



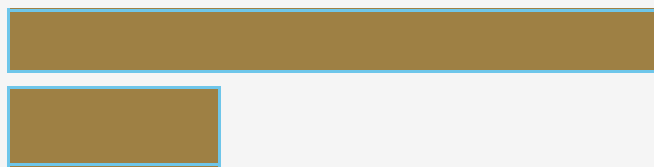
# Beyond Meds

Alternatives to Psychiatry

interdisciplinary & integral holistic well-being



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### Beyond Medication: Mental Health, Holistic Healing & Nutrition

A 2-part ecourse exploring the latest, most up to date research & knowledge about food, natural healing and mental health.\*

## Living Proof

### Experiment

**A**  
GROUP

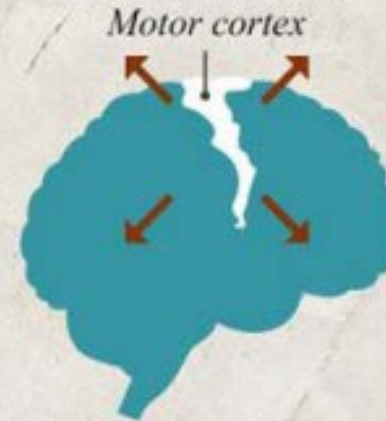
Practice piano exercise for **2 hours** each day for **1 week**



**B**  
GROUP

Imagined practicing the piano exercise, **holding hands still**

The region of motor cortex devoted to these finger movements had **expanded**



The region of motor cortex devoted to these finger movements had **also expanded**



#### Hypothesis

"Mental training has the power to **change the physical structure** of the brain."

Alvaro Pascual-Leone, M.D. PhD. Professor of Neurology, Harvard Medical School

#### Compared with the average brain:



A London Cab Driver typically has a **larger hippocampus** & stores a detailed mental map of the city



Musicians typically have **130% more grey matter** in the auditory cortex

## Living Proof

The brain is a **muscle that grows with exercise**. One day, we could create **educational systems** that are perfectly suited to the adaptability of the brain.



Faster processing



Improved memory



Language skills



Creativity



Problem solving

## MINDFULNESS

**Mindfulness** – becoming consciously aware of our thoughts and decisions, observing our inner experiences **as if they were happening to someone else**.



"Mindfulness and meditation are essential for helping

Tweets

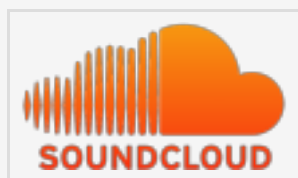
Follow

Monica Cassani @BeyondMeds 2h
It involves the body and the mind and the spirit. It is a profoundly holistic journey in which everything we do matters.
Expand

Monica Cassani @BeyondMeds 2h
It's a rather astonishing and all too often not discovered process. It is something virtually never discussed in mainstream psychology.
Expand

Monica Cassani @BeyondMeds 2h
We can individuate like what Jung

Tweet to @BeyondMeds



...Mindfulness and meditation are essential for helping the brain to create new pathways."

David Smith, M.D. co-author of Unchain Your Brain

Study:

"My brain is generating another obsessive thought. Don't I know it is just some garbage thrown up by a faulty circuit?"
After 10 weeks of mindfulness-based therapy 12 /18 OCD patients improved significantly

Dr. Jeffrey Schwartz, M.D. UCLA



Mindfulness-Based Relapse Prevention (MBRP)

Mindfulness here is intended to increase discriminative awareness, with a specific focus on acceptance of uncomfortable states or challenging situations without reacting automatically.

Trial:

MBRP group demonstrated significantly lower rates of substance use and greater decreases in craving following treatment compared to control group.

Hypothesis:

"MBRP may affect numerous brain systems and may reverse, repair, or compensate for the neuroadaptive changes associated with addiction and addictive-behavior relapse."

