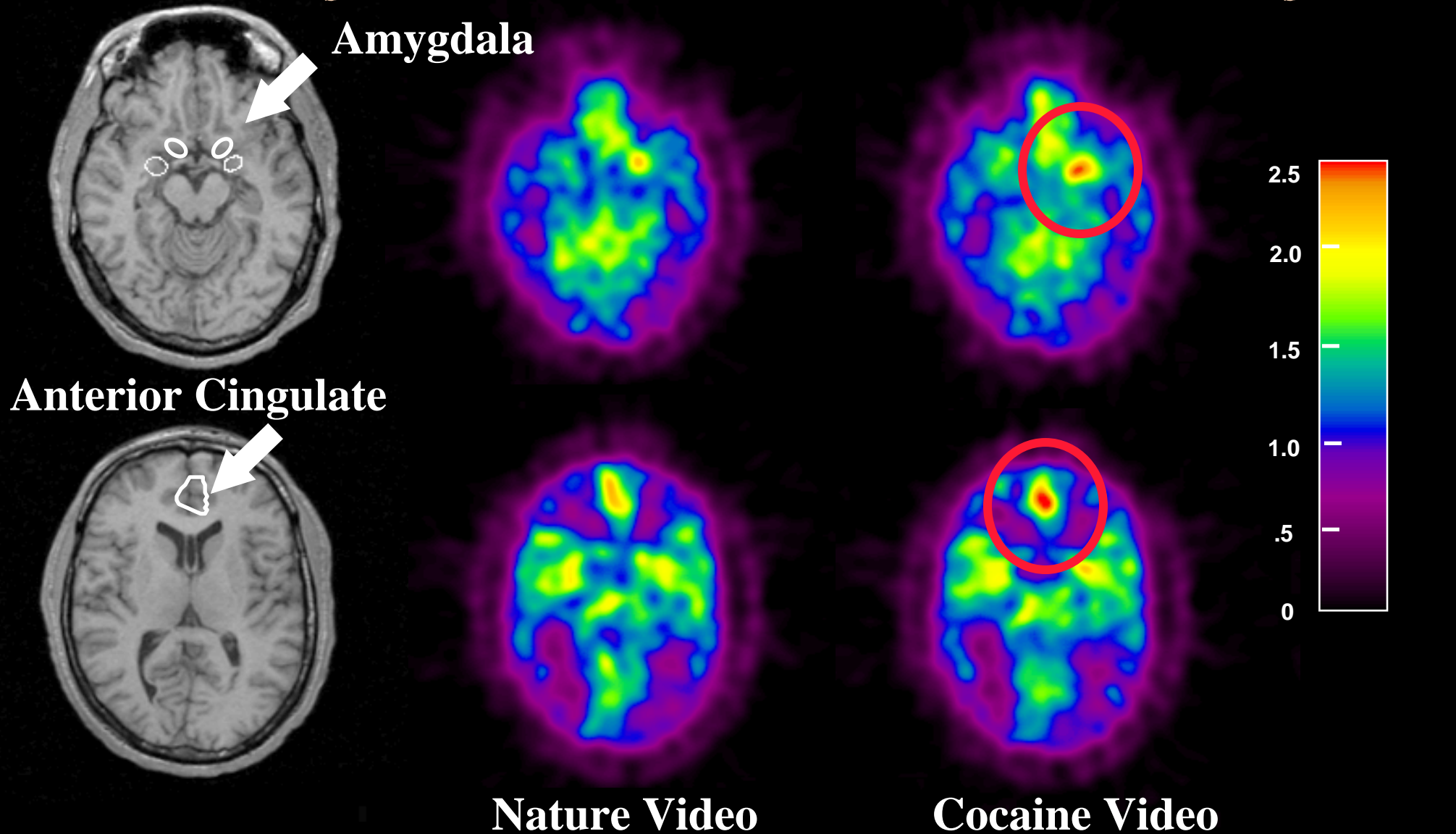


# *Circuits Involved In Drug Abuse and Addiction*



# Memories Appear to Be A Critical Part of Addiction

# Cocaine Abusers Have Increased Activation in Brain Regions Associated with Emotional Learning

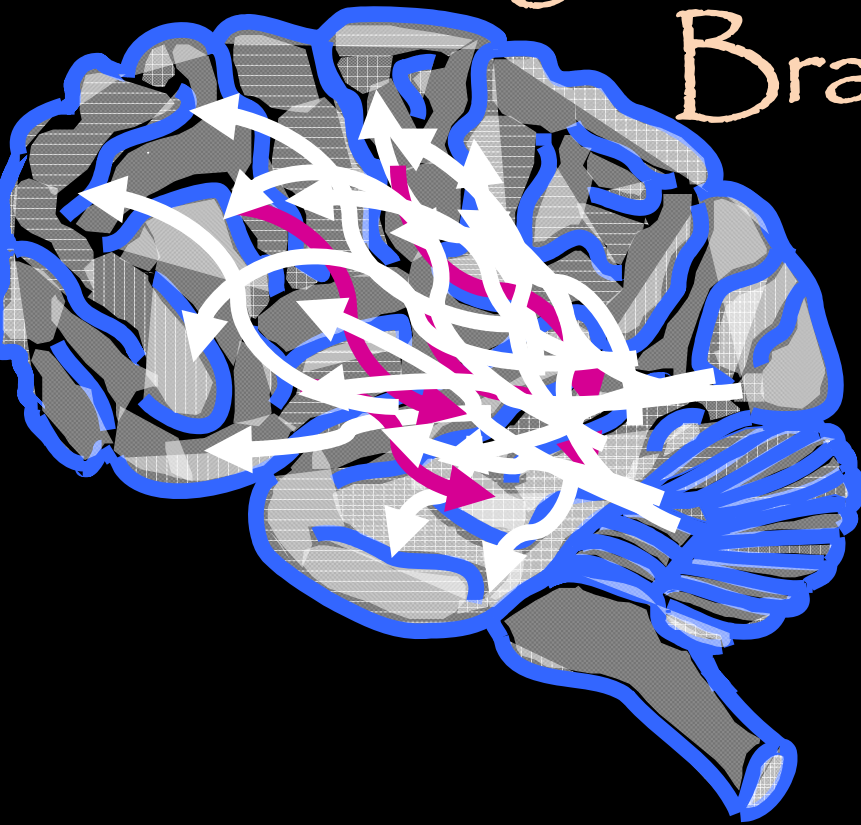


Source: Childress, et al., AJP, 1999

NIDA

But It's Not Just Memories...

Drugs Usurp  
Brain Circuits



and  
Motivational Priorities

We Don't Know the Exact Switch

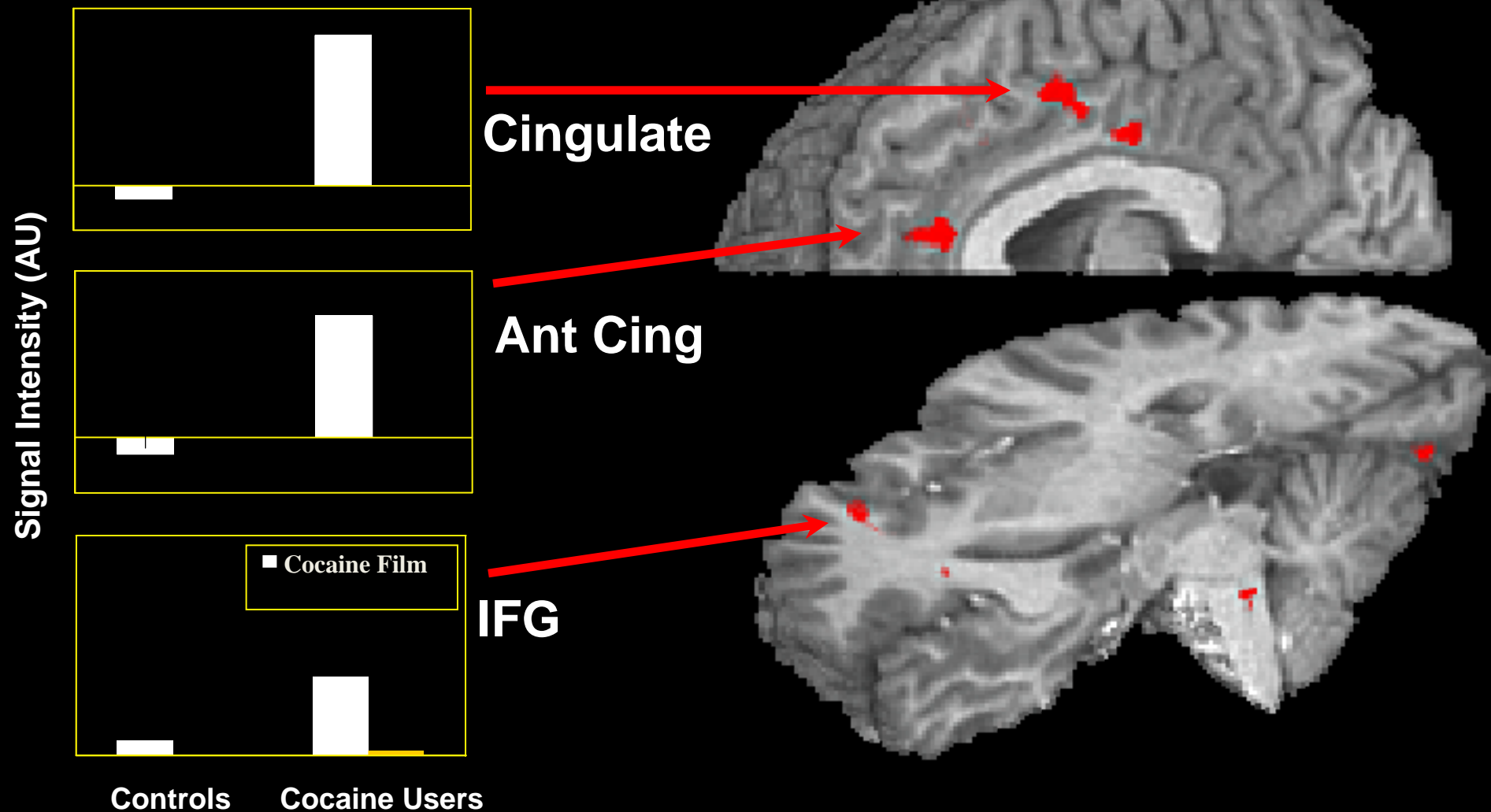
BUT...

We Do Know that the Brain Circuitry  
Involved in Addiction Has Similarities to  
that of Other Motivational Systems



# Cocaine Craving:

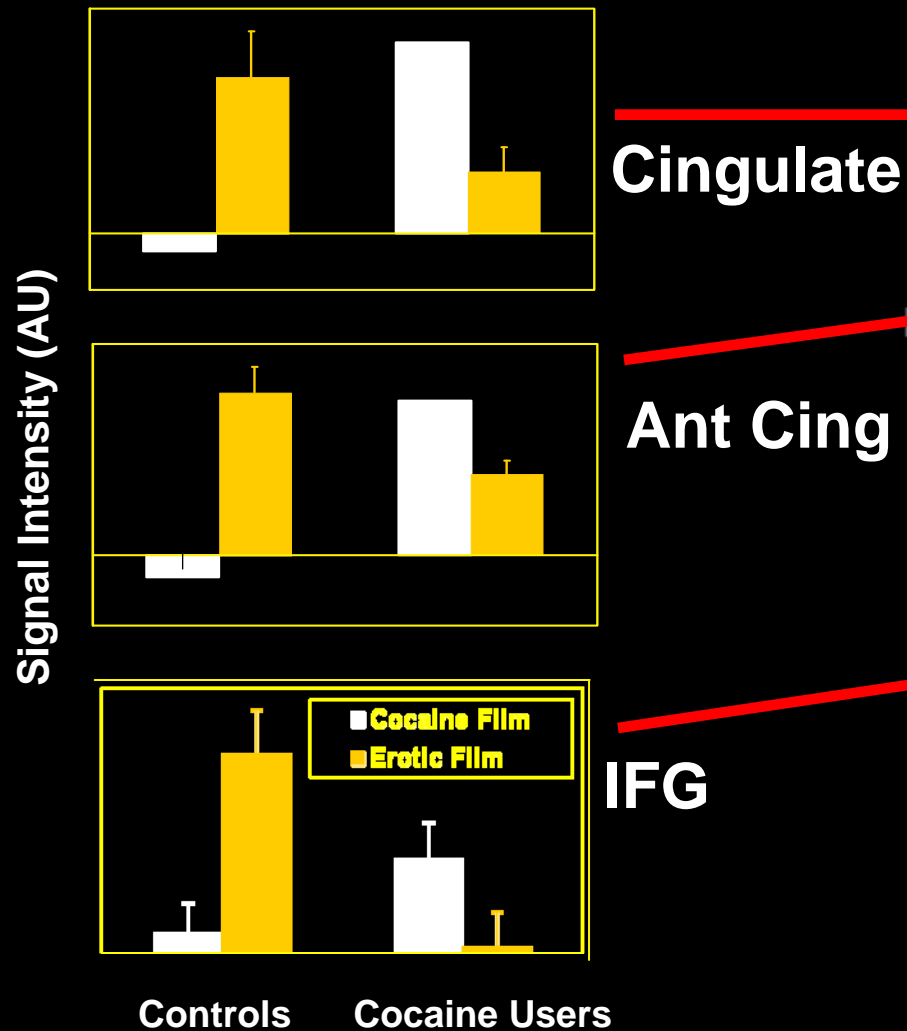
Population (Cocaine Users, Controls) x Film (cocaine)



Garavan et al A .J. Psych 2000

# Cocaine Craving:

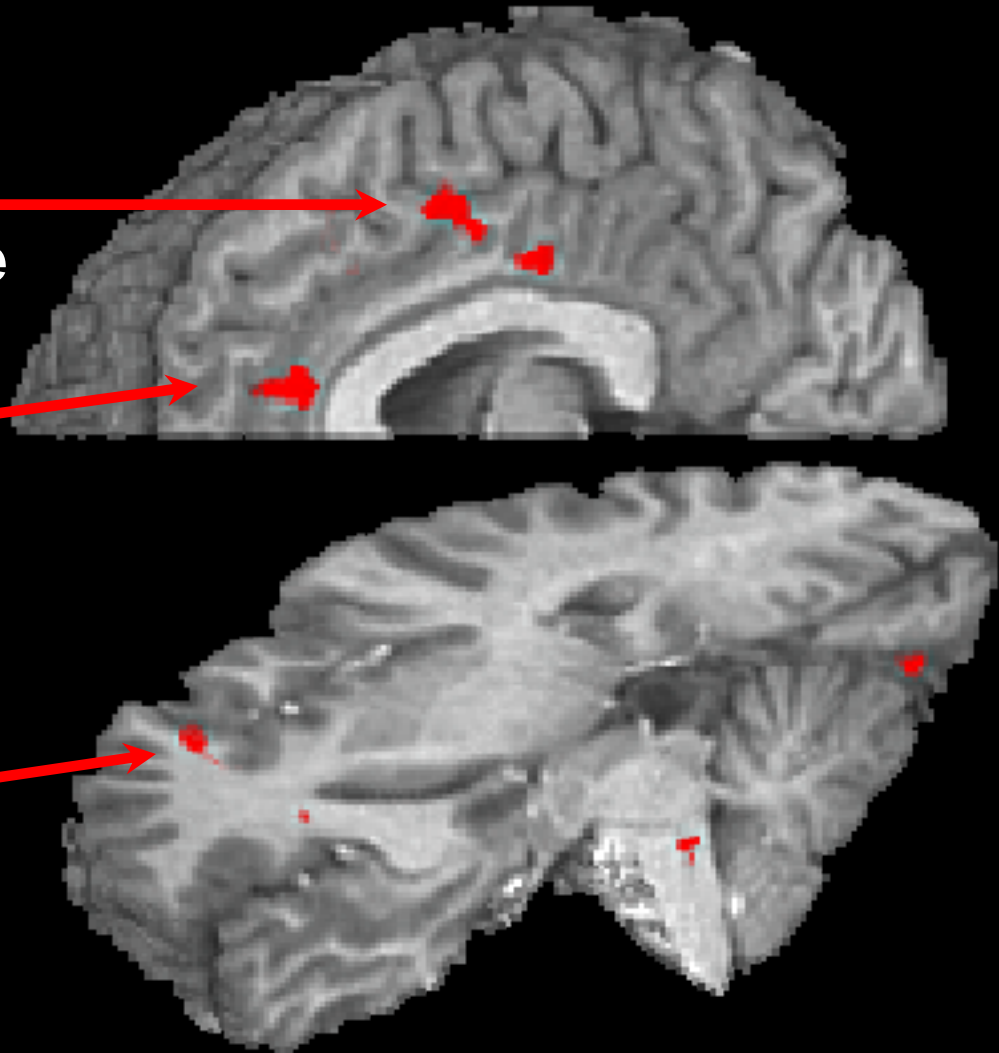
Population (Cocaine Users, Controls) x Film (cocaine, erotic)



