


Cycle of Addiction: Substance Use Disorders

Presented by
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Understanding oneself is incomplete when divorced from the history of one's people. Those with lived experience of addiction and recovery share such a larger history. Over the course of centuries and across the globe, we have been..... (William White, 2021)

Abandoned....
Arrested....
Berated....
Condemned....
Coerced....
Divorced....
Deprioritized....
Denied Probation...
Evicted....
Tough Loved....
Shamed....
Shunned....
Stigmatized....
Objectified....
Tranquilized....
Trivialized....

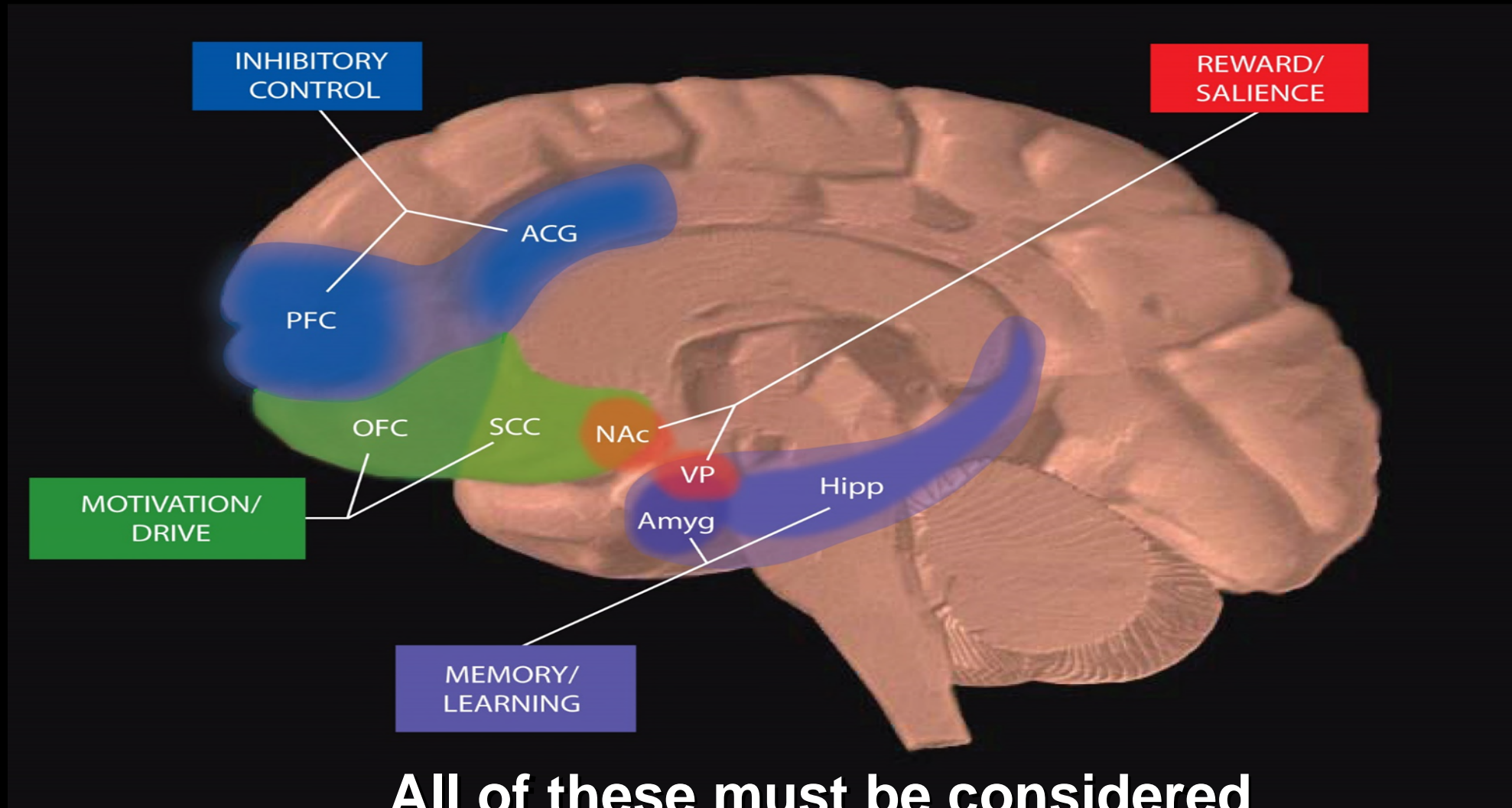
(William White 2021)



- “Addictions ... started out like magical pets, and pocket monsters. They did extraordinary tricks, showed you things you hadn’t seen, were fun. But come, through some gradual dire alchemy, to make decisions for you. Eventually, they were making your most crucial life-decisions. And they were ... less intelligent than goldfish.”