K Witkiewitz Ph.D, S Bowen Ph.D, MK Lustyk Ph.D

Try it out

Count to Ten

It may sound simple, but this exercise can be very powerful and you can do it anytime, anywhere and it helps restore your mind to clarity and peace in the present moment.



Focus all your attention on your breathing and count to ten

Don't let your mind wander, if it does - start again!

1 2 3... I need to check my emails

1 2 3 4 5 6... where did I put my keys?

1 2 3 4 5 6 7 8 9 10

The Pursuit of Happiness

Experiment: Buddhist Monks vs. Students

Monks can spend more than 10,000 hours of their lives in meditation.

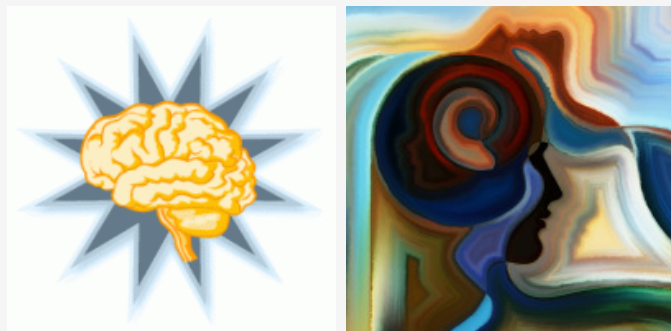
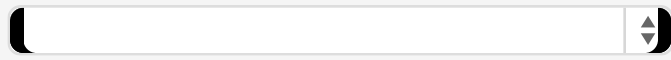
Task

Generate feelings of compassion through meditation

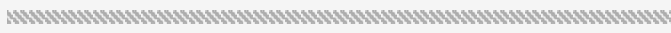


Left prefrontal cortex Associated with

Right prefrontal cortex Associated with



**BEYOND  
MEDS**



Monks

Associated with  
happiness

Associated with  
negative moods

Students

Activity in left prefrontal cortex was able to **swamp activity in right prefrontal cortex.**



**No difference** between left and right prefrontal cortex.

**Hypothesis:**

*"Emotions, moods and states are trainable mental skills"*

Dr Richard J. Davidson, University of Wisconsin-Madison

## CONCLUSIONS

The power of brain training means that the brain can not only learn new tricks, it can actually **restructure itself, even in old age.**

Neuroplasticity promises **remarkable new therapies** for mental illness and addiction.

From Buddhist monks to London taxi drivers, whether trying to overcome addiction or learn a new language, **we can all harness the power of neuroplasticity and rewire our brains.**