Cingulate

Ant Cing

IFG



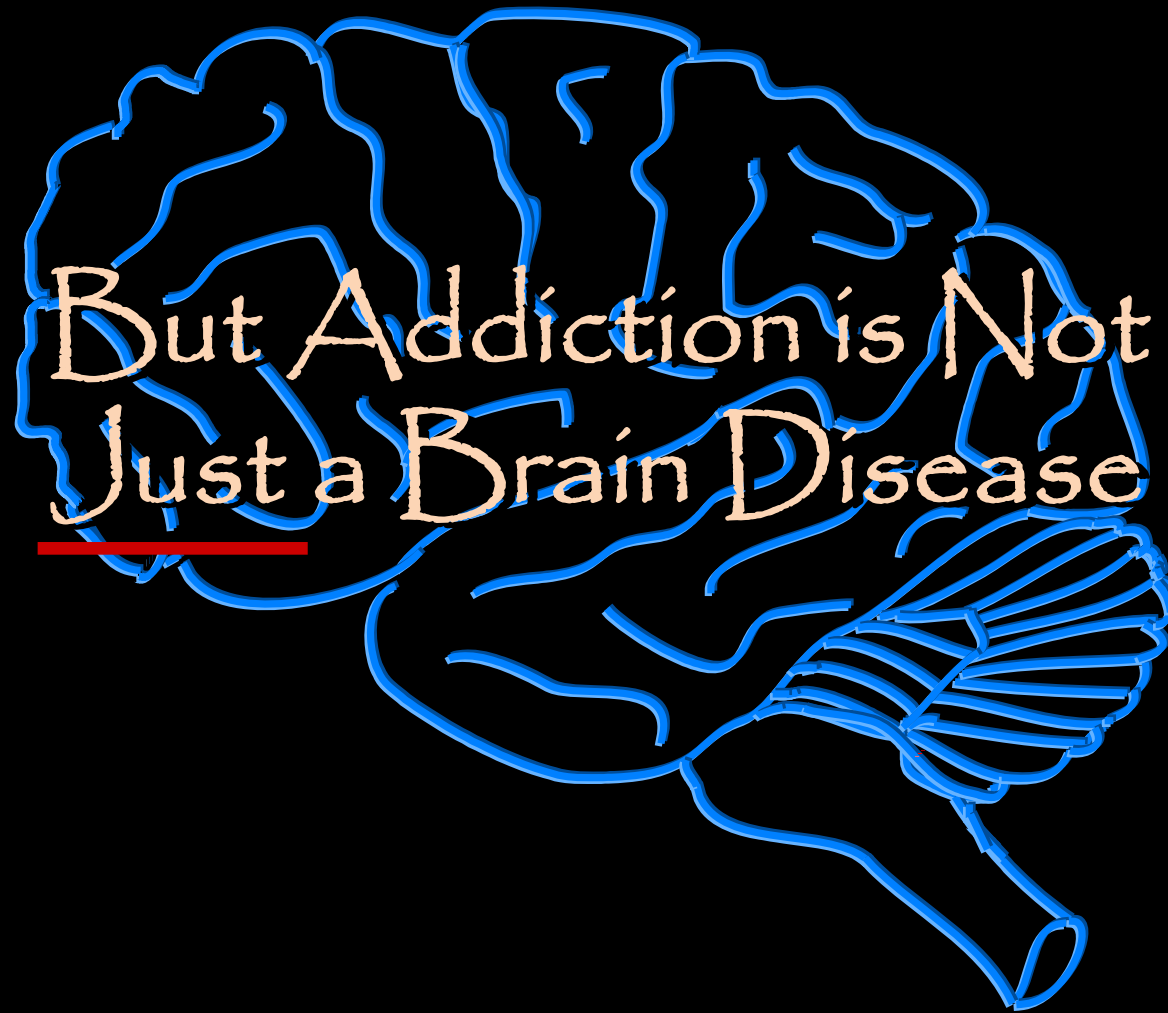
Garavan et al A .J. Psych 2000

This Results in  
“Motivational Toxicity”  
and Compulsive Drug Use  
(Addiction)



The Brains of Addicts  
Are Different From  
the Brains of Non-Addicts

...And Those Differences  
Are An Essential Element  
of Addiction







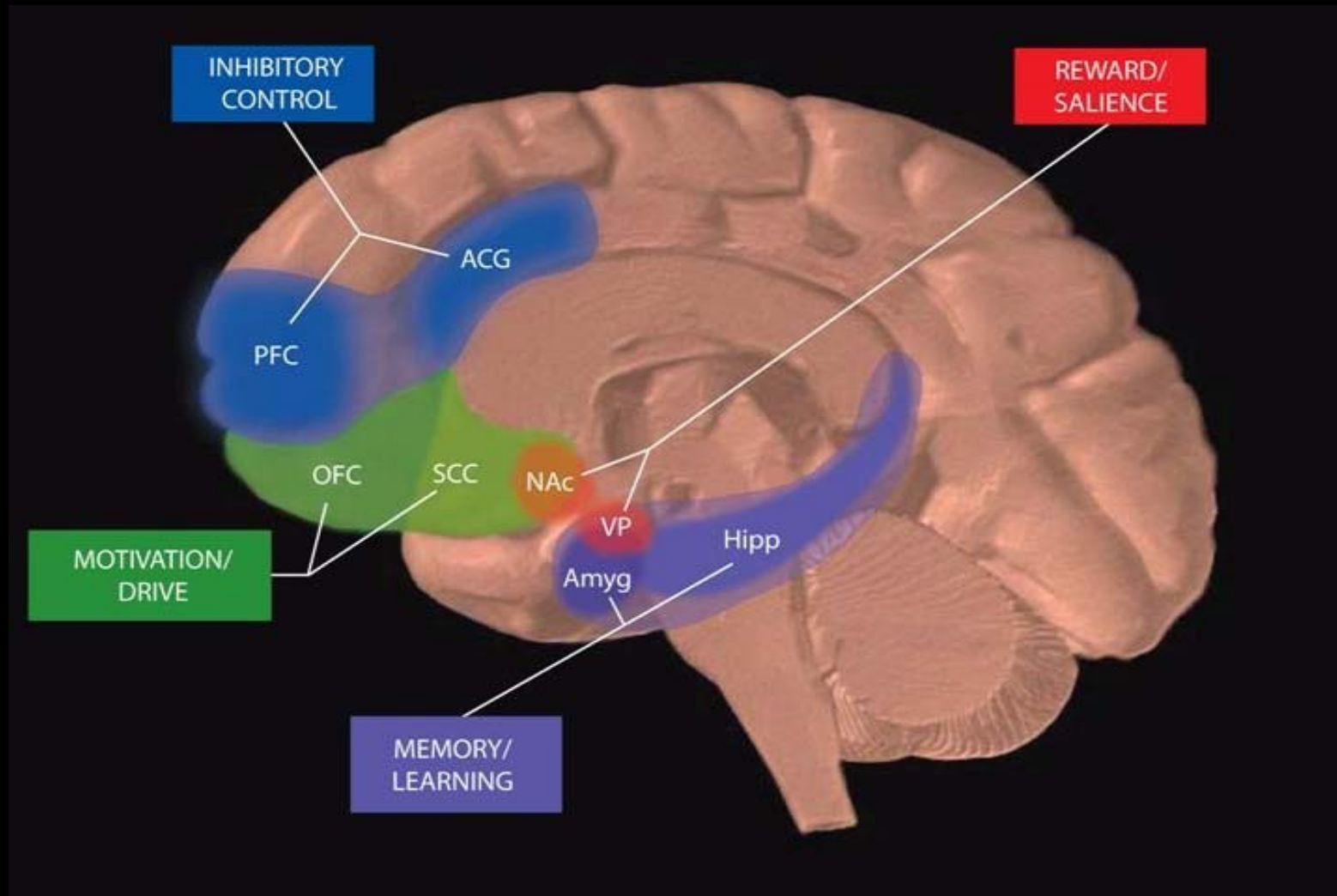
Addiction Is A Brain Disease  
Expressed As Compulsive Behavior

It is the Quintessential  
Biobehavioral Disorder

So....

....What Does This Mean For  
Treatment?