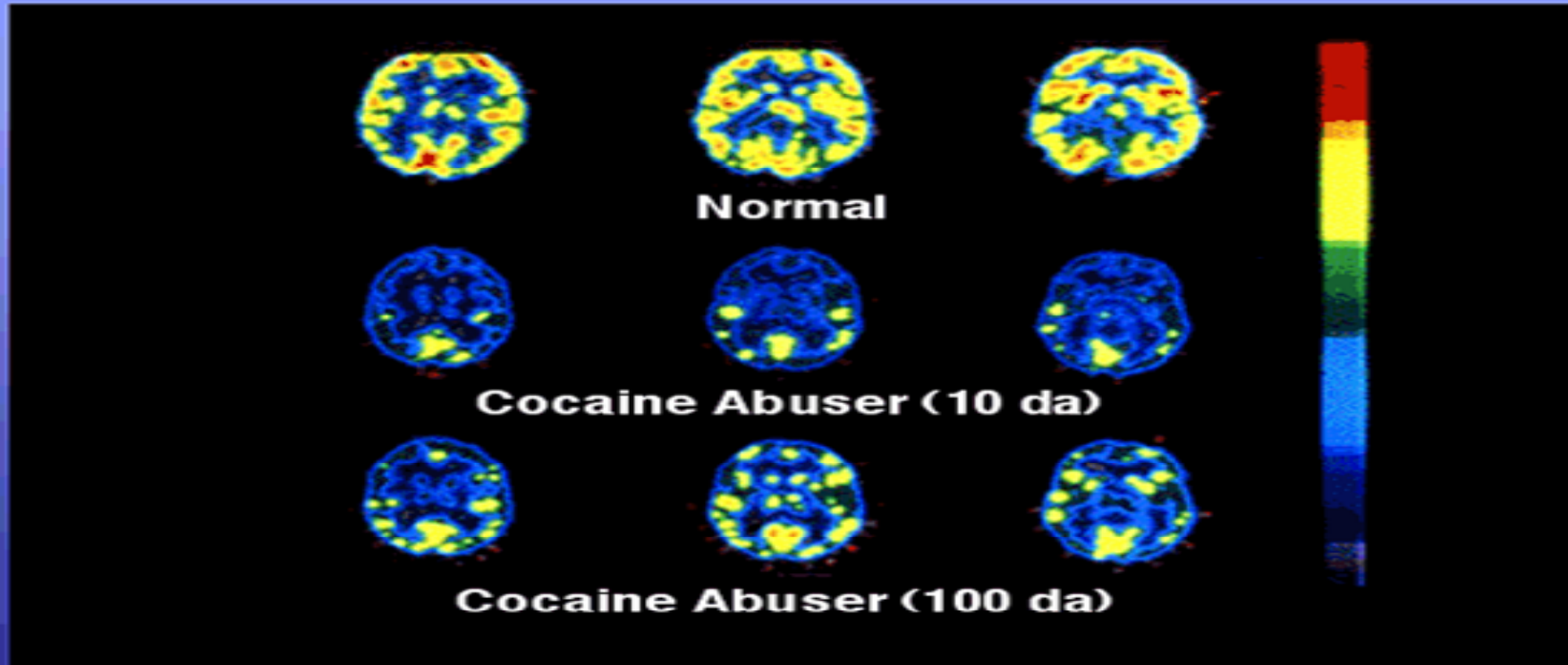
William Gibson

Circuits Involved In Drug Abuse and Addiction



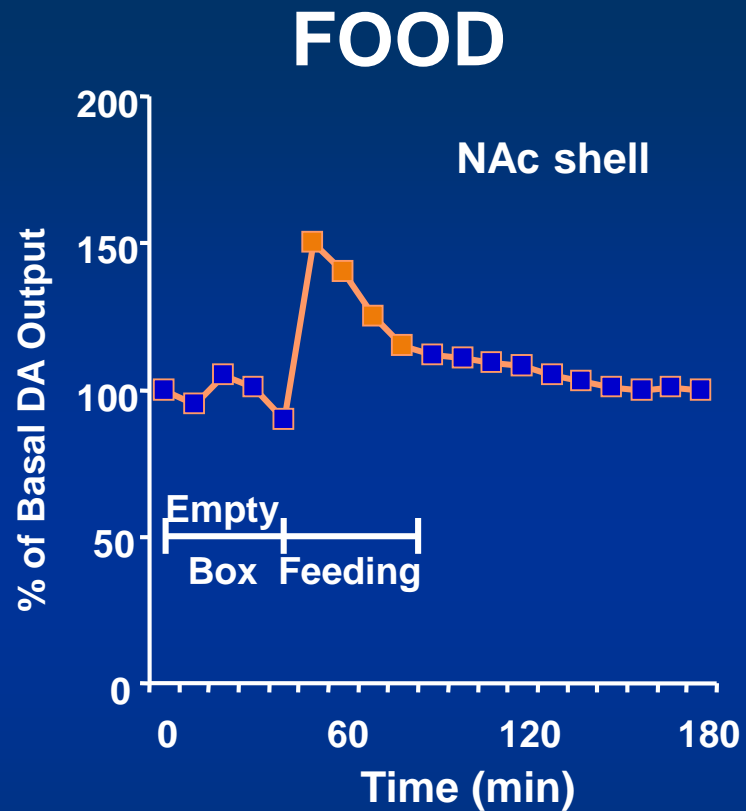
**All of these must be considered
in developing strategies to
effectively treat addiction**