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Sausalito, California

# REWIRING THE BRAIN



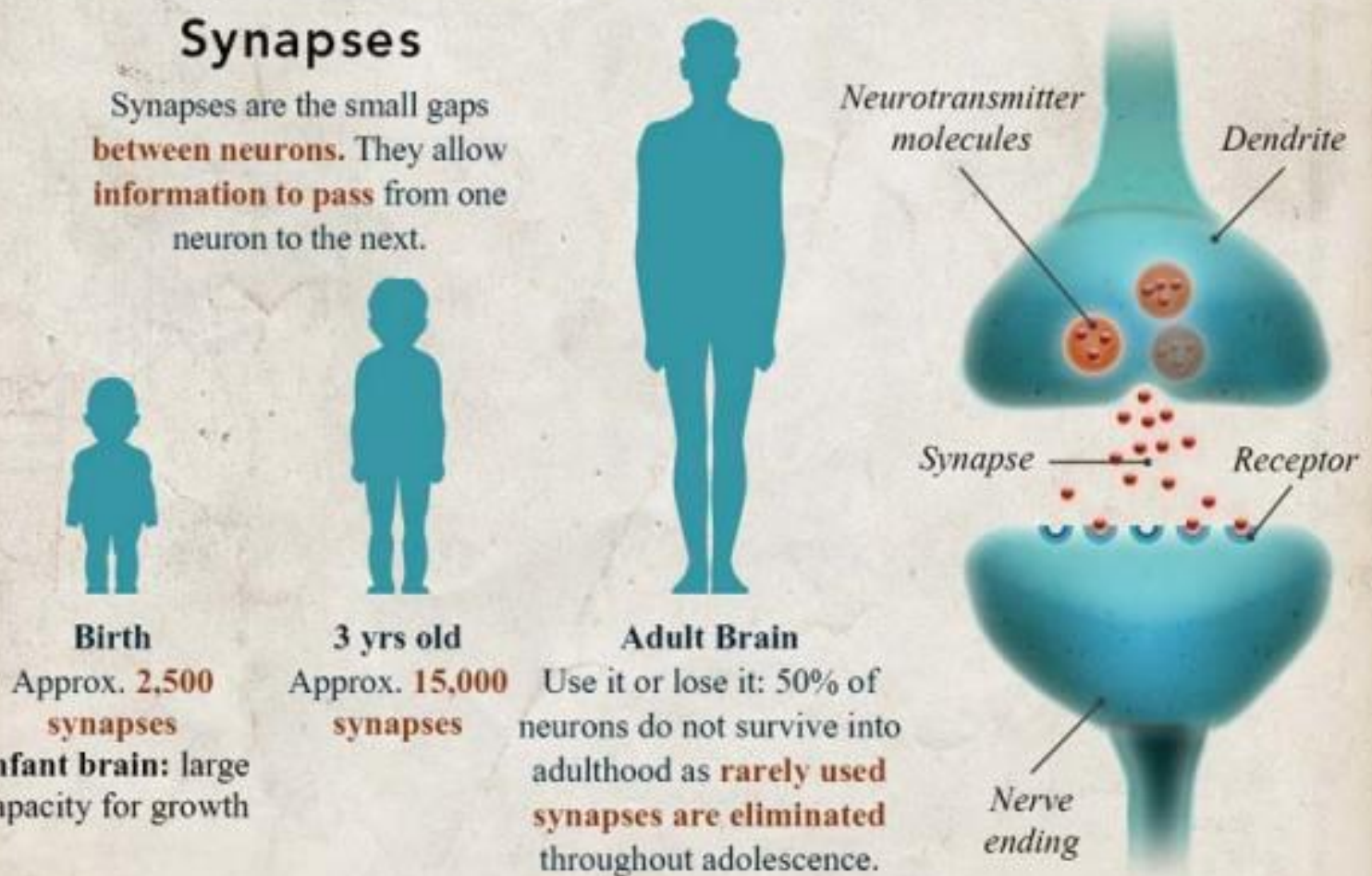
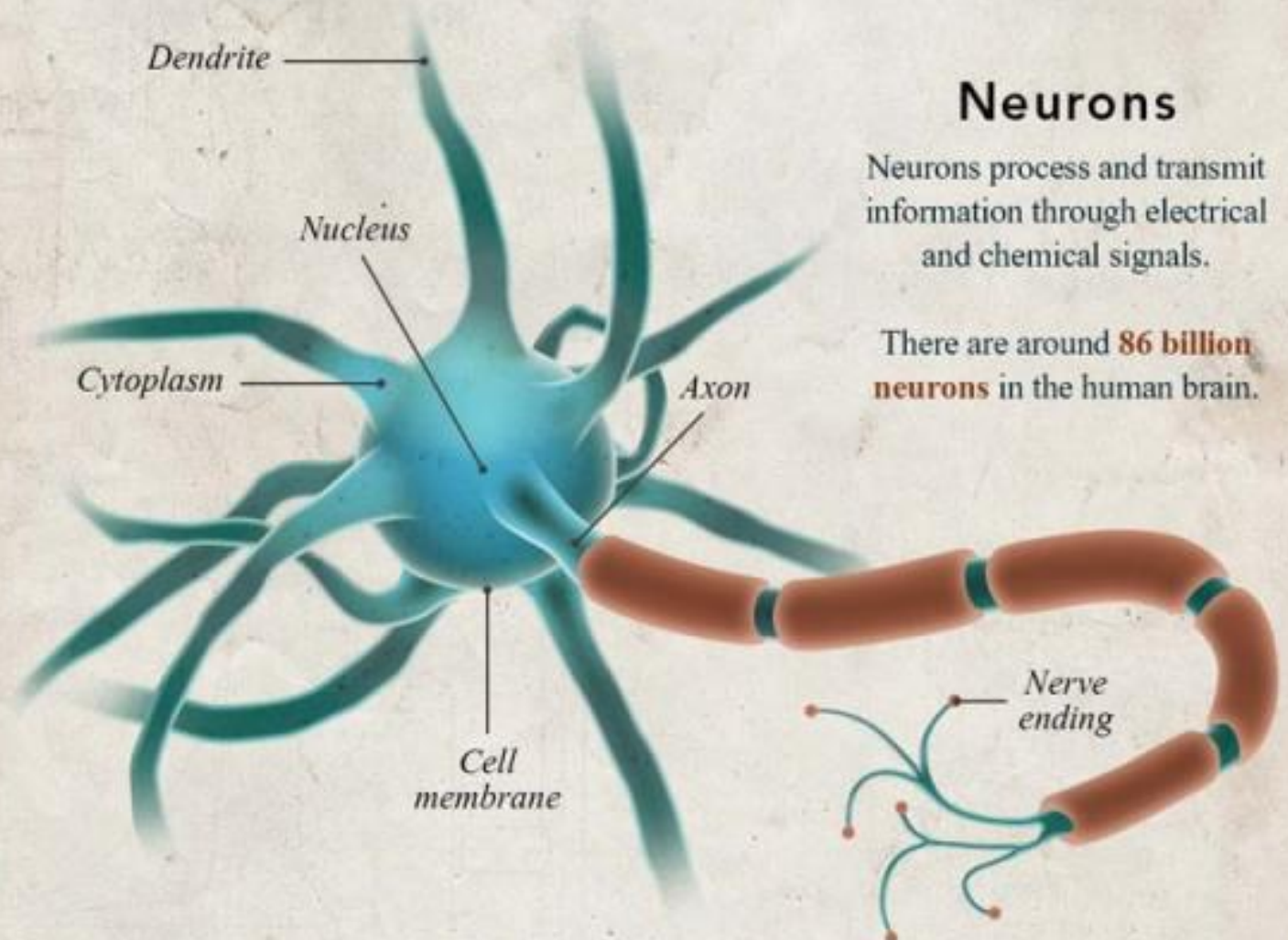