# *Circuits Involved In Drug Abuse and Addiction*

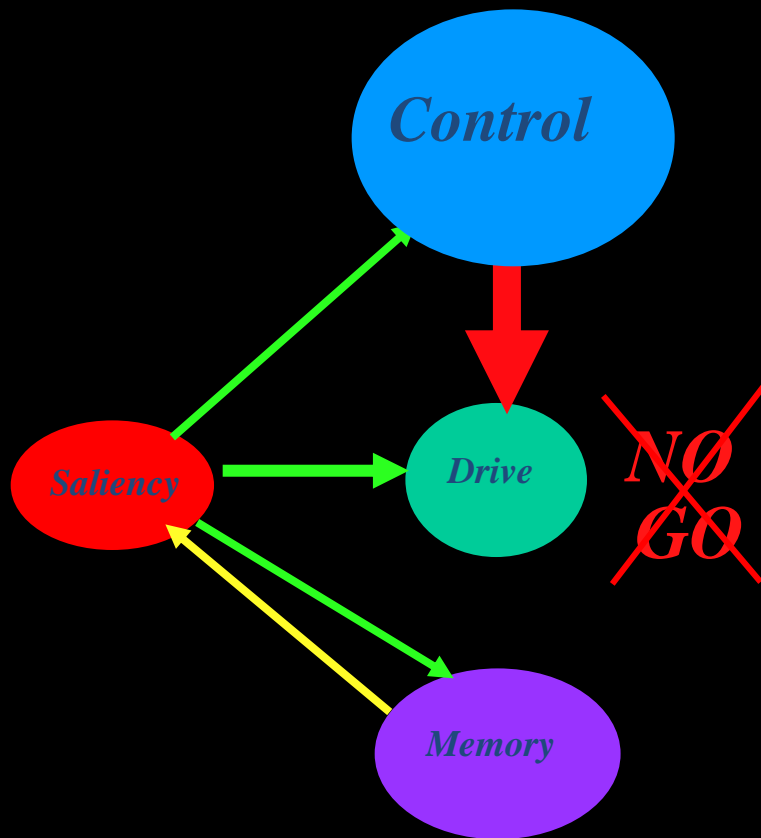


***All of these brain regions must be considered in developing strategies to effectively treat addiction***

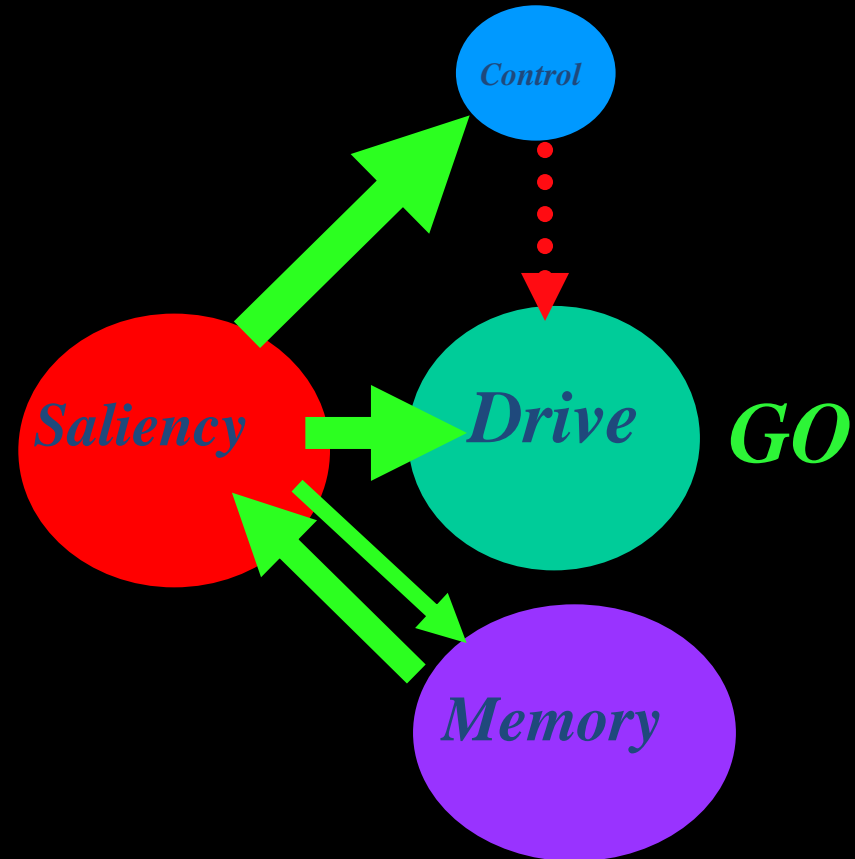
**NIDA**

# *Why Can't Addicts Just Quit?*

*Non-Addicted Brain*

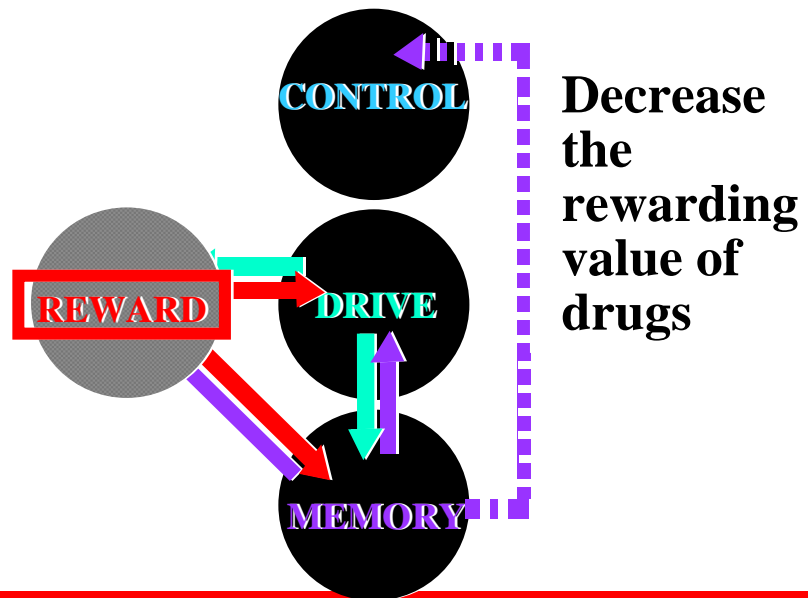


*Addicted Brain*

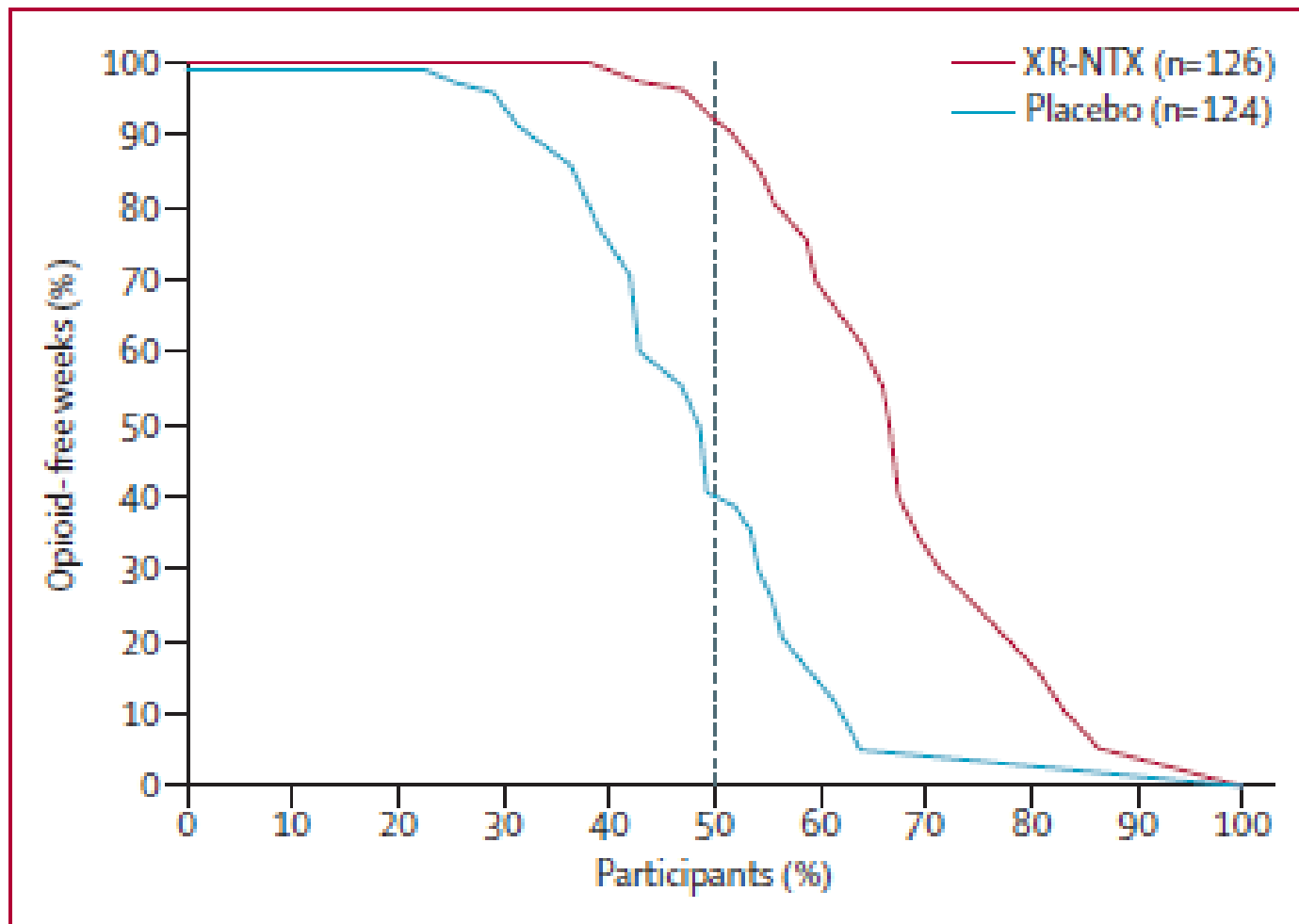


*Because Addiction Changes Brain Circuits*

# Treating the Addicted Brain

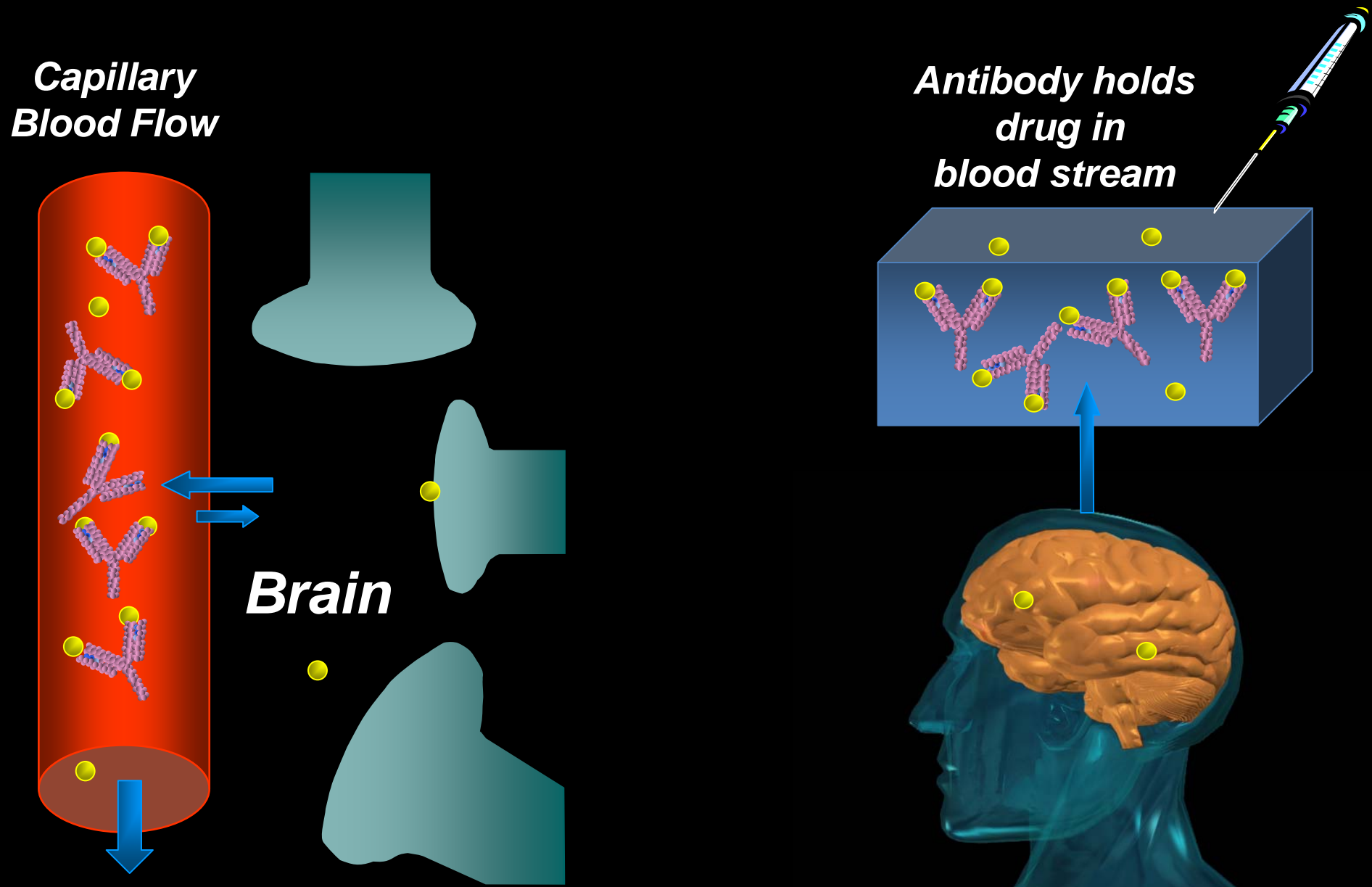


# Vivitrol significantly increases percentage of patients with opioid-free weeks

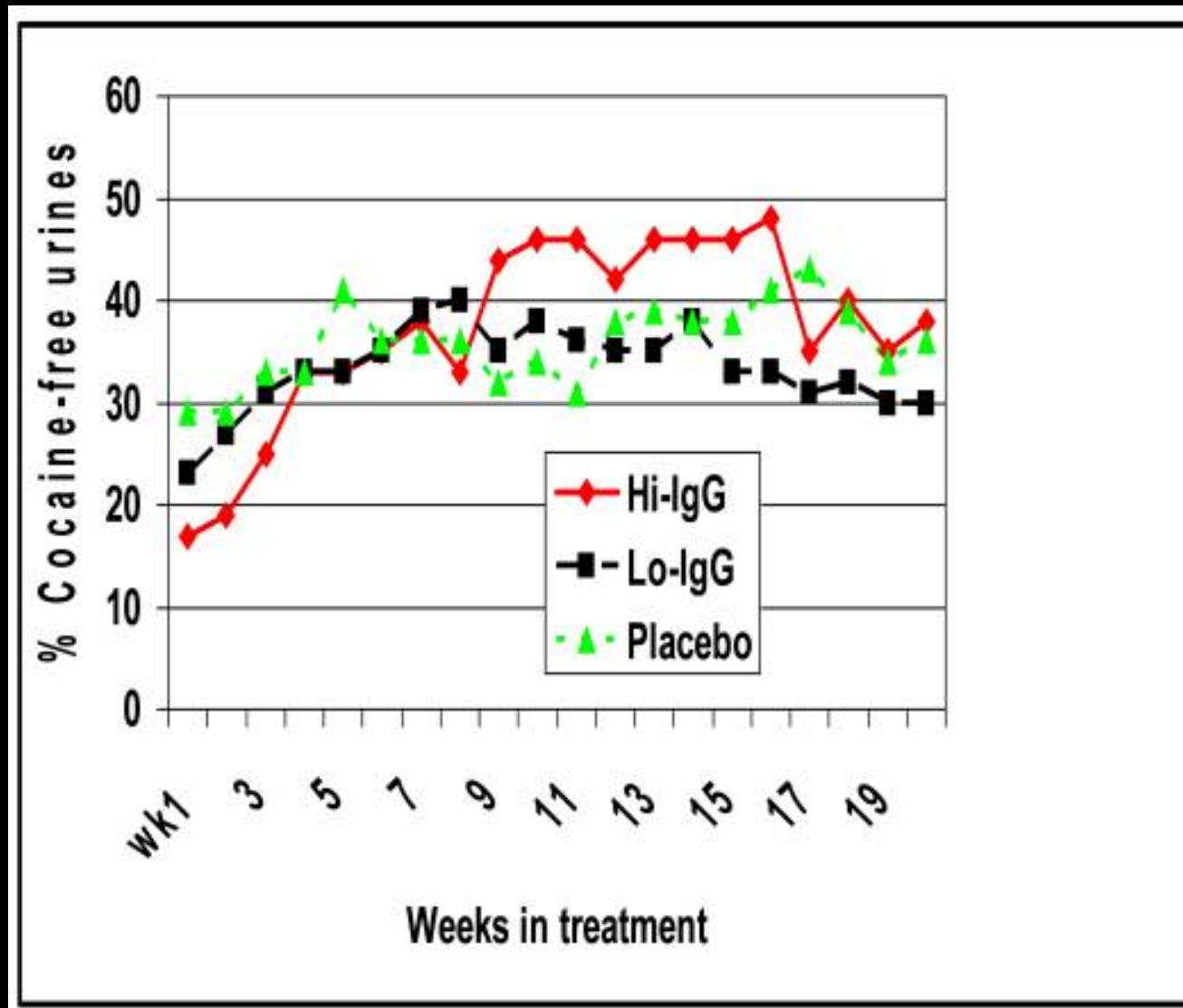




# *Antibodies can reduce brain concentrations*

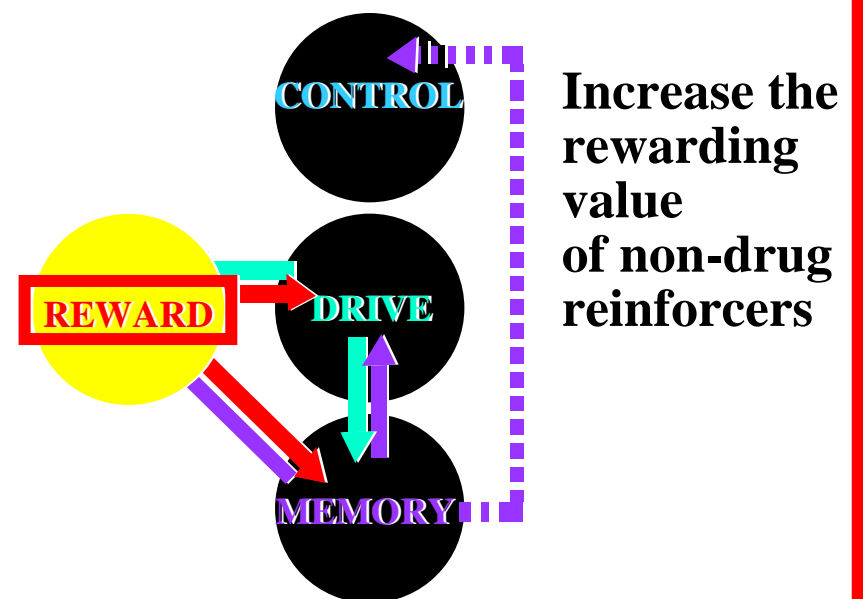
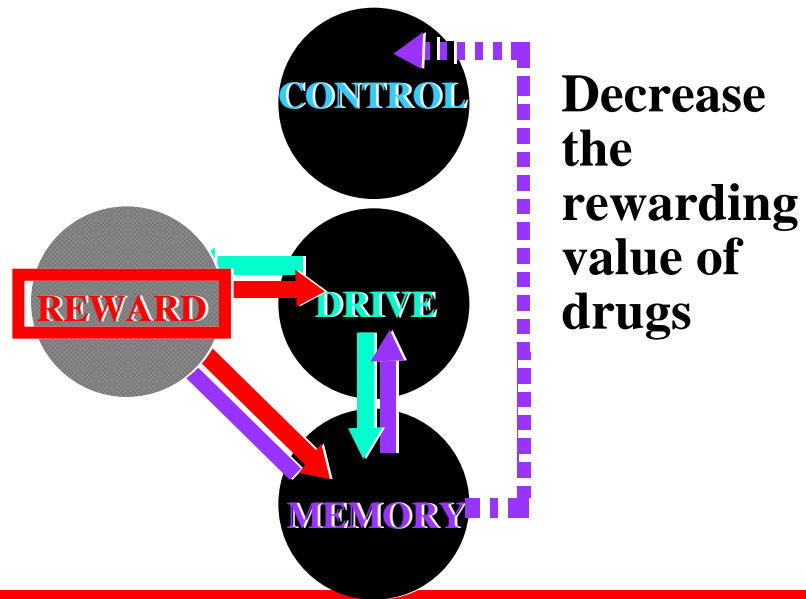


# Fewer cocaine urines at higher vaccine dose

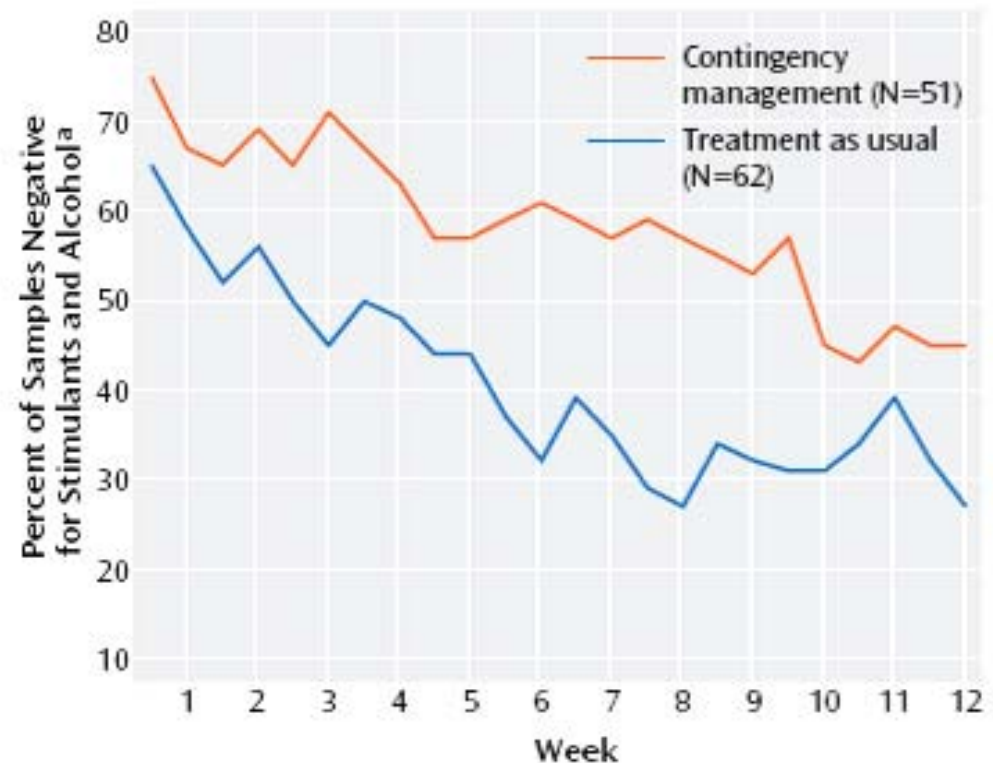
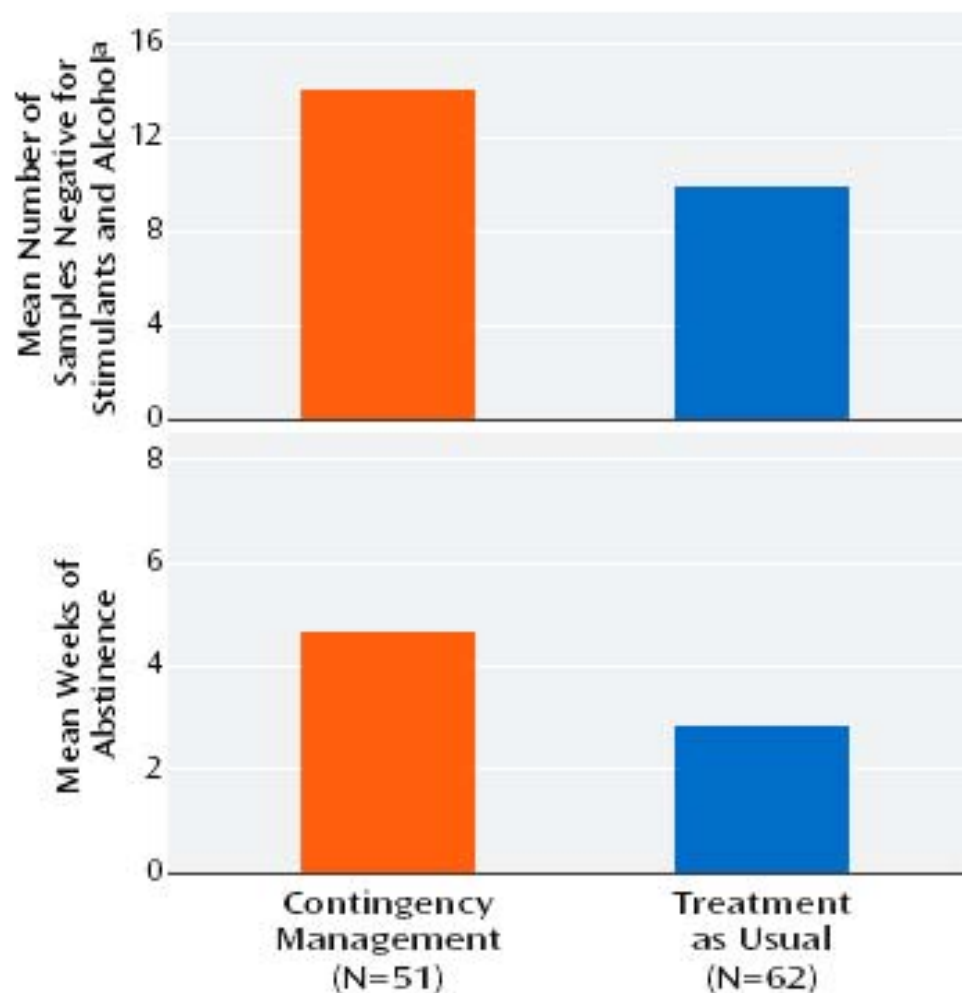