Your Brain After Drugs

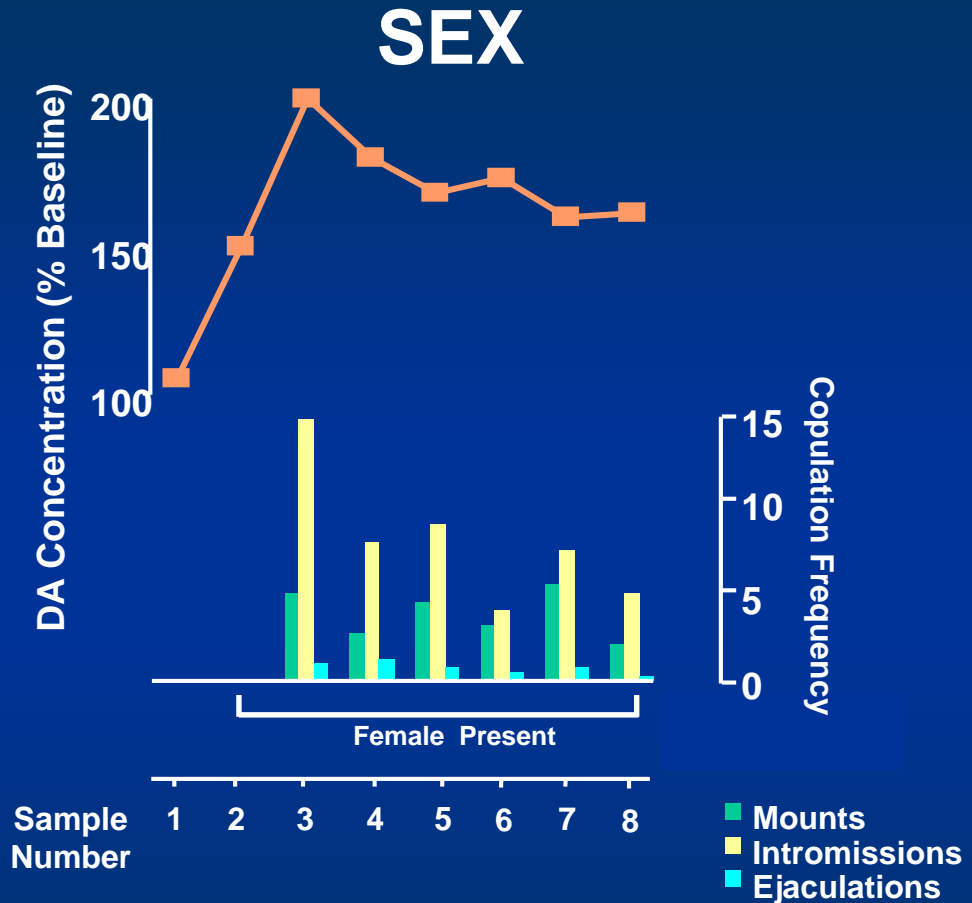


- In this image, the level of brain function is indicated in yellow. The top row shows a normal-functioning brain without drugs. You can see a lot of brain activity. In other words, there is a lot of yellow color. The middle row shows a cocaine addict's brain after 10 days without any cocaine use at all. *Less yellow* means *less normal activity* occurring in the brain - even after the cocaine abuser has abstained from the drug for 10 days. The third row shows the same addict's brain after 100 days without any cocaine. We can see a little more yellow, so there is some improvement - more brain activity - at this point. But the addict's brain is *still* not back to a normal level of functioning... more than 3 months later.