# Teaching an Old Dog New Tricks



Previously, scientists thought that the brain's structure was hard-wired and immutable. Brain-damaged patients rarely made full recoveries and the living brain's microscopic activities were unobservable. The widely held belief was that the brain was a machine: machines are capable of many things, but they do not change and grow.

New research has taught us that **the brain is actually plastic, it is able to change based on experiences.** Even in old age, the adult brain retains neuroplasticity and is able to change its structure and function. It turns out you can teach an old dog new tricks!

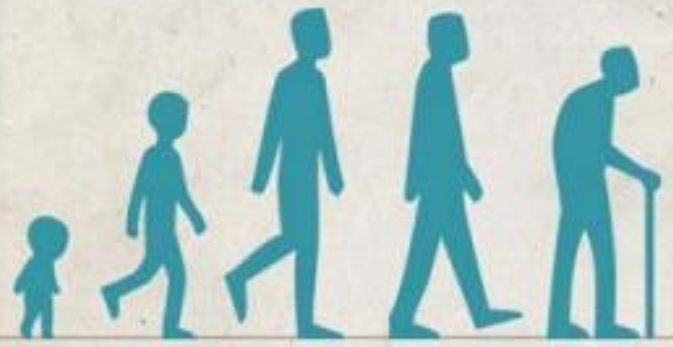




# Neurogenesis

The production of neurons, beginning week 3 of human development at a rate of **250,000/minute** until birth.

