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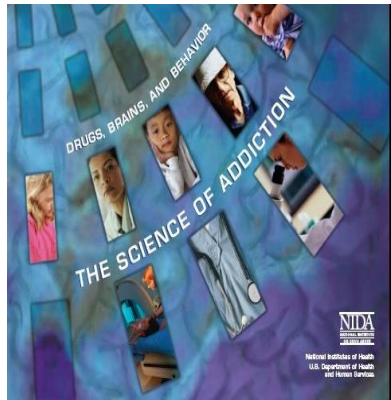
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What Causes a Substance Use Disorder (SUD)?

- Predisposition/Physical Wiring
- Mental Health Conditions
- Environment
- Live Events
- Substances Used
- Timing of Use
- Maybe 100 other reasons???

View of SUD: Bio-psycho-social

- SUD is viewed as *a combination of biological, psychological and social factors that contribute to the disorder.*

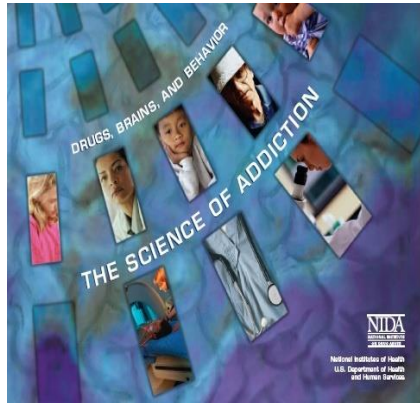


The Science of Addiction

Is Drug Addiction a Disease?

“Addiction is a chronic, relapsing disease that affects the brain and causes compulsive drug seeking and use despite negative consequences.”

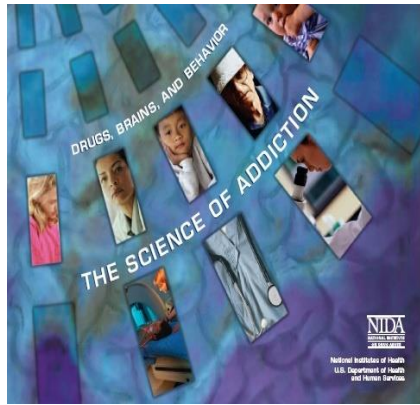
NIDA (2007, 2008)



The Science of Addiction

Is Drug Addiction a Disease?

“Addiction is considered a brain disease because drugs change the brain – in structure and in function. It is true that for most people the initial decision to take a drug is voluntary.”



The Science of Addiction

Is Drug Addiction a Disease?

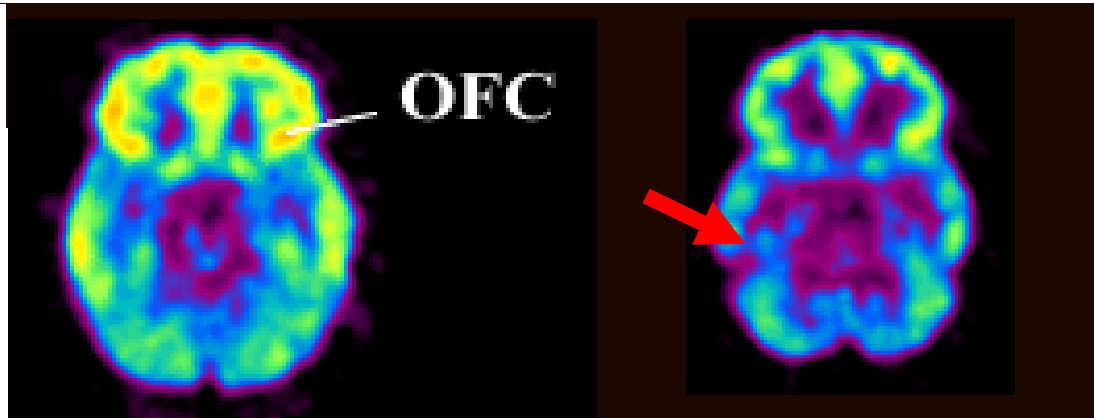
“Over time drug abuse can cause changes to the brain that may erode a person’s self control and ability to make sound decisions, while sending intense impulses to take drugs.”