Natural Rewards Elevate Dopamine Levels

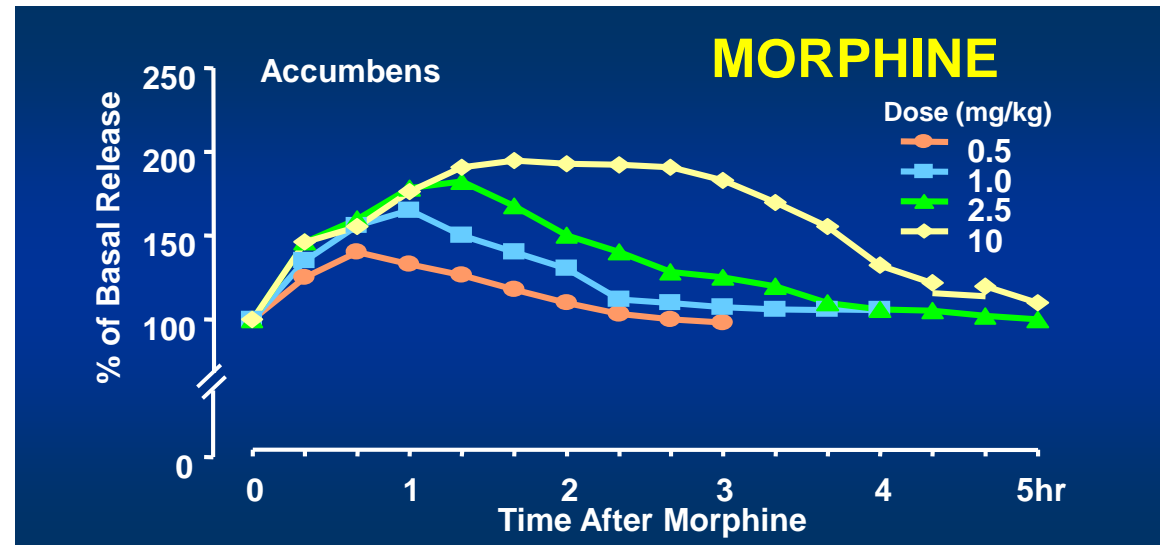
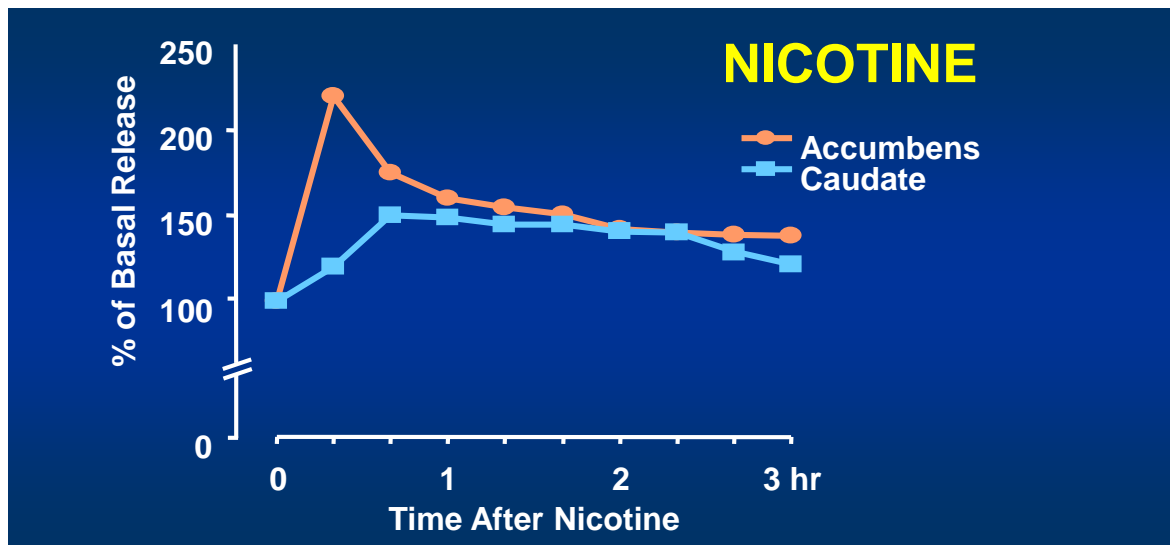