**Previous thought...**  
Neurons cannot reproduce after the first few years of life

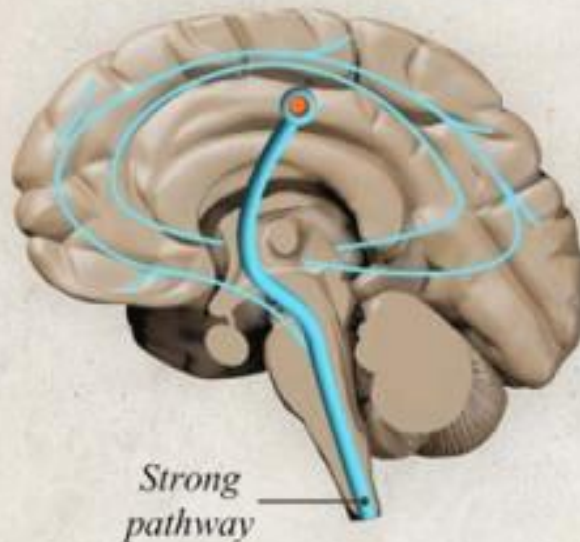


**New research:** neurogenesis may continue to occur **throughout human life span**. In 1999, researchers at the Salk Institute, San Diego discovered neurogenesis occurring in the brain of a **72-year-old adult!**

**The Future:** there is growing hope that science will discover an effective way to guide the process of neuronal growth to **repair areas of the brain** that are damaged by injury or disease.

## Pathways

Neural pathways **connect relatively distant areas of the brain or nervous system**, each pathway is associated with a particular action or behavior.



Every time we think, feel or do something, **we strengthen this pathway**. Habits are **well travelled pathways** – our brain finds these things easy to do.

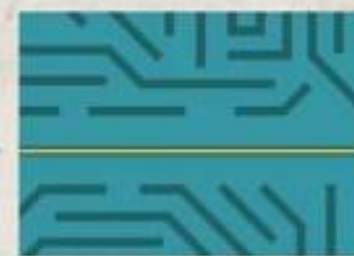
## Neuroplasticity



New thoughts and skills **carve out new pathways**.



Repetition and practice **strengthen these pathways**, forming new habits.



Old pathways **get used less and weaken**.

With **repeated and direct attention** towards a desired change, we all have the ability to **rewire our brains**.

## Pleasure & Reward

The Mesolimbic Dopamine System

The brain's reward pathway encourages us to seek out activities essential to **species survival**.