*Kosten, et al, 2010 Arch Gen Psych*

# Treating the Addicted Brain

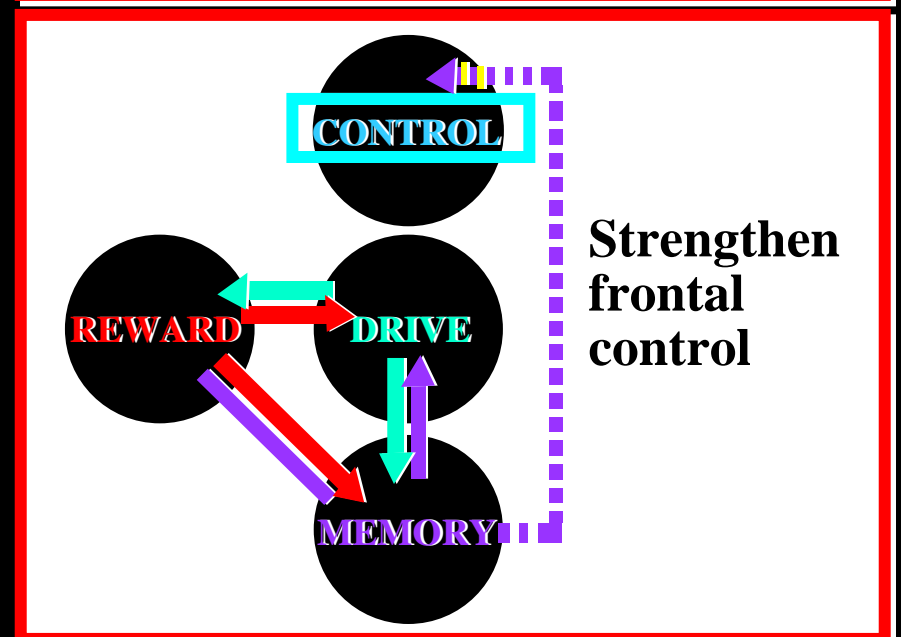
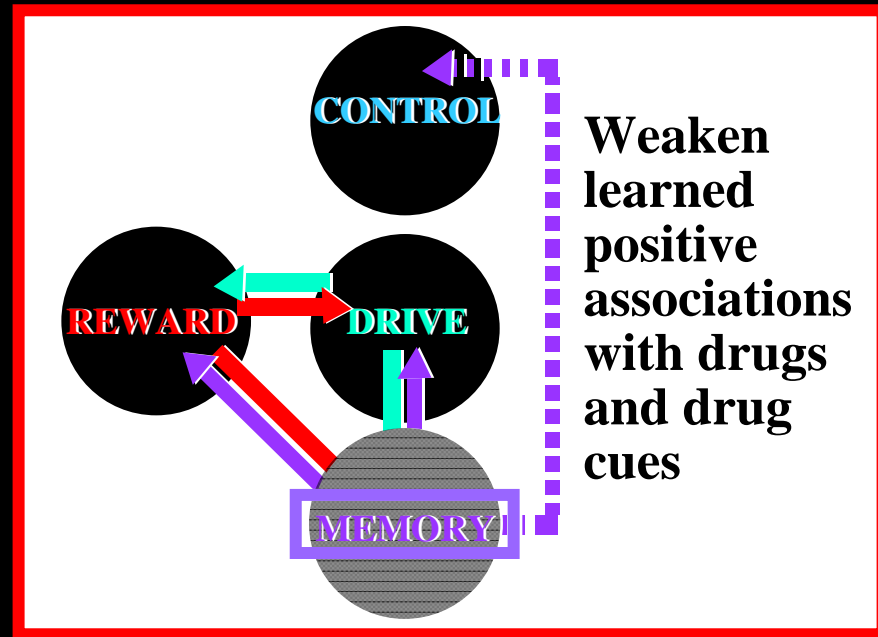
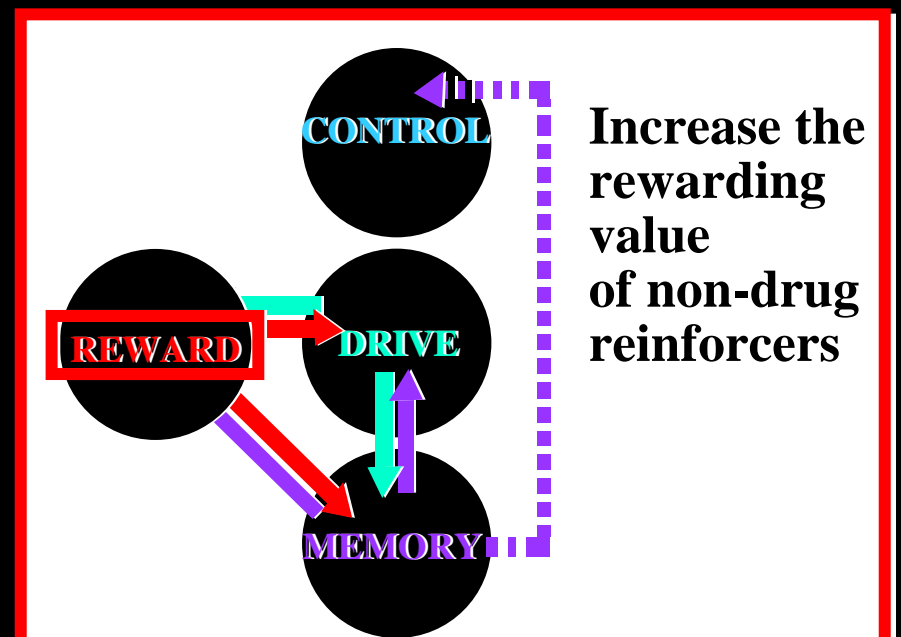
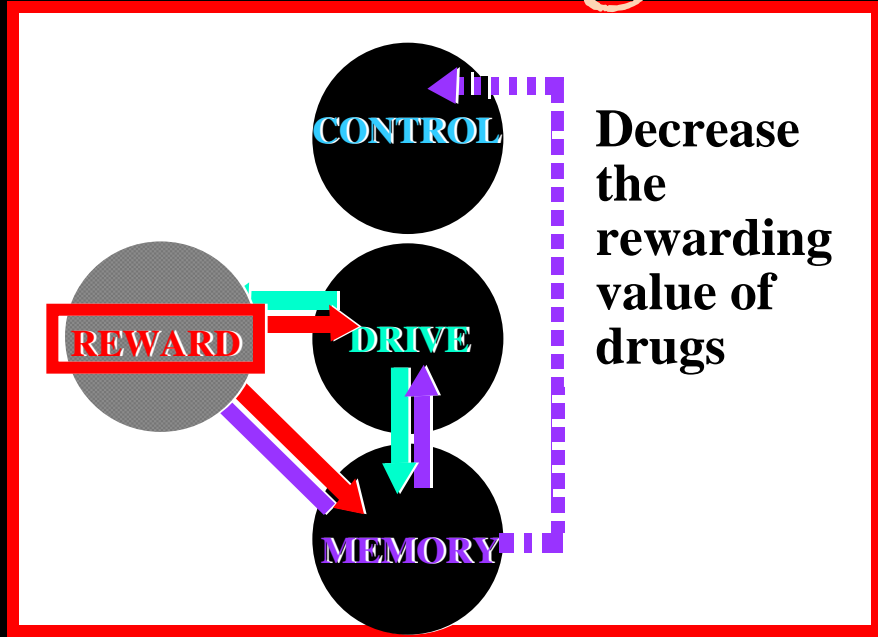


# Contingency Management for the Treatment of Methamphetamine Use Disorders



*Roll, J.M. et al., AJP 163(11) pp. 1993-1999, November 2006.*

# Treating the Addicted Brain



# **Behavioral Interventions**

## **Medications**

## **Biofeedback**

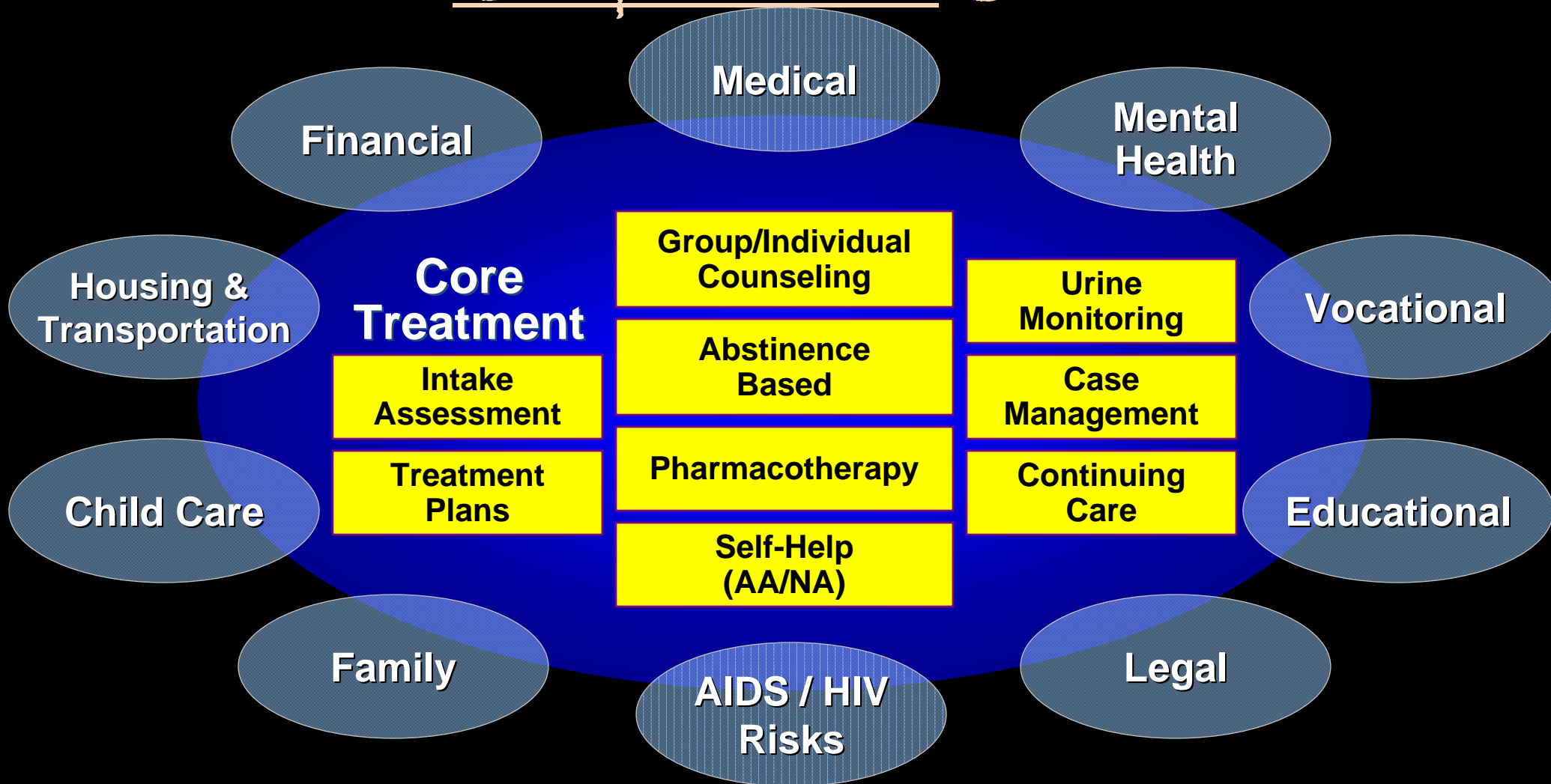


Treating A Biobehavioral Disorder  
Must Go Beyond Just  
Fixing The Chemistry

# The Most Effective Intervention Strategies Will Attend to All Aspects of Addiction:

- **Biology**
- **Behavior**
- **Social Context**

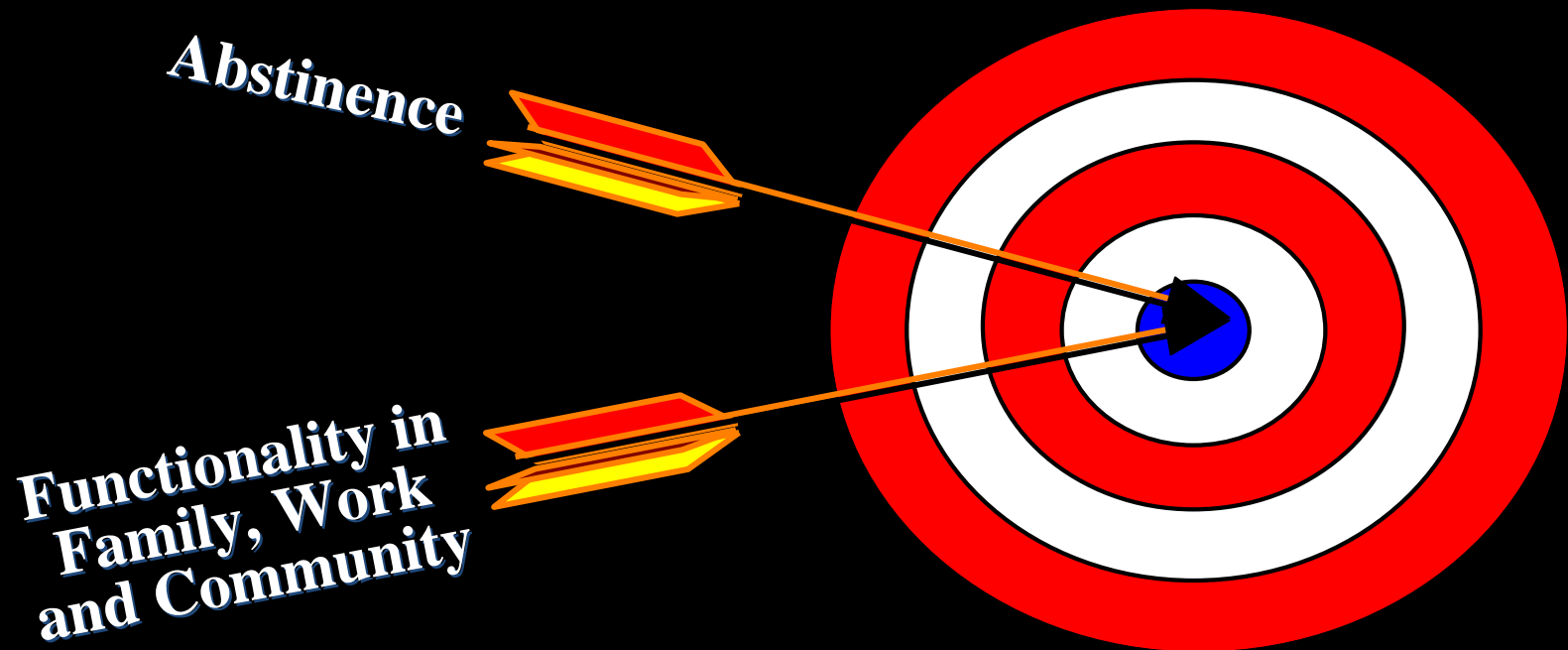
# Drug Abuse Treatment Core Components and Comprehensive Services