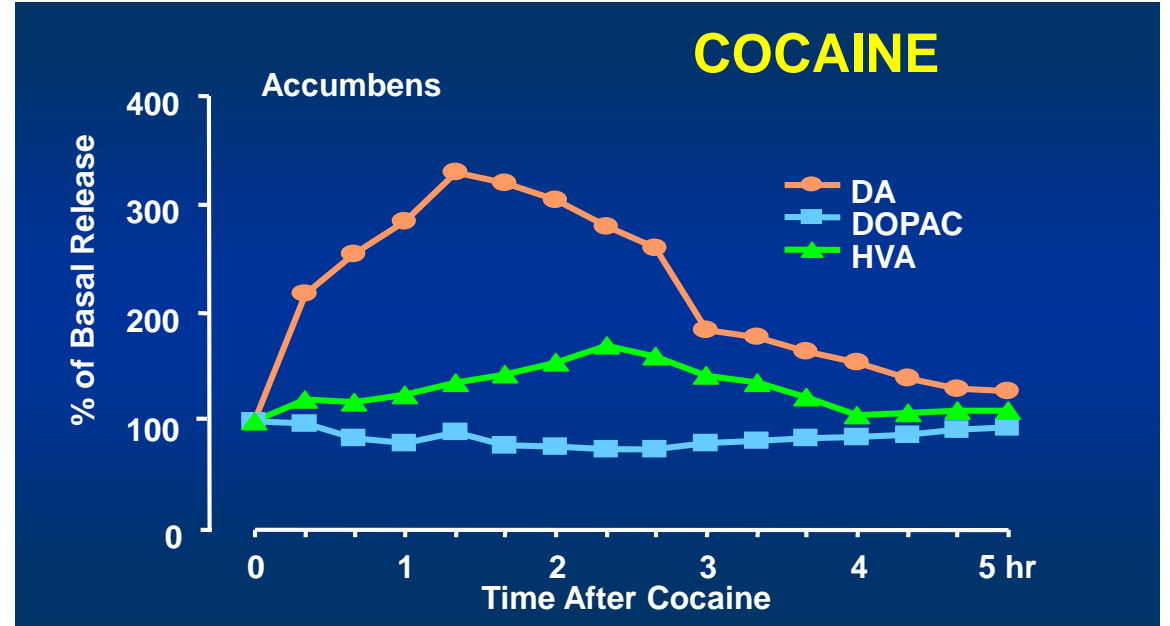
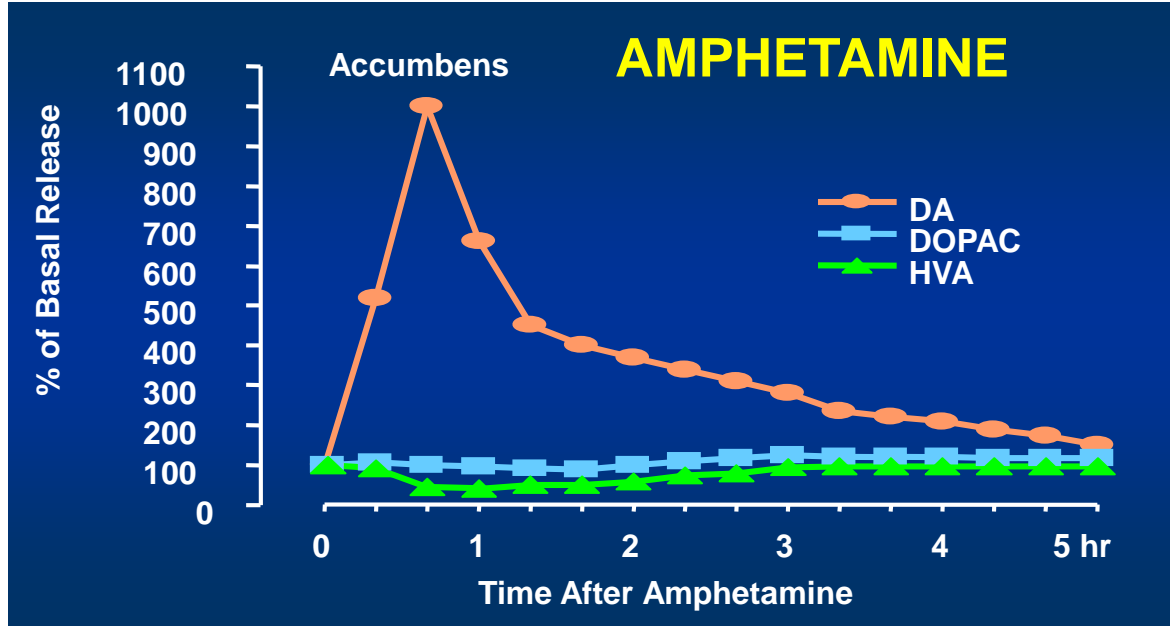


