

The Pursuit of: "The Ultimate Neurotransmitter Fix"

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For most of us, Jefferson's "Pursuit of Happiness" translates to a Quest for a specific state—of peace, belonging, meaningfulness, clarity, joy. We all have experienced this state—time fades away, senses are full, there is no room for worry. It can be triggered by a beautiful sunset, an accomplishment, family events, sex, yoga, meditation, service, or other conditions. Olympic athletes call this state Flow. It is also called "The Zone", "Mojo" and "eating chocolate" (:/). Unfortunately, for most of us, this state is rare, elusive, short-lasting and can be expensive.

Achieving this state is good in that once experienced, we KNOW that it exists; bad in that once experienced, we want MORE. It is traditionally called Nirvana or Samadhi, and is a goal of some spiritual traditions. There are also undesirable states, such as stress, panic and depression.

A "State" is a mode of being, like a "state of siege" or a channel on a TV. With human consciousness a state is characterized by a specific emotional set, perceptual awareness or thinking process. Examples are awake, deep sleep, REM sleep, awake after coffee, hypnosis, etc. To date, science has not been able to define or measure these states as they are features of "mind", which is also unmeasurable. The problem is in part due to the artificial distinction between mind and brain. However, if "mind" is defined as the function of the brain and nervous system, a state of mind ultimately has to translate to a specific balance of neurotransmitters.

A Fix is a repair, like fixing a broken vase, usually leaving a small scar as evidence of prior injury. A "fix" for heroin addicts is an act that gives temporary relief. In general, a fix can be short- or long-term; but implies damage not fully restored.

Neurotransmitters are molecules that convey information to and from neurons, or nerve cells. Thirty years ago, we only knew of two neurotransmitters; today the growing list tops 100, and are produced both in and outside of the brain. For example, the gut is the largest producer of serotonin, an important neurotransmitter for mood and gut function. While neurotransmitters and certain medications are associated with specific emotions or states, this is oversimplified and not scientifically accurate.

Stuck in a Rut

Addictions are compulsive behaviors that we repeat uncontrollably, essentially to reach a desired state or get to it. Shopping, gambling, internet surfing, talking, worrying, ruminating, smoking, drinking, sex and eating are activities that for some are an attempt to get us out of one state and into another. They do work, but usually require valuable resource—time, energy (even if only mental) and money. And brain science tells us that when we repeat a behavior, thought or feeling repeatedly, they become entrenched and difficult to change (= "bad habit"). In an attempt to break these patterns, we latch onto the latest philosophy, pill, subscription or other fad, which takes additional resource and creates new dependencies.

Treatment Successes and Failures

Many programs have developed to deal with human nature, including Religion, Alcoholics Anonymous (and its spinoffs), Weight Watchers, etc. While successes do occur, after 5 years only 5-10% sustain their achievement. In other realms—a house repair or education, a 90% failure rate would place the provider, not the recipient in question. When people fail, they are blamed for "not staying with the program". Doctors call this "non-compliance". We are our own worst critics, blaming our transgressions on "not enough willpower". However, each failure is scientific evidence that some other factor needs to be found. We do not choose to hurt ourselves and suffer; our mental states and addictions provide important clues for healing.

Yoga and Brain Science to the Rescue

The Pursuit should not be for a Result, but for a Model and Process. Science is about understanding and prediction. Columbus, Galileo, Semmelweis², Einstein and recently Marshall and Warren³ are examples of "heretics" who discovered information that changed the world. Brain science continues to identify neurotransmitters and modulators that affect hunger, emotion and motivation⁴. Yoga is a 5000 year old scientific method that reveals deep and subtle truths about our nervous system, its states, and its cycles. By bringing Brain Science together with Yoga, we have the best chance of breaking out of wasteful ruts, individually and globally.

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Neurotransmitters affected by toxicity, deficiency, stress, lifestyle and yoga

Acetylcholine
Epinephrine
Norepinephrine
Dopamine
Serotonin
GABA
Nitrous Oxide
Neuropeptide Y

Footnotes and Reading Materials (Books with ISBN)

1. See prior Yoga Livings and Dr. Cheikin's website, cheikin.com, for related articles and expanded bibliographies.
2. Semmelweis discovered unseen bacteria as a cause of mothers' death after delivery (child bed fever) before Pasteur and Lister, but was ridiculed and ultimately died in a mad house.
3. Marshall and Warren discovered H Pylori as a bacterial cause of stomach ulcers in the 1980's, rejected by the medical establishment but ultimately vindicated with the Nobel Prize in Medicine in 2005.
4. Richards: *Mastering Leptin...* (3rd Edition). 2009. 978-193-392-7251.
5. Joy, W. Brugh: *Joy's Way*. 1979. 0874-770-858.
6. Sivananda Center: *The Sivananda Companion to Yoga*. New York: Simon & Schuster, 1983. 0684-87000-2.

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