NIDA (2007, 2008)

ADDICTION IS A DISEASE OF THE BRAIN

As other diseases, it affects tissue function

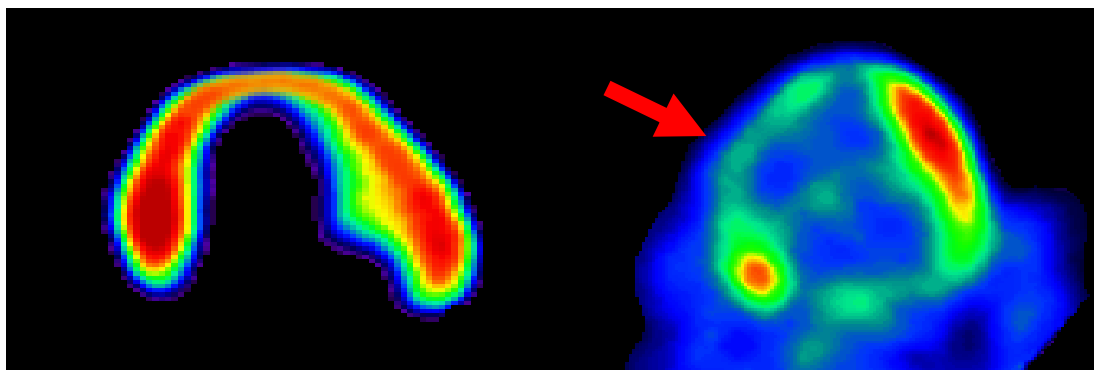
Decreased brain metabolism in drug abuse patient