Etheridge, Hubbard, Anderson, Craddock, & Flynn, 1997 (PAB)

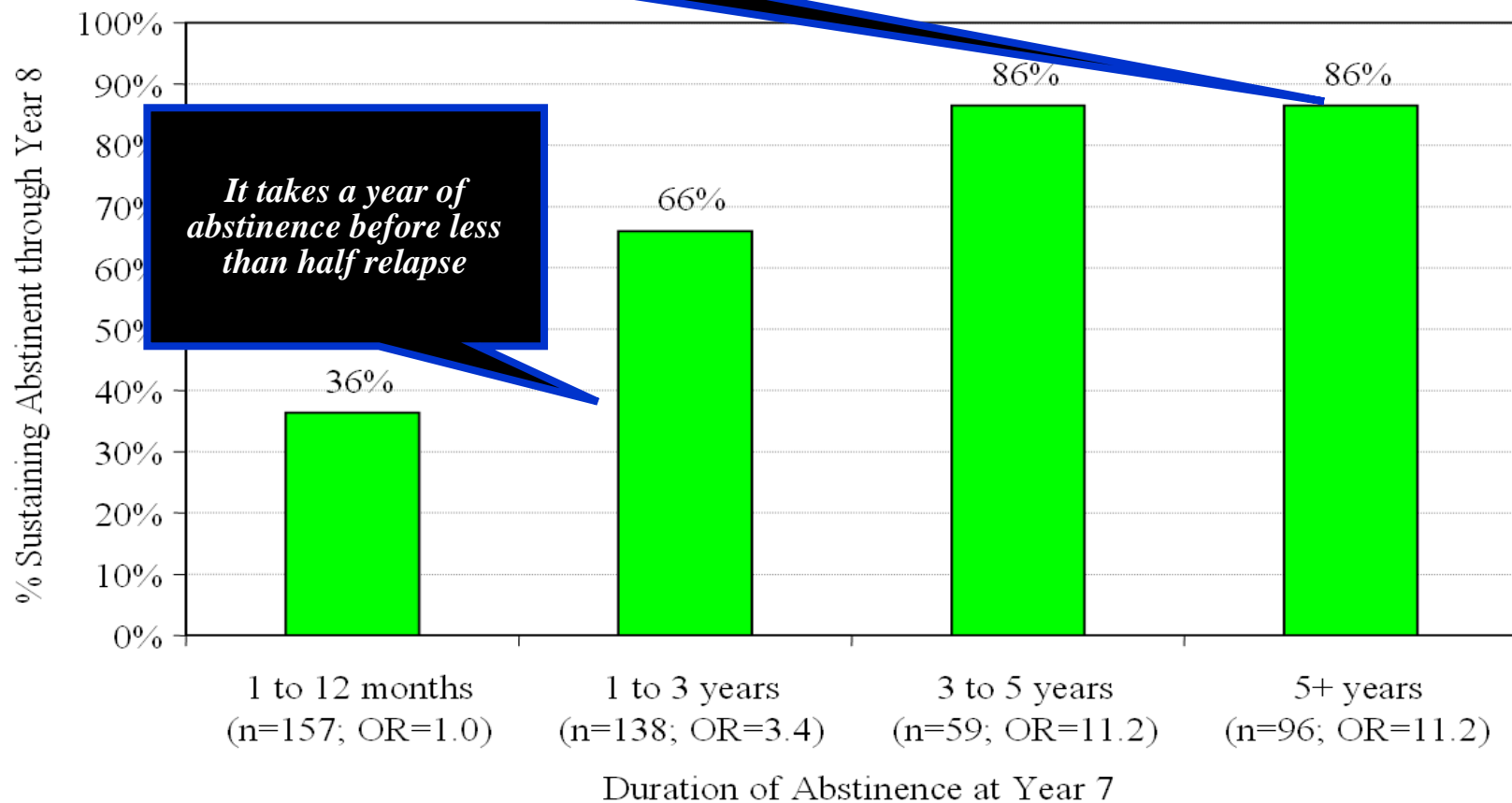
*In Treating Addiction...*

**We Need to Keep Our Eye on  
the Real Target**



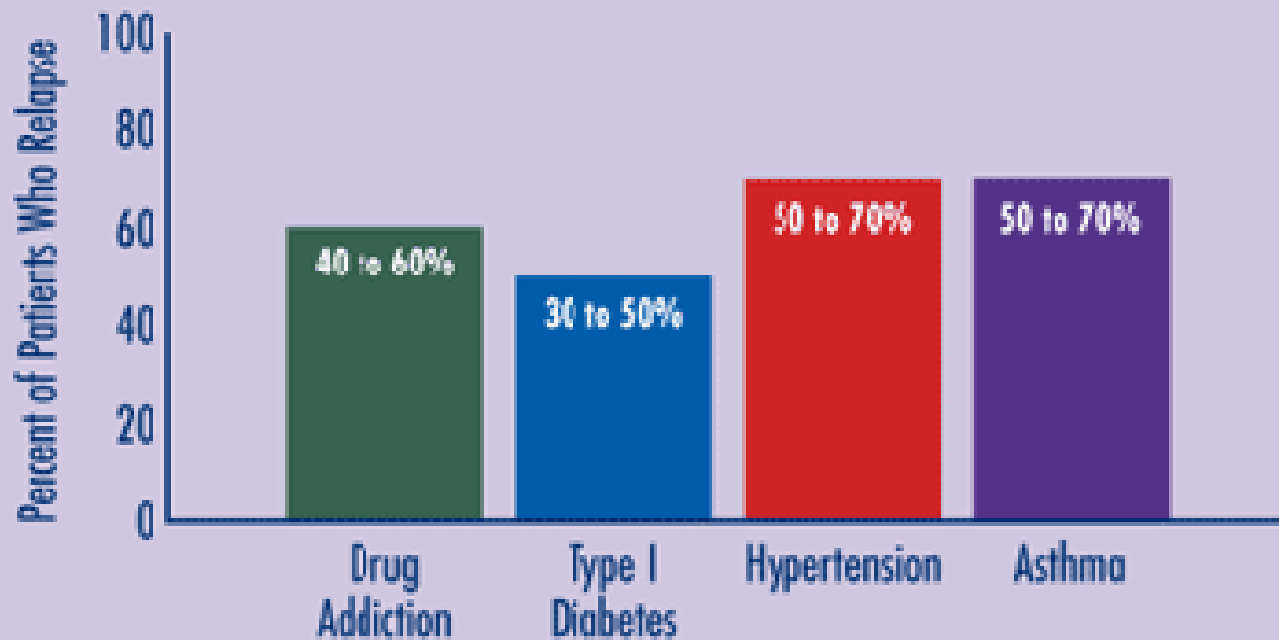
# Extended Abstinence is Predictive of Sustained Recovery

*After 5 years – if you are sober, you probably will stay that way.*



*But, drug addiction is a chronic disease with relapse rates similar to those of other chronic illnesses*

**COMPARISON OF RELAPSE RATES BETWEEN  
DRUG ADDICTION AND OTHER CHRONIC ILLNESSES**

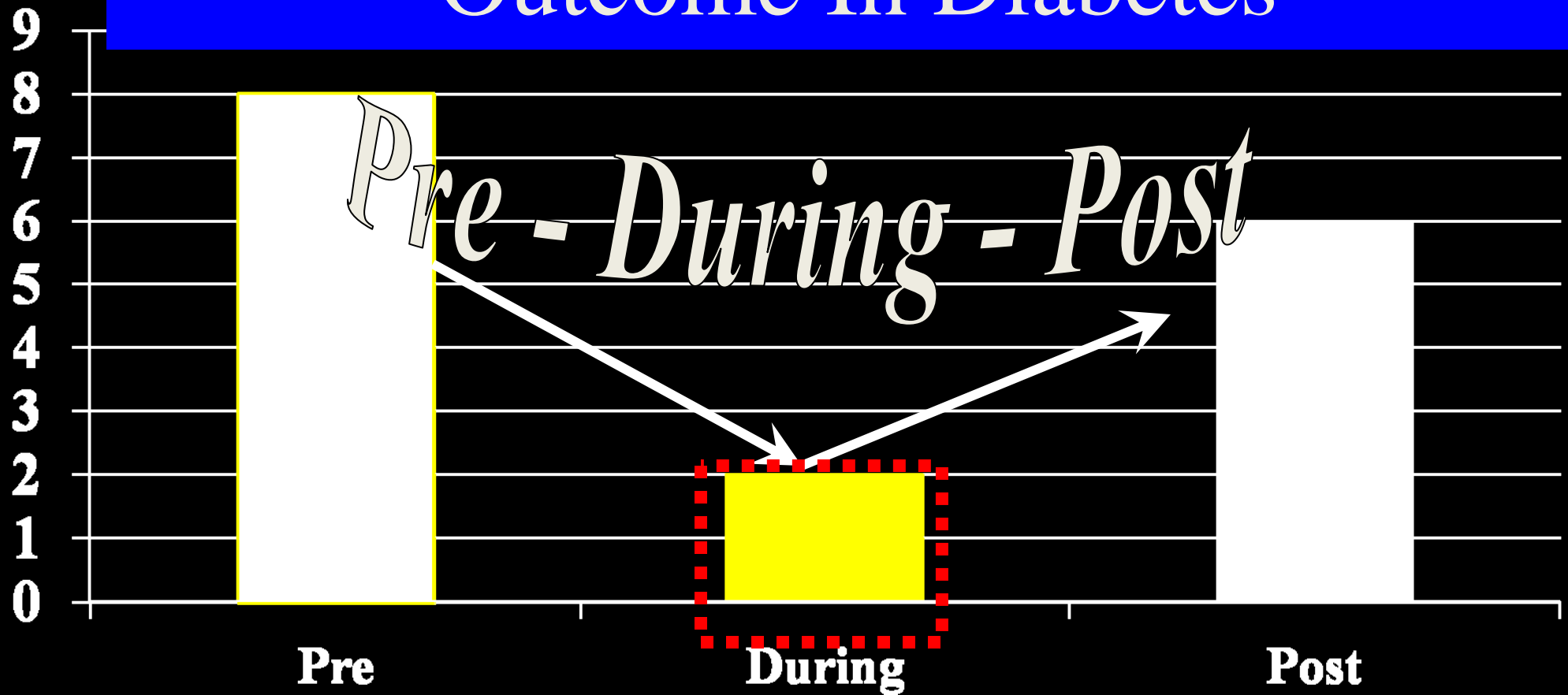


*Source: McLellan, A.T. et al., JAMA, Vol 284(13), October 4, 2000.*

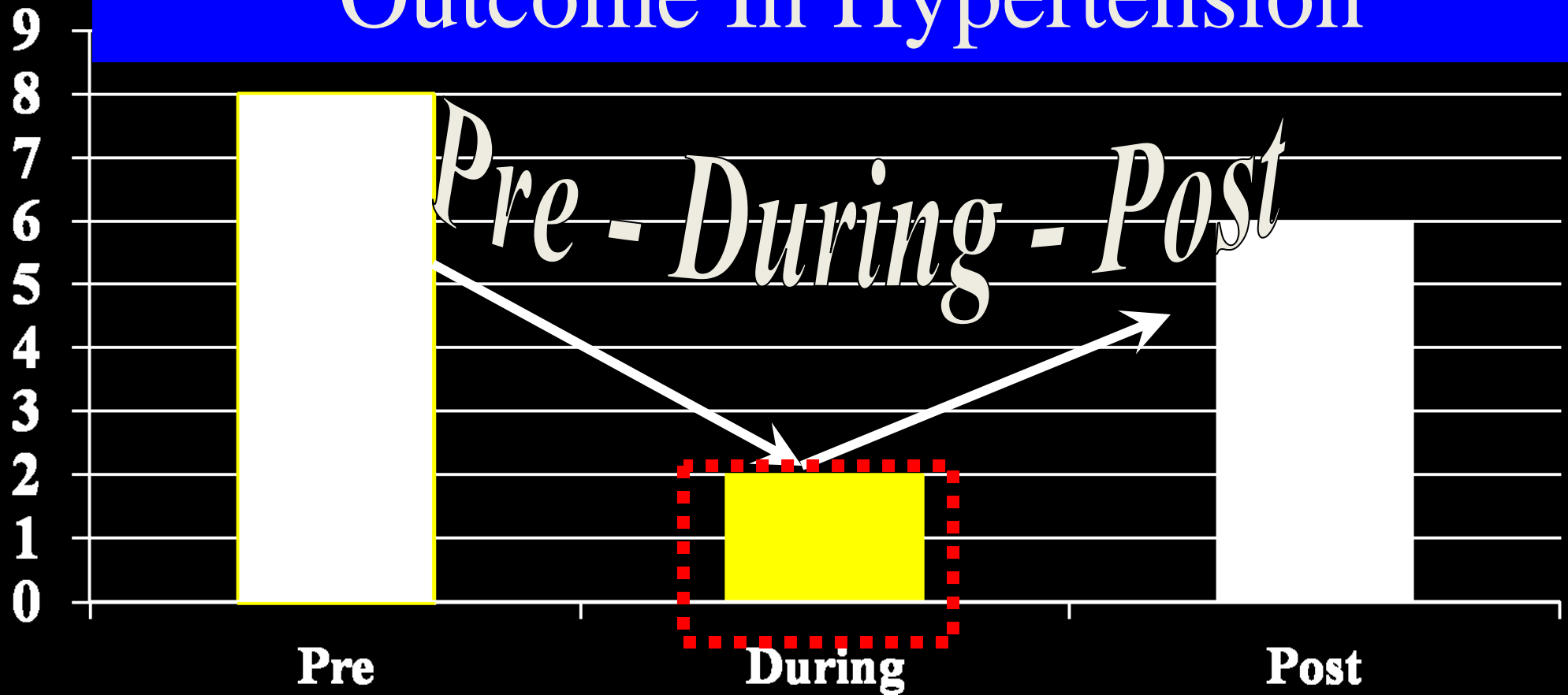
We Need to View and Treat Addiction  
As A Chronic, Relapsing Illness



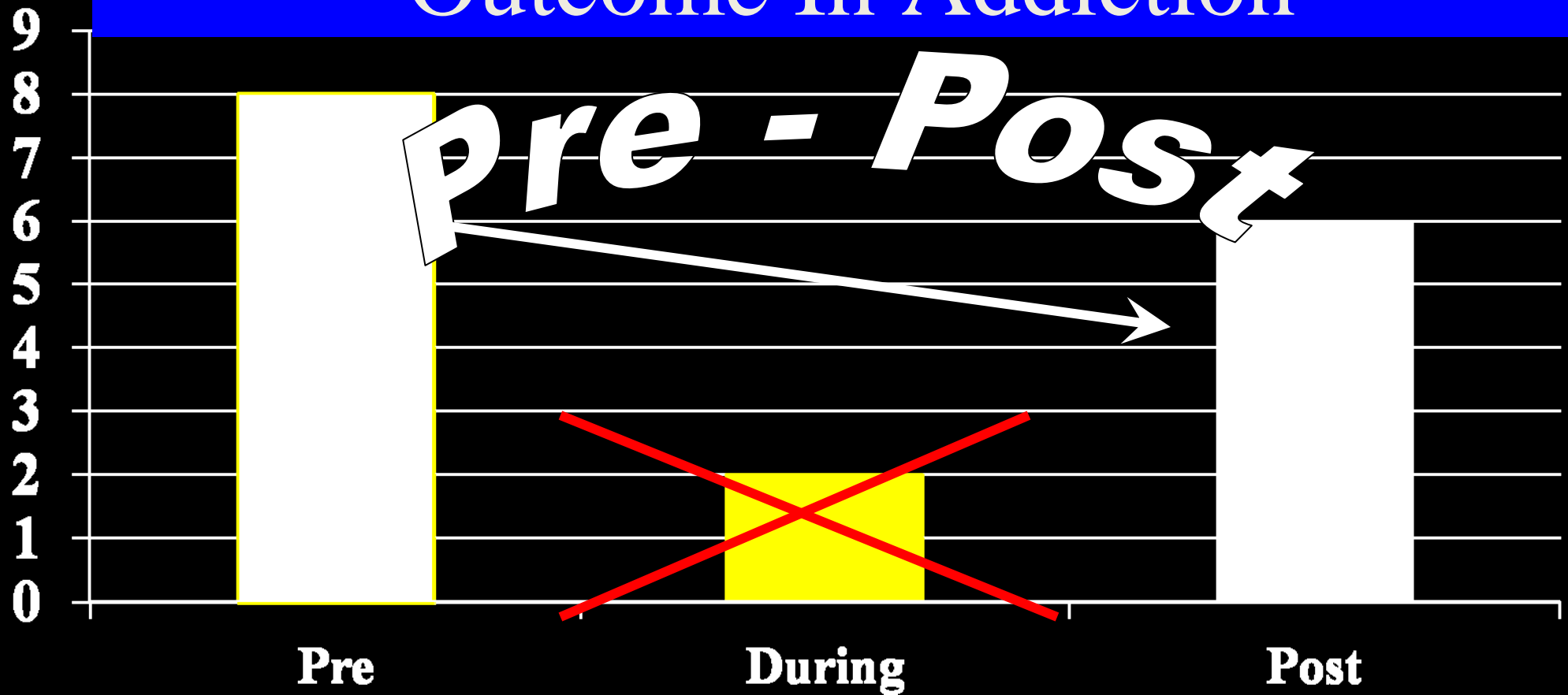
# Outcome In Diabetes



# Outcome In Hypertension



# Outcome In Addiction



**If we treat a diabetic and symptoms don't  
subside....what do we do?**

**Would we increase the dose?**

**Would we change medications?**

**Would we change treatment approaches?**

**Would we fail to provide ongoing  
treatment for a diabetic?**

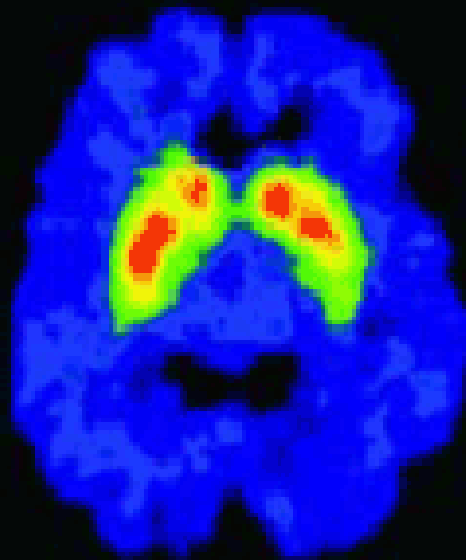
# Addiction is Similar to Other Chronic Illnesses Because:

- **It has biological and behavioral components, both of which must be addressed during treatment.**
- **Recovery from it--protracted abstinence and restored functioning--is often a long-term process requiring repeated episodes of treatment.**
- **Relapses can occur during or after treatment, and signal a need for treatment adjustment or reinstatement.**
- **Participation in support programs during and following treatment can be helpful in sustaining long-term recovery**

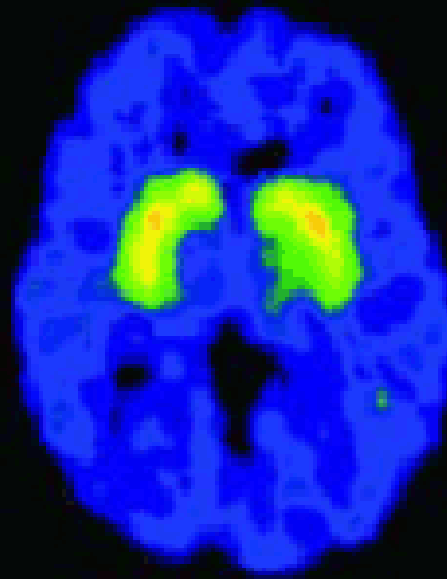
**Therefore...**

Full recovery is a challenge but it  
is possible ...

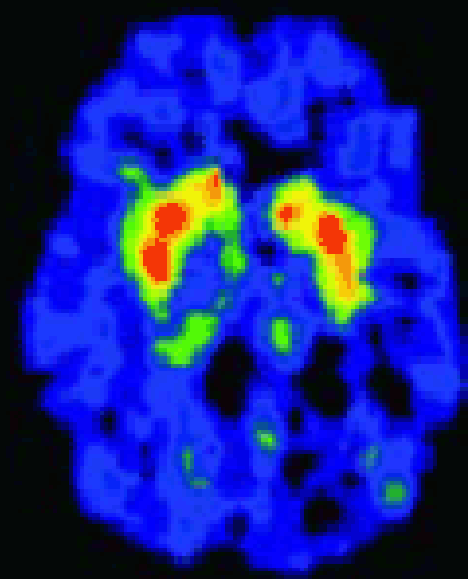
## BRAIN RECOVERY WITH PROLONGED ABSTINENCE



Healthy Person



METH Abuser  
1 month abstinence

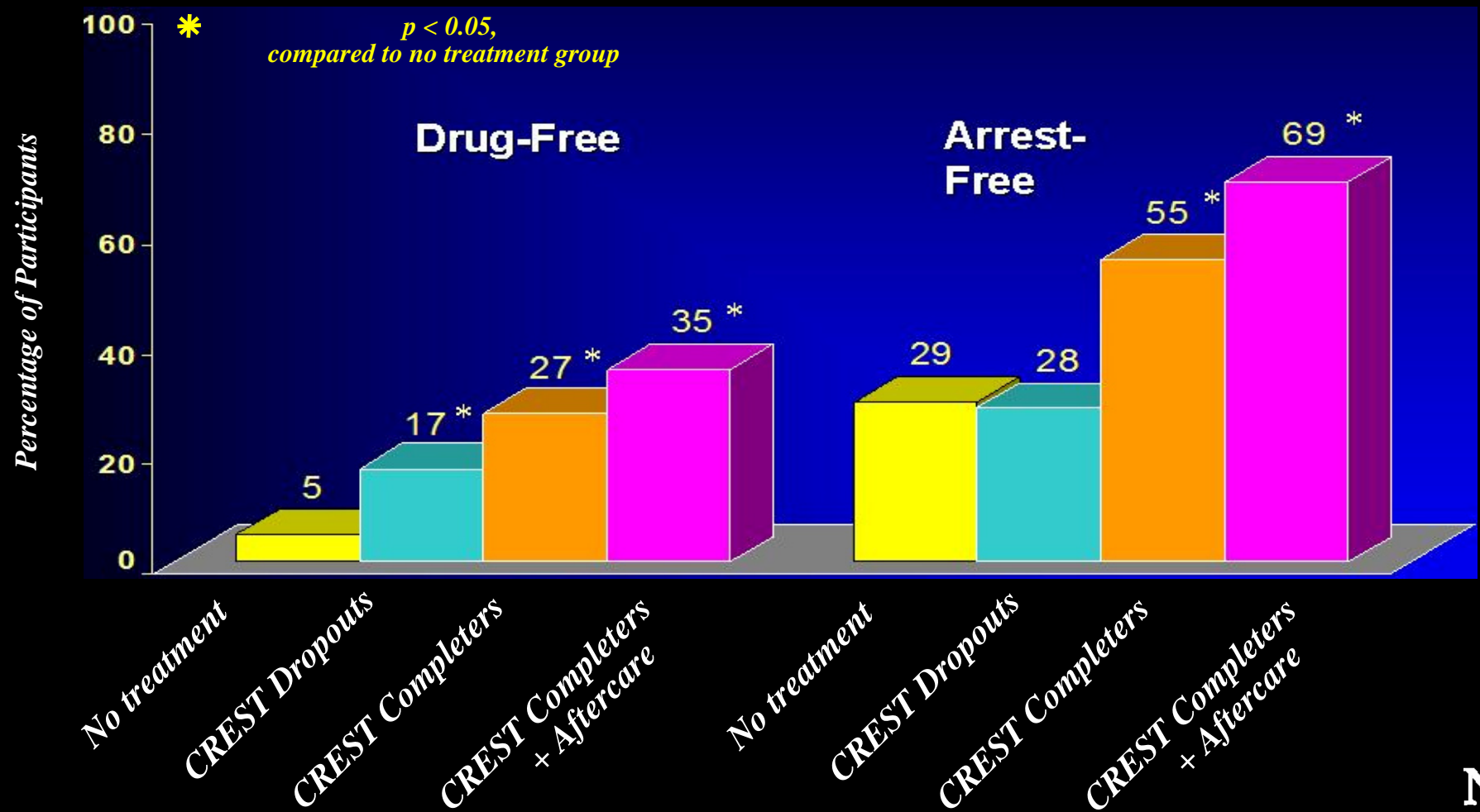


METH Abuser  
14 months abstinence



# Treatment Reduces Drug Use and Recidivism

*Delaware Work Release Therapeutic Community (CREST) + Aftercare  
3 Years After Release (N=448)*



Research



Practice

*NIDA Physician Outreach*

# How is substance abuse relevant to primary care?

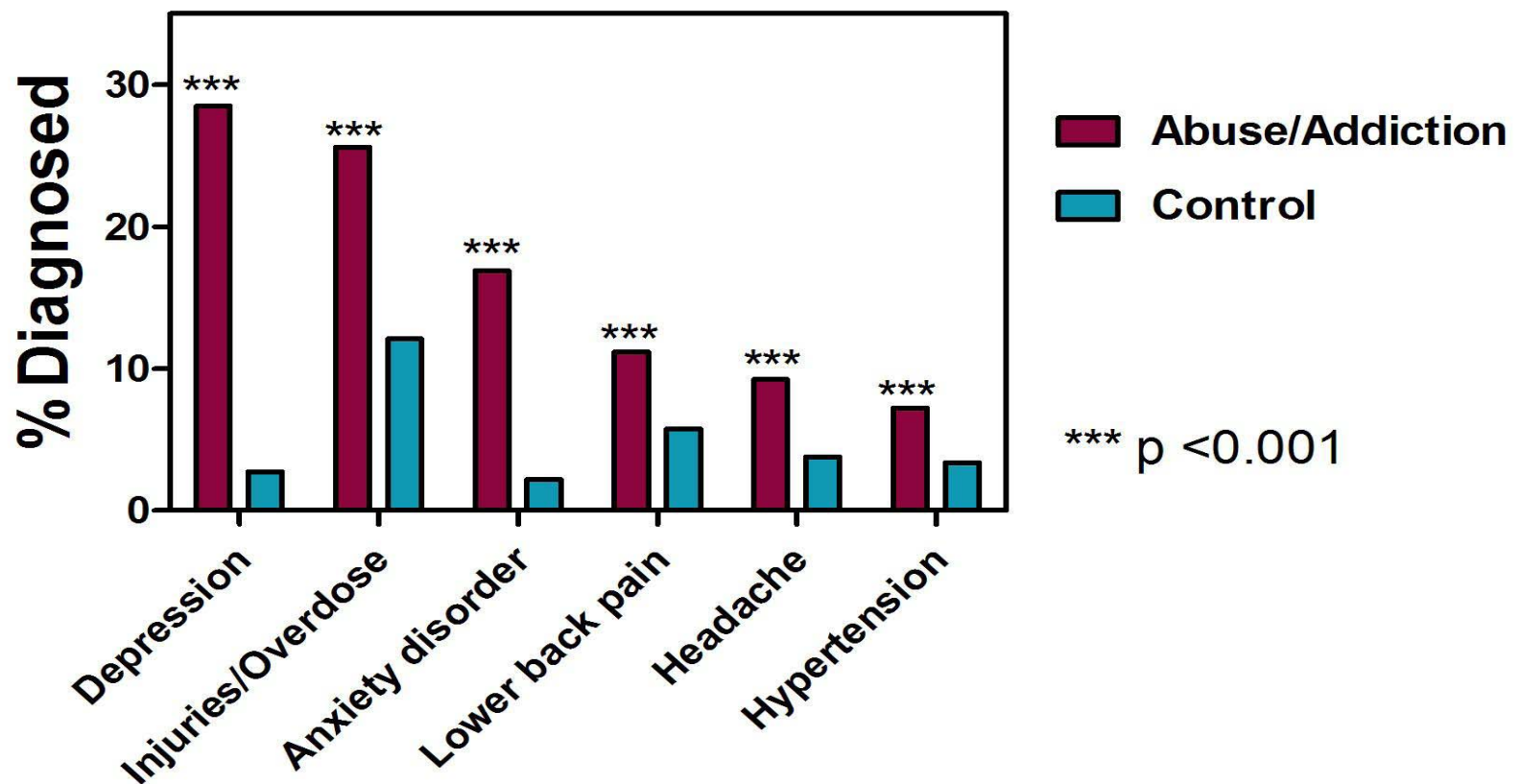


## Substance abuse can:

- Lead to **unintentional injuries**
- **Exacerbate medical conditions**
- **Exacerbate psychiatric problems** (anxiety, depression)
- **Induce** medical diseases (stroke, cancer, dementia, hypertension)
- Induce **infectious diseases** (HIV, HCV)
- Affect the **efficacy** of prescribed medications
- Be associated with **abuse of Rx medications**
- Result in **low birth weight**, premature deliveries, developmental delays
- Result in **addiction**

# How is substance abuse relevant to primary care?

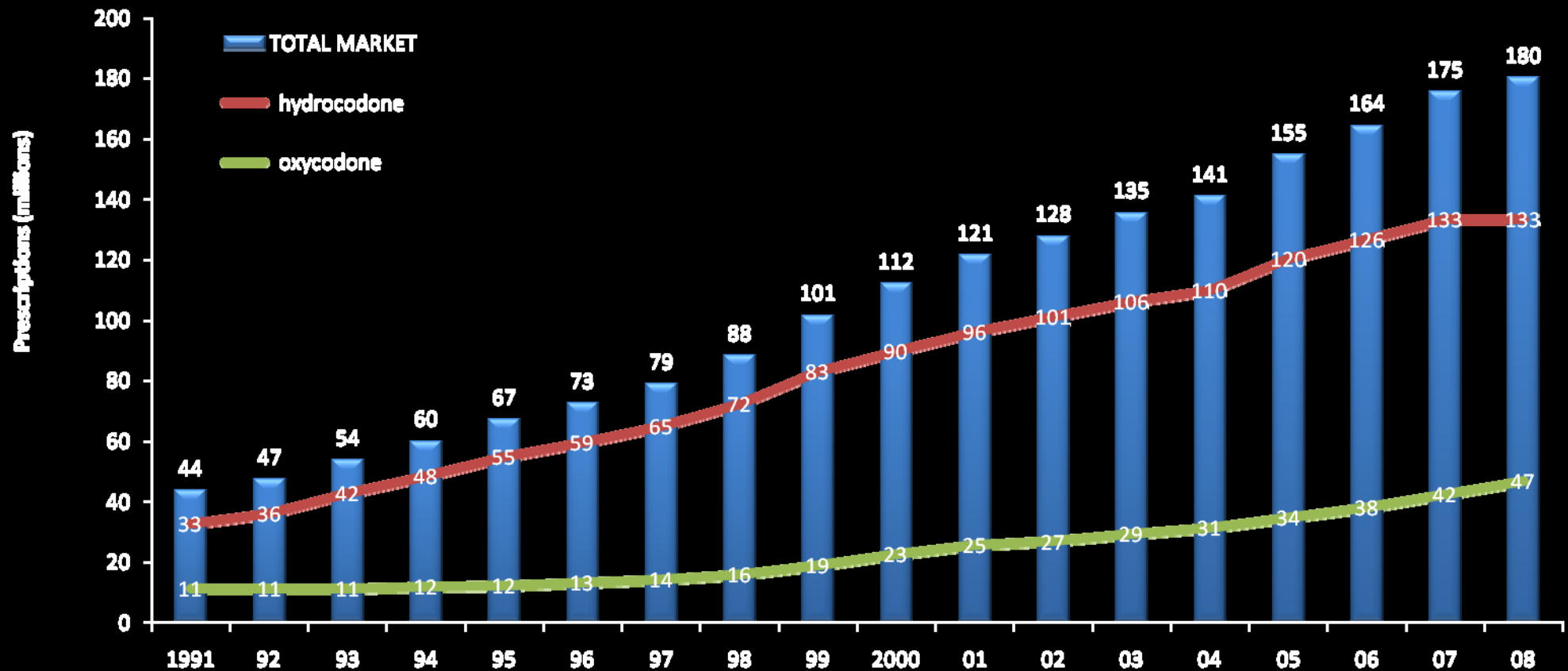
Higher Prevalence of Medical Conditions in Substance Abusers vs. Controls