Food & Drink



Shelter



Sex

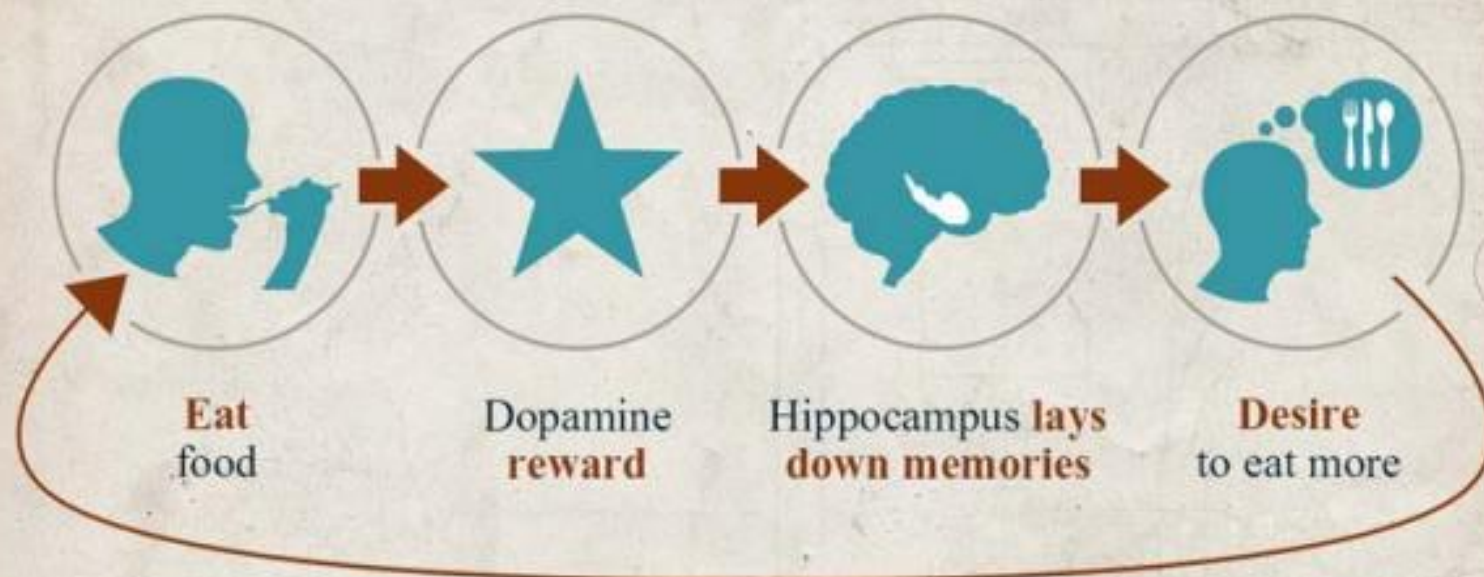


Nurturing

The reward pathway is activated, **the brain floods with dopamine**. We feel good, we seek to repeat the activity.