Control

Cocaine Abuser

Decreased heart metabolism in Heart Disease Patient

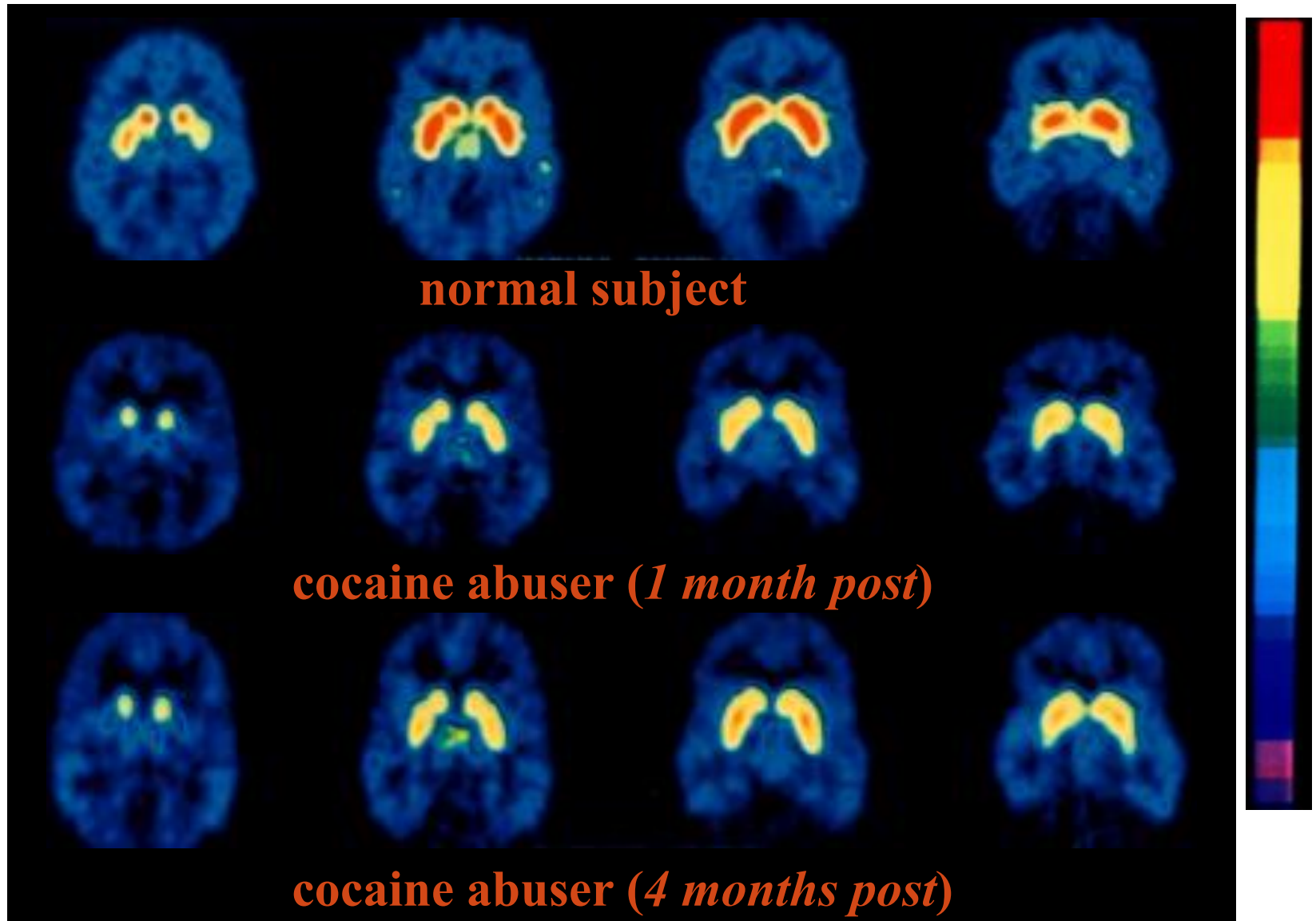


Healthy Heart

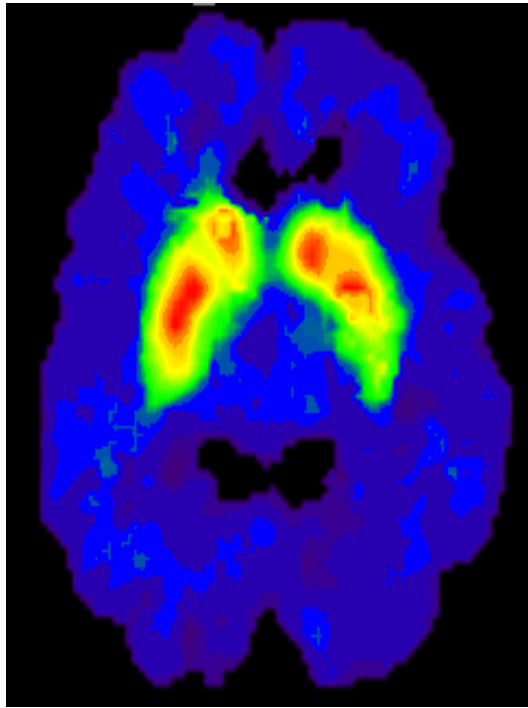
Diseased Heart

Sources: From the laboratories of Drs. N. Volkow and H. Schelbert

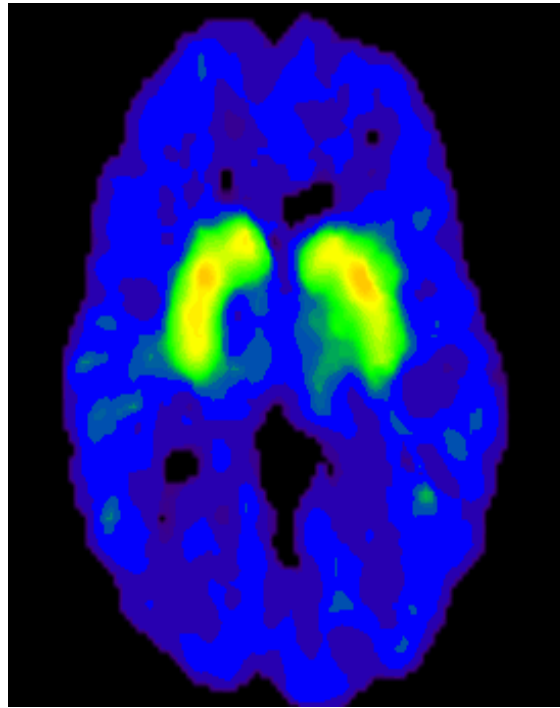
Effect of Cocaine Abuse on Dopamine D2 Receptors