Source: Mertens JR et al, Arch Intern Med 163: 2511-2517, 2003

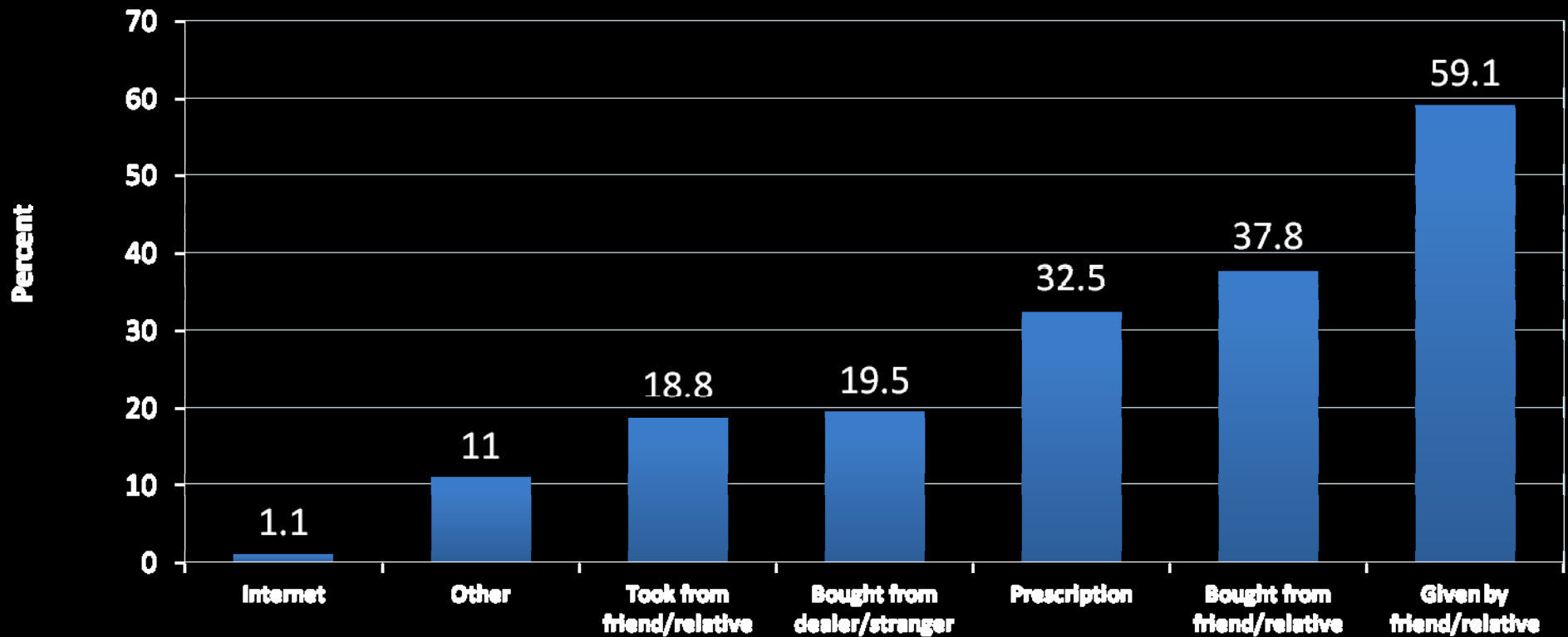
# Physicians Can Play a Role in Both Prevention and Treatment

# Projected Prescriptions for Hydrocodone and Oxycodone Products Dispensed by US Retail Pharmacies, Years 1991–2008



Source: SDI Health Vector One® National (VONA)

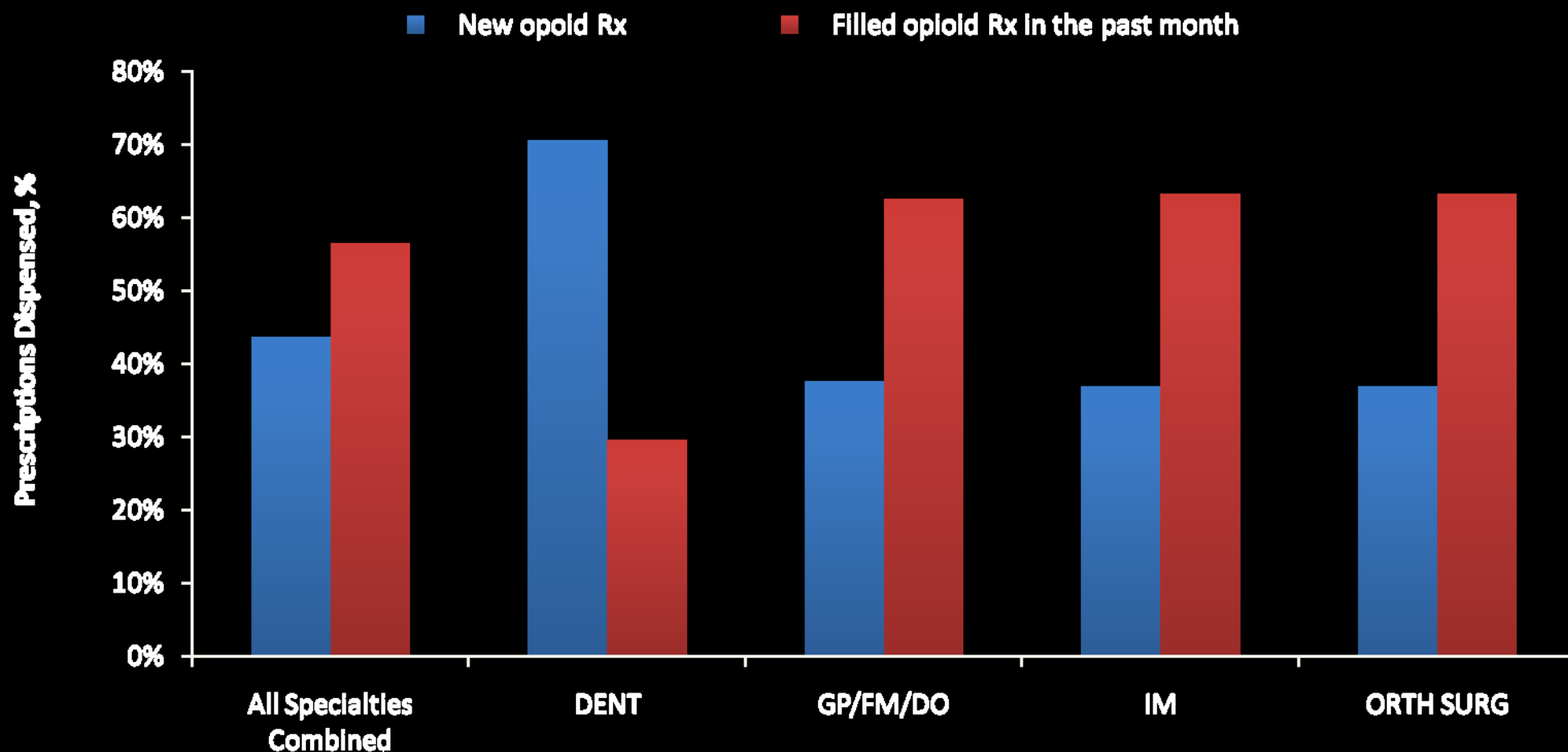
# Source of Prescription Narcotics among Those Who Used in the Past Year, 12<sup>th</sup> Grade\*



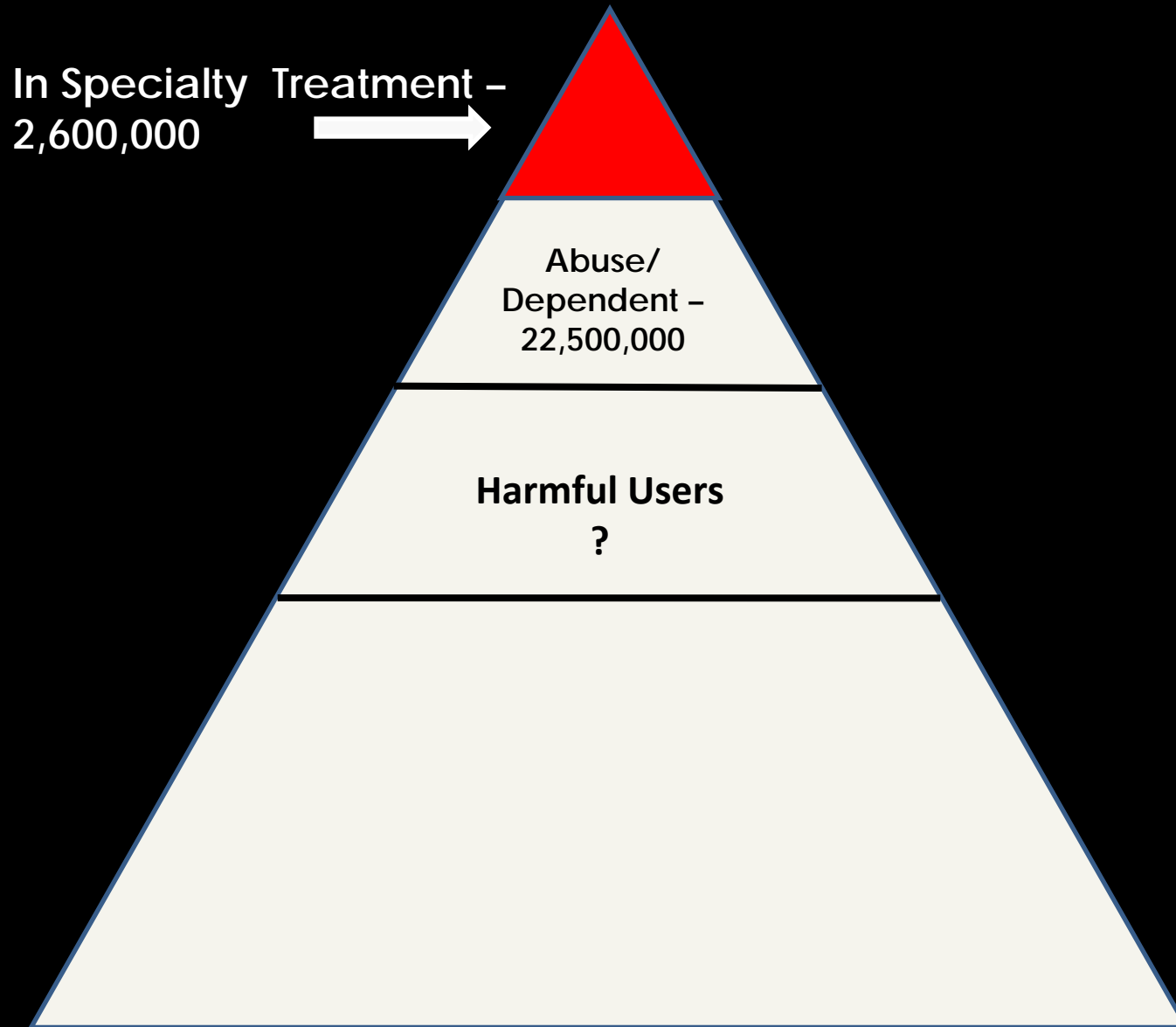
*SOURCE: University of Michigan, 2010 Monitoring the Future Study*



# New vs. Continuing or Switch/Add-on Opioid Prescriptions Dispensed by US Retail Pharmacies as a Function of Specialty, 2009

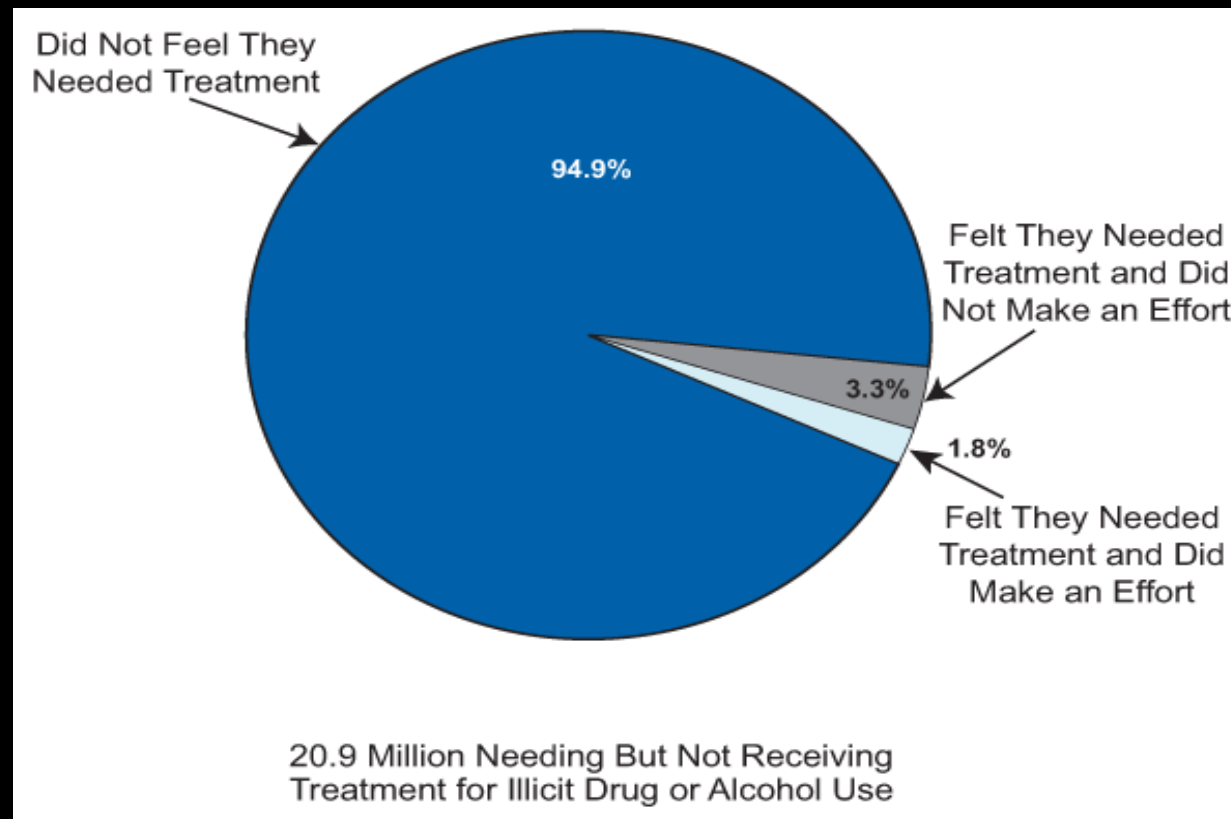


# Physicians can also play a role in Treatment



# Physicians Can Play a Role in Treatment

- Most substance abusing patients don't feel they need treatment and therefore won't seek it on their own.



# Treatment Referral Sources

	1990	2004
Criminal Justice	38%	59%
Employers/EAP	10%	6%
Welfare	8%	16%
Hosp/Phys	4%	3%

# Evidence for SBIRT in primary care

- Using screening and brief intervention (SBI) procedures in general medical settings can make a difference in drug use behaviors
  - Research has demonstrated that SBI can reduce alcohol and tobacco use.