“Hey, this cake is really good.  
I’m going to **remember** that for the future.”

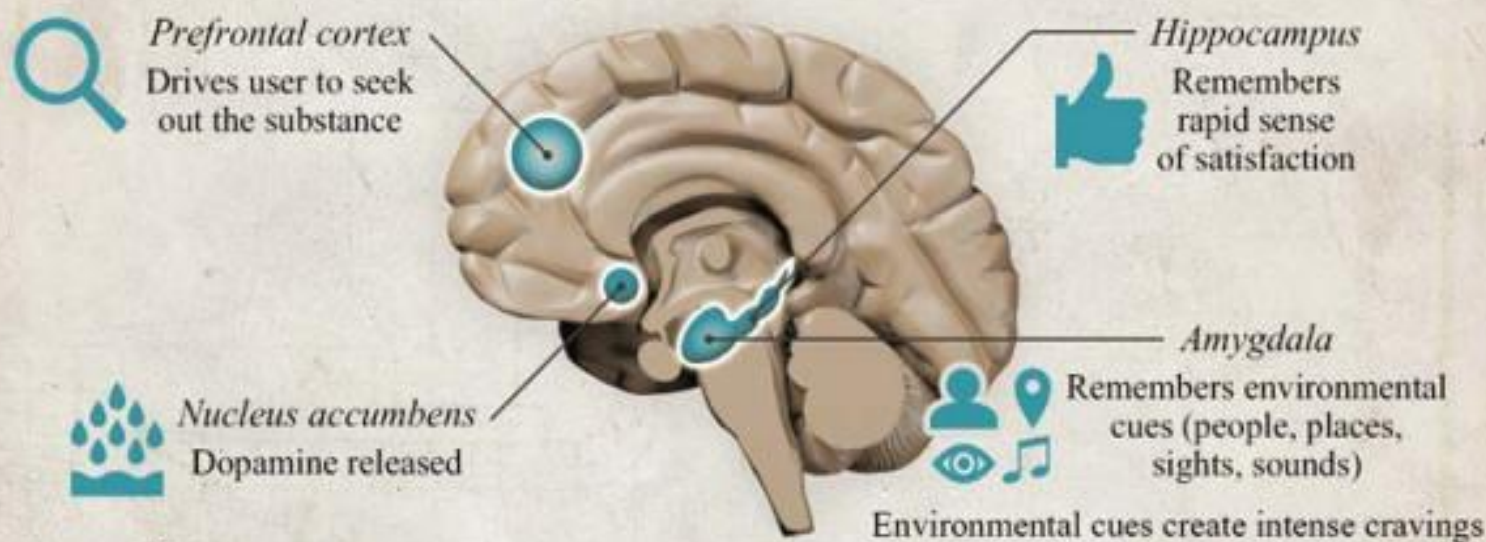
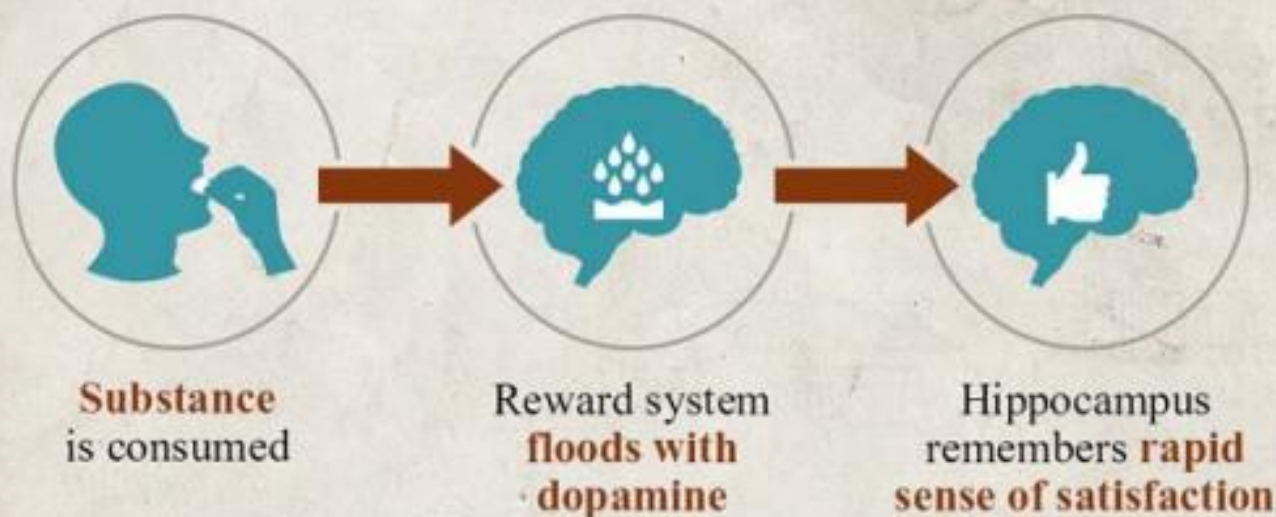