Di Chiara et al., Neuroscience, 1999.



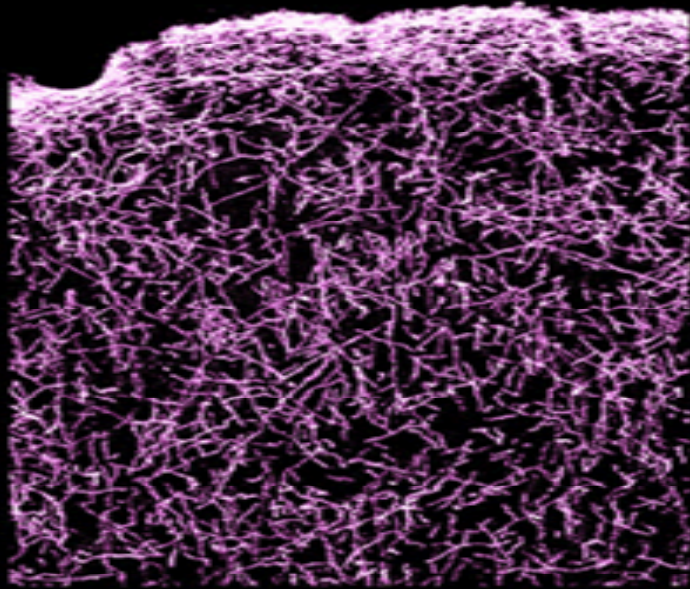
Fiorino and Phillips, J. Neuroscience, 1997.