Tobacco - USPSTF Grade A  
(strongly recommended)

<http://www.uspreventiveservicestaskforce.org/uspstf/uspstbac.htm>

Alcohol - USPSTF Grade B  
(recommended)

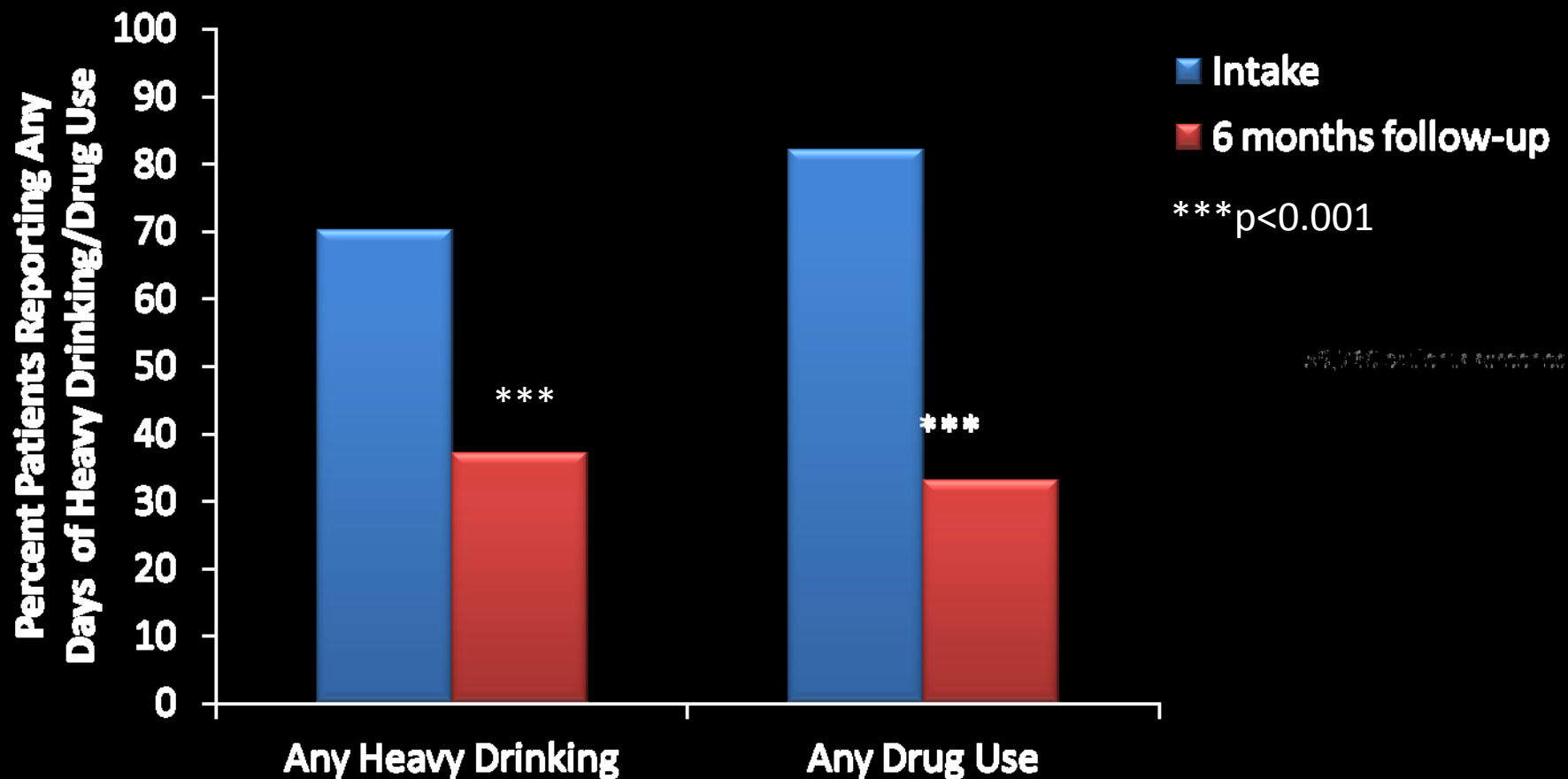
<http://www.uspreventiveservicestaskforce.org/uspstf/uspdrin.htm>

# Evidence for SBIRT in primary care

## *Illicit Drugs: Promising and Proliferating*

- Bernstein, et al. 2005: Randomized Controlled Trial (RCT)
- WHO study, 2008: Randomized Controlled Trial (RCT) in Multiple Sites Internationally
- InSight Project Research Group 2009
- Madras, et al. 2009: SAMHSA program evaluation of (SBIRT) for illicit drug and alcohol use at multiple sites

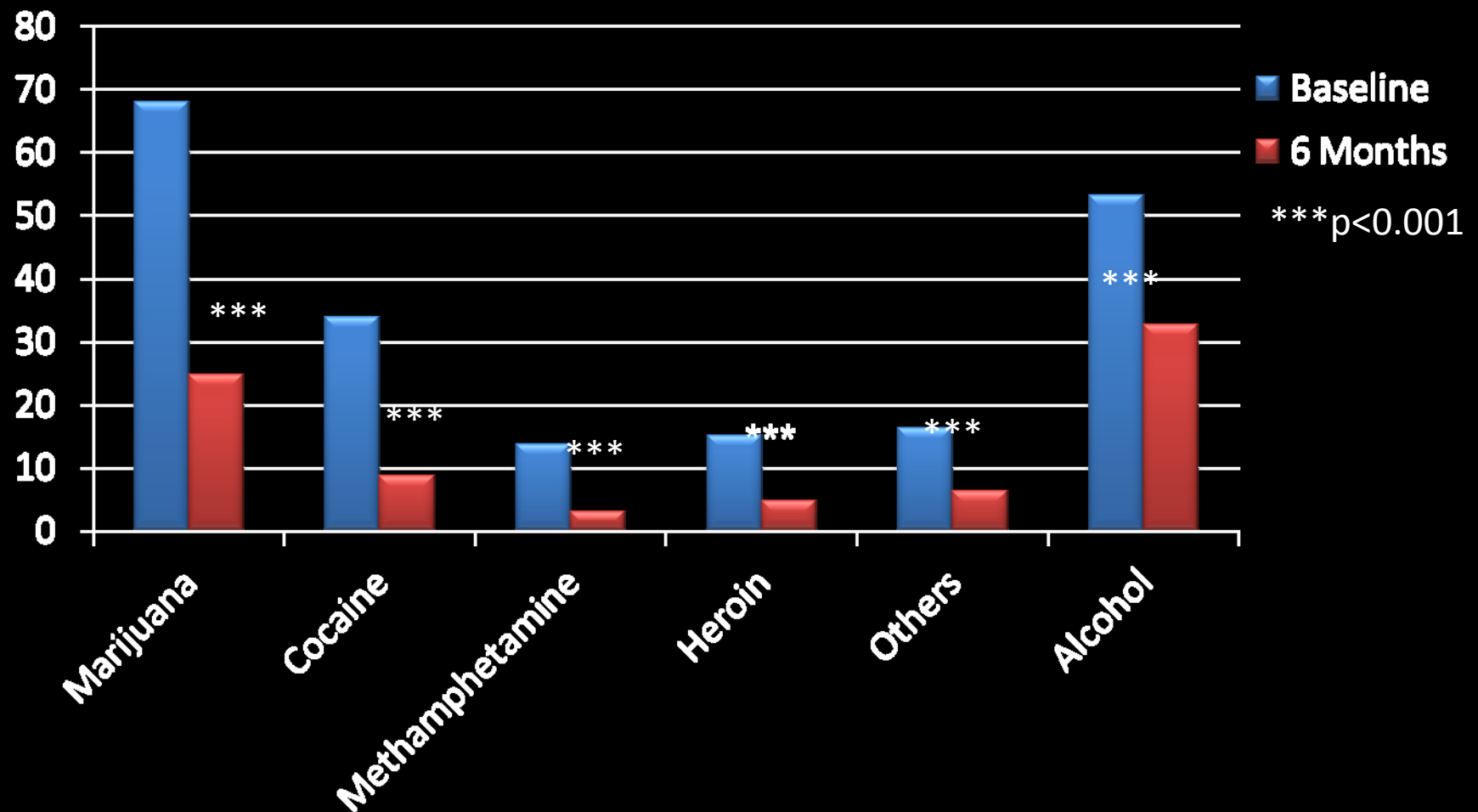
# SBIRT Reduces Heavy Alcohol and Drug Use in a Hospital District-Based Program (N=1,278)



Source: The InSight Project Research Group, 2009. Alcoholism: Clinical and Experimental Research



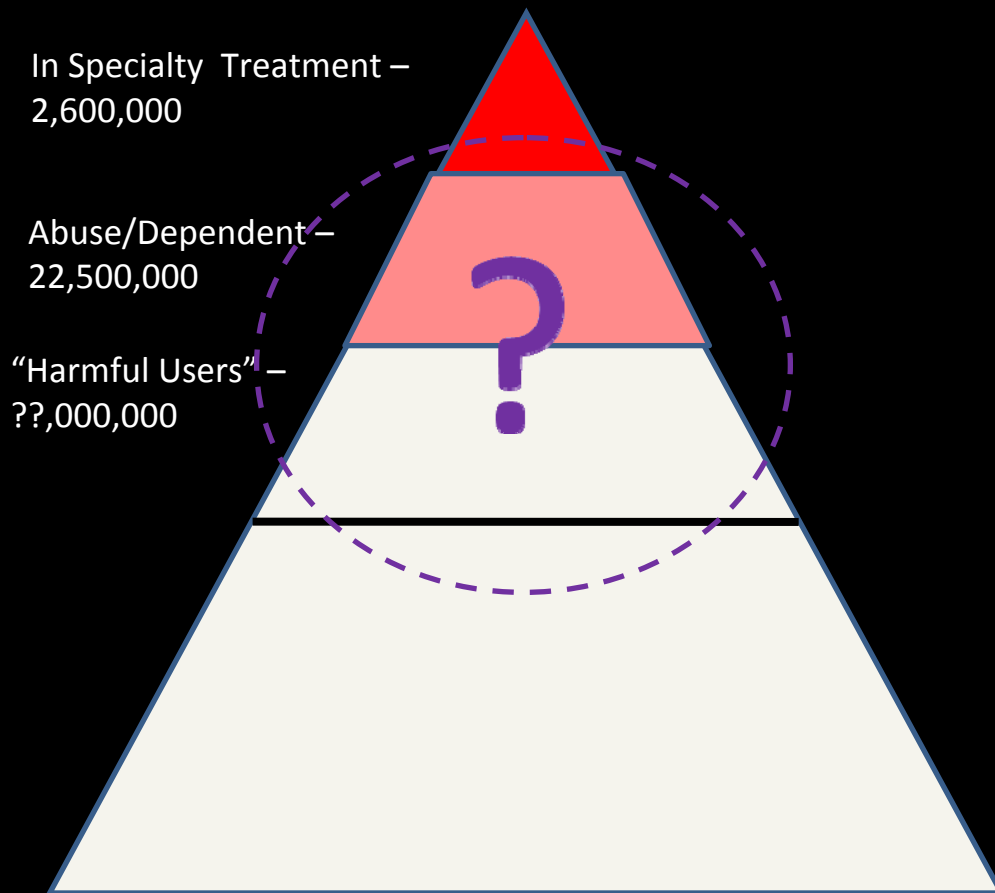
# SAMHSA SBIRT Service Program - Reductions in Substance Use at 6 Month Follow-up



Source: Madras et al., 2008 Drug and Alcohol Dependence

# Substance Abuse Pyramid

Physicians can:



- Identify patients at high risk for a substance use disorder and refer for specialty assessment and treatment, if necessary.
- Identify those at lower or moderate risk to intervene early and prevent the escalation to abuse and addiction.

# Physicians Don't Routinely Screen for Substance Abuse – Why?

- Don't believe it is a medical problem
- Don't believe there is effective treatment
- Can't be reimbursed
- Don't know what to do
- Not enough time

# Physicians Say They Don't Know What To Do

- National surveys of medical schools suggest dramatic variability in training in this area.
  - More than 55 percent of medical students had 9 hours or less of formal instruction on substance abuse (n=1340)
- Residency training
  - Only about half of residency programs required a curriculum in substance use disorders
  - 65 percent of residents had 9 hours or less of formal instruction on substance abuse (n=246)

Source: Yoast et al., 2008. Journal of Addictive Diseases; NIDA CoE Formative Assessment

# Centers of Excellence for Physician Information

NIDA has partnered with the American Medical Association and eight medical schools across the country to develop curriculum resources that contain scientifically accurate information about substance abuse and addiction.

These curriculum resources address pressing issues facing physicians today, in particular recognizing risk factors for as well as identifying prescription drug abuse in their patients.



**NIDA**  
Centers of Excellence  
*for*  
Physician Information

[www.drugabuse.gov/coe](http://www.drugabuse.gov/coe)

# Innovative Continuing Medical Education Program

## Addiction Performance Project

A NIDAMED CME program

Featuring a Dramatic Reading of Act III of

### *Long Day's Journey into Night*

by Eugene O'Neill

Produced by

OUTSIDE  
THE WIRE™

With medical consultation from  
Elizabeth Gaufberg, MD, MPH



Cambridge Health Alliance

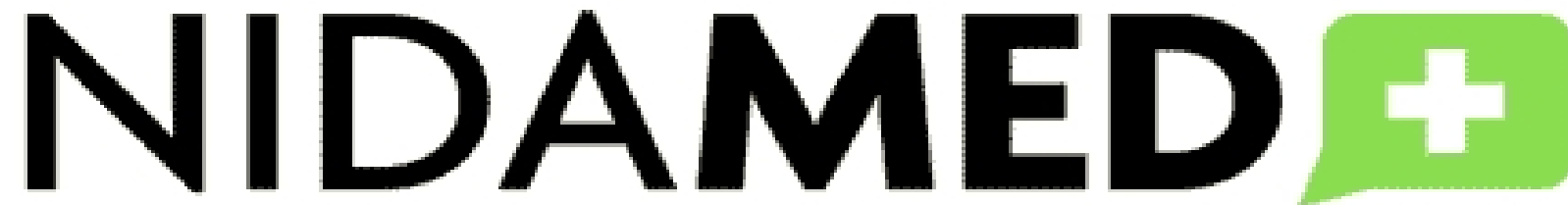
Funded by



The *Addiction Performance Project* offers healthcare providers the opportunity to help break down the stigma associated with addiction and promote a healthy dialogue that fosters compassion, cooperation, and understanding for patients living with this disease.

Dramatic reading by award-winning professional actors followed by a brief expert panel reaction and facilitated audience discussion of:

- the challenges and opportunities in caring for drug-addicted patients in primary care settings,
- physician biases, and
- how best to incorporate screening, brief intervention, and referral to treatment into primary care settings.



#### **NIDAMED Online Screening Tool**

- NIDA Quick Screen
- NMASSIST - Based on the WHO ASSIST
- Screens for tobacco, alcohol, illicit, and non-medical prescription drug use
- Based on patients' responses, automatically:
  - Leads to next appropriate question
  - Determines substance involvement score (i.e., risk level not a diagnosis)
- Links to additional resources

[Website and Online Tool](#)

# NIDAMED



## Online Resource Guide

- Rationale
- Instructions on how to implement screening
- The five A's of intervention – Ask, Advise, Assess, Assist, Arrange
- Scripts on how to discuss drug use with patients
- Additional Resources

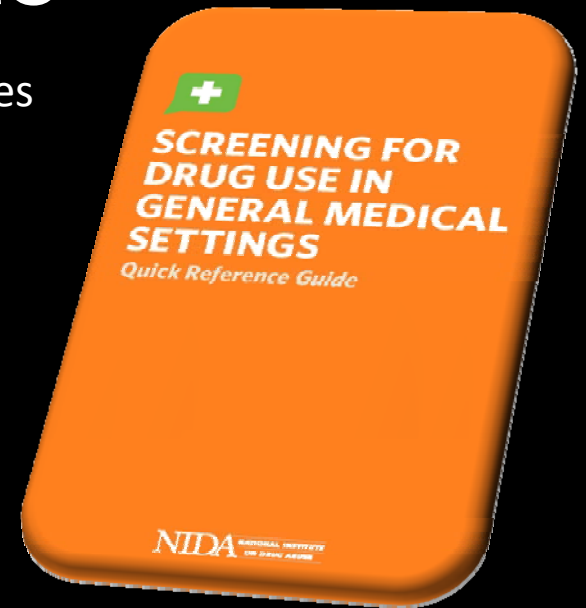




# NIDAMED

## Quick Reference Guide

- Drug listing outlining the different classes
- Screening questions
- Point value for each response
- Brief summary of the recommended intervention for each risk level





# PCSSmentor.org

## Physician Clinical Support System - Primary Care

An Educational Resource for Those Addressing Substance Abuse in Primary Care

- A free, nationwide service to help primary care providers seeking to identify and advise their patients regarding alcohol and drug abuse before they evolve into life-threatening conditions.
- PCSS-P provides physicians with easy access to clinical tools (e.g., NIDA Screening Tool), information, and resources to help them incorporate screening, brief intervention, and referral to substance abuse treatment into their practices.
- PCSS-P also links physicians to trained clinical advisors that can provide telephone or email responses to specific questions, and offer support on how to use and integrate PCSS-related clinical resources as a regular part of patient care.
- For more information, please visit PCSS-P at [www.PCSSmentor.org](http://www.PCSSmentor.org), email [PCSSproject@asam.org](mailto:PCSSproject@asam.org) or call 1-877-630-8812.

# Encouraging Patients to Talk About Drug Use



**WITHOUT THE WHOLE PICTURE, YOU MIGHT NOT GET THE WHOLE TREATMENT.**

To give you the best possible care, your doctor needs to know about any and all drugs you are taking, including tobacco, alcohol, illicit drugs, over-the-counter and prescription medications—even those not prescribed for you.


**Tell Your Doctor About ALL the Drugs You Use.**


[www.drugabuse.gov/nidamed](http://www.drugabuse.gov/nidamed)

Comments or inquiries?  
email: [information@nida.nih.gov](mailto:information@nida.nih.gov). To order free copies of this card, call 1-800-729-6686 and request NIDACRDXX

Your right to privacy is protected by law. For more information on privacy rights, visit <http://www.hhs.gov/ocr/hipaa> or call 1-866-627-7748

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
National Institutes of Health

**NIDAMED** 

**NIDA** 

# Encouraging Patients to Talk About Drug Use



# The Ultimate Goal – Addressing substance abuse becomes a part of routine medical care.

- Practicing physicians need to implement
- It must become a routine part of medical education.

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# NIDA

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NATIONAL INSTITUTE  
ON DRUG ABUSE

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[www.drugabuse.gov](http://www.drugabuse.gov)  
[www.drugabuse.gov/nidamed/](http://www.drugabuse.gov/nidamed/)  
[www.drugabuse.gov/coe](http://www.drugabuse.gov/coe)  
[www.PCSSmentor.org](http://www.PCSSmentor.org)