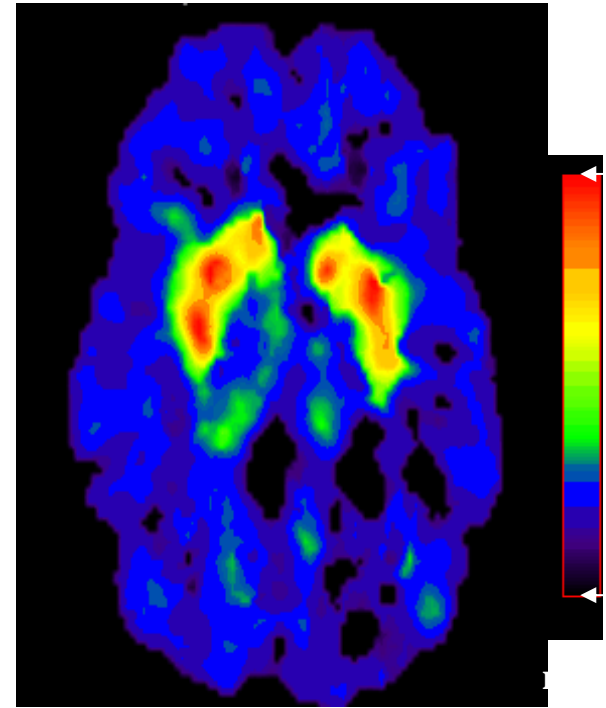
Partial Recovery of Brain from Methamphetamine After Abstinence



Normal Control



METH Abuser
(1 month abstinent)



METH Abuser
(14 months abstinent)

Dopamine improvements after 1 year, but not cognitive and motor functioning

Source: Volkow, ND et al., Journal of Neuroscience 21, 9414-9418, 2001.

How Do We Treat a SUD?

- What are we really trying to accomplish?
- What can each element of my program do for the client that no other element can?

SAMHSA Recovery Definition

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

SAMHSA March 2012

Common Elements of a Program

- Counseling – Individual and Group
- Community Support
- Peer Support
- Mutual Support Groups
- Exercise
- Nutrition
- Animals
- Medication

What Do SUD Medications Do?

1. Help regulate brain receptor activity as well as impact other physical processes in various ways:
 - Activate receptors – reduce cravings & withdrawal (Methadone/Buprenorphine)
 - Block receptors (Naltrexone)
 - Balance Gaba/Glutamate/Calcium levels (Acamprosate)
 - Disrupt elimination process (Disulfiram)

What Do SUD Medications Do?

*As part of a comprehensive **treatment** program, MAR has been shown to:*

- *Improve survival*
- *Increase retention in treatment*
- *Decrease illicit opioid use*
- *Decrease hepatitis and HIV*
- *Increase employment*
- *Improve birth outcomes*
- *Increase program's financial bottom line*

SAMHSA DPT Website

Common Elements of a Program: Positives & Negatives

- Counseling – Individual and Group
- Mutual Support Groups
- Peer Services
- Exercise
- Nutrition
- Animals
- Medication

Random Thoughts

- Are you trading one drug for another?
- Comprehensive program
- Adherence versus misuse
- Physical dependence versus “addicted lifestyle”
- Harm reduction
- Length of time

Dr. Michael G. O'Neil, PharmD

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- Strict discontinuance of opioid maintenance therapy solely on the basis of duration of treatment is not clinically justifiable at this time. Individualization of treatment for opioid addiction with methadone or buprenorphine by qualified specialists is necessary for many suffering patients, in conjunction with counseling, community support, or behavioral interventions.

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SAMHSA March 2012