Effects of Drugs on Dopamine Release

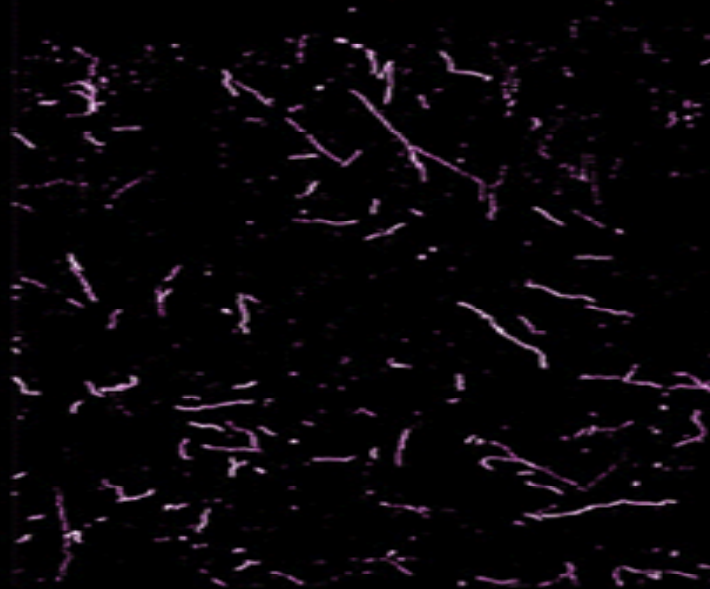


Serotonin Present in Cerebral Cortex Neurons

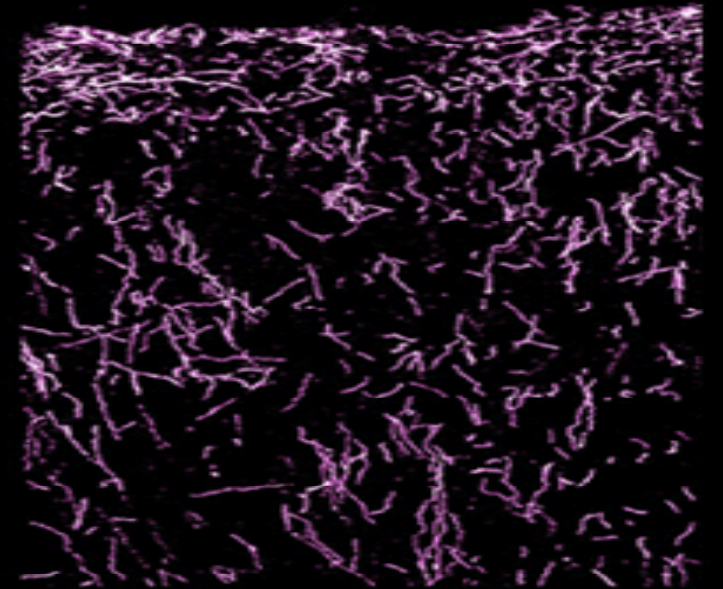
Control



2 weeks after Ecstasy

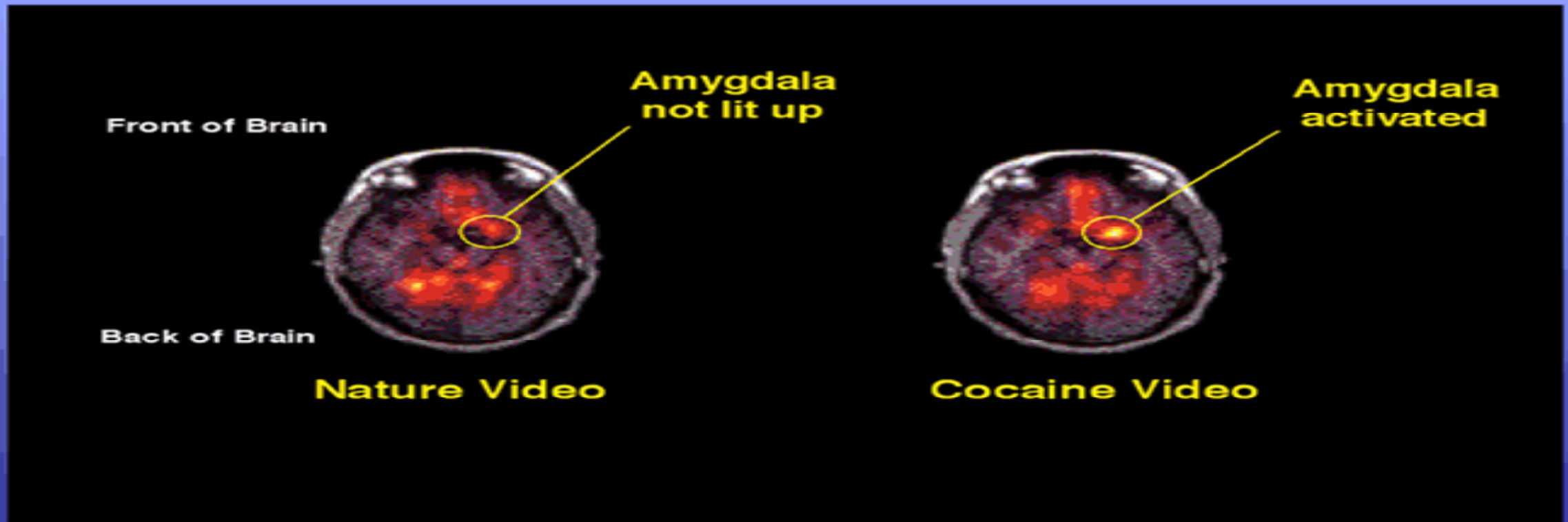


7 years after Ecstasy



- Two weeks after a monkey received Ecstasy, most of the serotonin was gone, suggesting that the serotonin neuron terminals were destroyed (there was no destruction of the serotonin cell bodies arising back in the brainstem). This damage appeared to be long-term because 7 years later there was some recovery, but it was not complete (in fact the pattern of regrowth of serotonin terminals was abnormal -- point out one of the areas where the pink lines are running sideways).

The Memory of Drugs

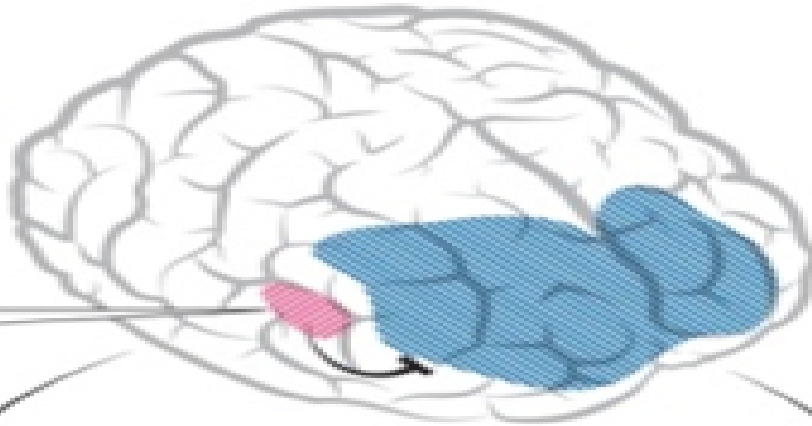


This is how the memory of drugs works: The yellow area on the upper part of the second image is the amygdala (**a-mig-duh-luh**), a part of the brain's limbic system, which is critical for memory and responsible for evoking emotions. For an addict, when a drug craving occurs, the amygdala becomes active and a craving for cocaine is triggered.

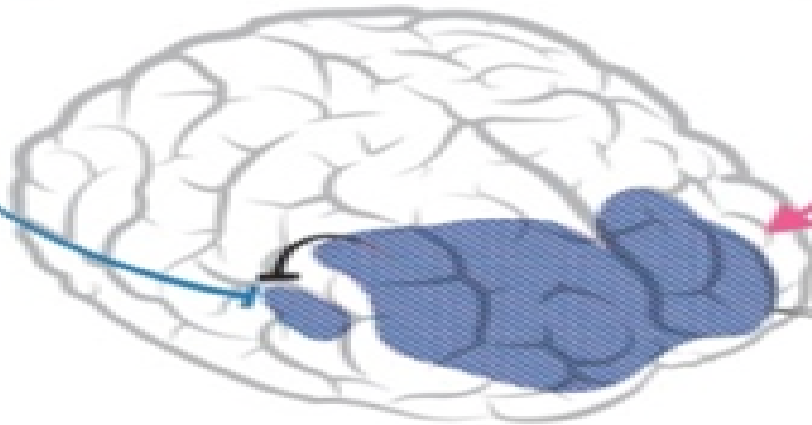
DESIRED BEHAVIOUR

Depressed individuals often have an overactive (pink) amygdala and a less-active (blue) prefrontal cortex compared to healthy people.

1 Activity in the amygdala, which is associated with emotional responses, may repress activity in the prefrontal cortex, which is involved in executive function.