## THE ADDICT'S BRAIN

### Hijacking the brain

**Dopamine release** and behaviors essential to survival take place in the midbrain, which **always trumps the cerebral cortex**.

The cerebral cortex plays a key role in memory, attention, thought and consciousness.



“The reward pathway is intimately connected to our judgment and emotional areas. Judgment becomes distorted and the brain begins to treat the substance as necessary for survival.”

**David Smith, M.D.** co-author of *Unchain Your Brain*

### The Addict's Brain

What makes a substance / behavior addictive?



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WITH  
**INTEGRITY**

blogwithintegrity.com



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**GREENMEDINFO.COM**  
WHERE THE EVIDENCE IS SPROUTING UP!



**Speed of dopamine release**



**Intensity of dopamine release**



**Reliability of dopamine release**

Addictive drugs can release **2 to 10 times** the amount of dopamine that natural rewards do and they do it more quickly and more reliably.

### Developing Tolerance



## HABITS & TRIGGERS



*"Habits play an important role in our health. Understanding the biology of how we develop routines that may be harmful to us, and how to break those routines and embrace new ones, could help us change our lifestyles and adopt healthier behaviors."*

**Dr. Nora Volkow - National Institute of Health**

### Recognize and avoid triggers:



**Environmental triggers**

*Places, locations, smells, sounds*



**Social triggers**

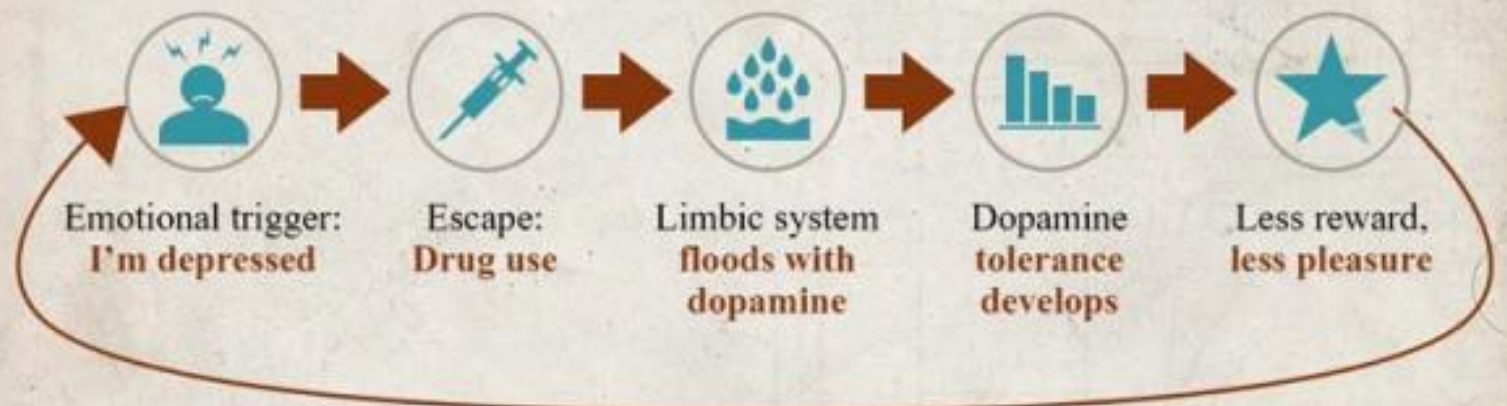
*Family, friends, other users*



**Emotional triggers**

*Depression, stress, exhaustion, frustration, anger, anxiety, loneliness*

### Triggers cause a downward spiral



### Recognizing triggers

*"For relapse prevention, it is crucial to understand the environmental cues that trigger cravings. Recovery is*





environmental cues that trigger cravings. Recovery is rechanneling the brain so that when those cues come, your brain is channeled to brain-healthy activities. Eventually, when the craving occurs, the brain returns to homeostasis much more readily. Recovery becomes more natural, and you get the healthy reward."

David Smith, M.D. co-author of *Unchain Your Brain*

## REWIRING THE BRAIN

### Neuroplasticity

'Neuro' = **brains**    'Plastic' = **changeable**

Neuroplasticity promises a new understanding of what it means to be human: we can **rewire our brains just by thinking!**

### Practice, Practice, Practice!



"Rewiring requires setting new goals and **practicing the healthy pursuit of reward** while the brain is creating new pathways."

David Smith, M.D. co-author of *Unchain Your Brain*

### Neuroplasticity



### Preparation



**Avoid substances** that provide unhealthy rewards



Learn to live a **comfortable and responsible life** in which your brain is rewarded by healthy pursuits



Exercise, try **yoga and meditation**



Seek support from peers and take care of yourself: **don't get too tired, too hungry, too lonely, too angry**

### Brain Training

If we don't learn new skills, we don't engage our brain's plasticity.

Highly focused activities help keep the brain in good shape, why not try:



**Learning a new language**



**Career change**



**Logistical puzzles**




**New environments**



*“When everything else is controlled for, bilinguals who come down with Alzheimer’s do so about **4.5 years later** than monolinguals.”*

**Dr. Thomas Bak University of Edinburgh**

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### Beyond Medication: Mental Health, Holistic Healing & Nutrition

A 2-part ecourse exploring the latest, most up to date research & knowledge about food, natural healing and mental health.\*



### Releasing PTSD

Watch a full A-Z treatment from Steve Andreas and see what's possible.

ReleasingPTSD.com

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