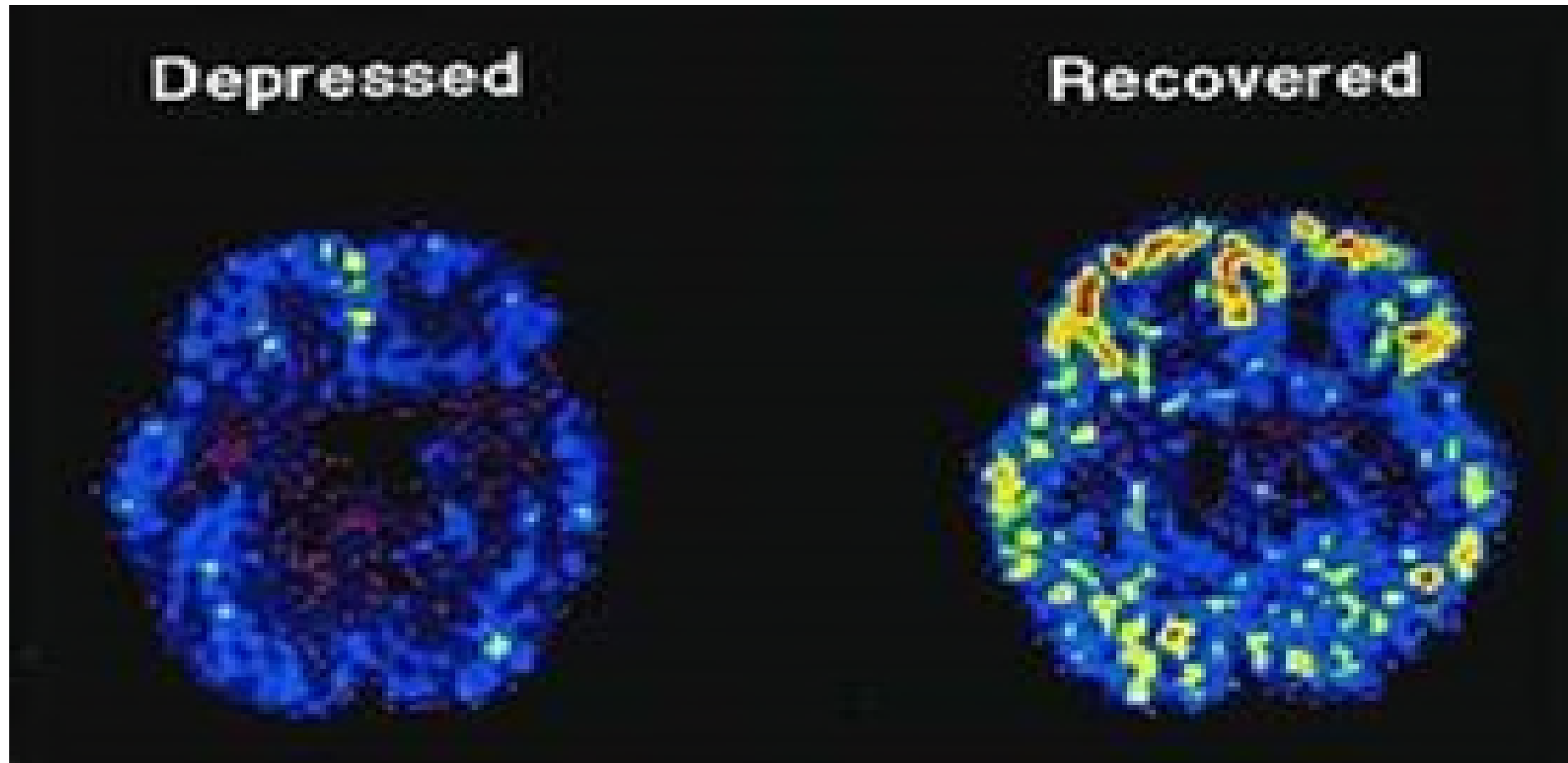
2 Some researchers suspect that antidepressant medication quietsens activity in the amygdala, whereas cognitive behavioural therapy (CBT) increases activity in the prefrontal cortex.



3 Although the two approaches work in different ways, they both seem to restore stability in these areas of the brain.

LONG-TERM BENEFITS

Counseling Changes Brains.....



More recently, through the efforts of recovery advocates and professional and public allies, we are being:

Applauded....

Awakened....

Celebrated....

Educated....

Hired....

Informed....

Restored....

Legitimized....

Destigmatized....

Compassionized....

Through our shared journeys, recovery is gifting us with:

Accountability, Acceptability, Adaptability,
Authenticity, Clarity, Collegiality, Community, Dignity,
Employability, Fidelity, Flexibility, Honesty, Humility,
Integrity, Longevity, Maturity, Opportunity,
Possibility, Predictability, Productivity, Prosperity,
Respectability, Responsibility, Sanity, Serenity,
Sobriety, Spirituality, Stability, Survivability,
Tranquility, Visibility, Wellbriety.

Thanks so much to all you
do to change brains!!!!

Reference

White, William. We have been: addiction lament and recovery celebration (2021).

[We Have Been \(Addiction Lament & Recovery Celebration\) | Blog & New Postings | William L. White \(williamwhitepapers.com\)](#)