

## **Brain Rules:<sup>1</sup>**

- #1 The brain and its neurochemical systems function in a very predictable manner.
- #2 Significant drug use alters the brain's neurochemical balance.
- #3 No matter what illicit or prescription drugs are taken or discontinued, the brain's neurochemical systems will always attempt to return to their genetically-set levels.
- #4 Treating underlying genetic neurotransmitter deficiencies and imbalances, as well as addressing psychiatric conditions, is paramount in treating drug dependency and alcoholism.
- #5 Cravings are caused by an imbalance in one or more neurotransmitter systems.
- #6 The brain has eight important genetically hardwired basic neurotransmitter systems that medical professionals should become familiar with: serotonin, dopamine, GABA, glutamate, opiate, noradrenaline, endocannabinoid, and acetylcholine.
- #7 These neurotransmitters systems are interconnected; if one system becomes altered, the others are affected as well. Some systems' relationships are stronger than others.
- #8 A paradoxical effect occurs after too many benzodiazepines have been prescribed to a patient, actually inciting agitation, because tolerance has been built up at the GABA1 site and there is no longer enough GABA stimulation to counteract the patient's glutamate.
- #9 The genetics we receive from our parents contain the instructions to how our brain and the neurotransmitter systems are formed. It is that function that plays a huge role in determining our quality of life and susceptibility to alcoholism and drug abuse.
- #10 Each person is born with genetically determined levels of neurotransmitters. Some of us inherit an imbalance of these neurotransmitters or their receptors.
- #11 Psychiatric disease combined with illicit drugs abuse create a complex neurochemical derangement.

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<sup>1</sup> Brain In Balance, by Dr. Fred Von Stieff

- #12 Underlying chemical imbalances are what lead to cravings for alcohol and drugs. If you treat the imbalance, you treat the cravings, and if you treat the cravings, you treat the addiction.
- #13 When conducting an initial evaluation of a chemically dependent patient; it is beneficial to first inquire about the patient's family history of alcoholism, drug abuse, and psychiatric disorders. Doing this provides deeper insight into what neurochemical imbalance(s) could possibly be behind their addiction.
- #14 Detoxification from drugs or alcohol is pretty much the process of the neurotransmitter imbalances up-regulating, returning to their genetically endowed levels.
- #15 The severity of a detoxification is dependent upon how many receptors are left to be activated and on the degree of the neurotransmitter imbalance, not on the quantity of drug last consumed.
- #16 You are not detoxifying the amount of narcotic, benzodiazepine, alcohol, or any other drug – illicit or prescribed; you are detoxifying the changes or damage done to the affected receptor sites in the brain.
- #17 How an individual's brain processes and interprets information is also subject to the influence of various factors such as hormones, environment, drugs, alcohol, and prescription medications.
- #18 Neurotransmitters influence our outlook on life; by utilizing this power and prescribing medications that improve patients' outlook, we can help them to maintain sobriety by eliminating their cravings.
- #19 By adjusting a patient's balance of neurotransmitters, we are essentially changing the way the patient's brain processes everything. When done properly, this can alleviate things like depression, compulsiveness, neuroticism, and cravings.
- #20 When the brain has a genetic abnormality or neurotransmitter imbalance, that problem will always be there, leading to certain cravings, habits, or abnormal ways of neurological processing, unless continually corrected with the proper neurochemical-adjusting medications.
- #21 It is vital to ascertain the source of patients' neurochemical imbalance. Establishing whether it started off as an inherited imbalance or if it is strictly self-induced with alcohol or drug abuse, will determine the kind of treatment each patient needs – whether it will be short-term, or life-long.

- #22 If the initial source of the neurochemical imbalance is genetic, it will be necessary for the patient to take anti-craving or psychiatric medication for the rest of his or her life to prevent relapse.
- #23 Alcohol is the ultimate stimulant for the brain. It raises serotonin, GABA, endocannabinoid, glutamate, and at high dose, increases the release of opiates and dopamine, adding up to a total of six neurotransmitters.
- #24 Combining the effects of alcohol and nicotine results in the strong stimulation and elevation of *all* of the eight basic neurotransmitter systems.
- #25 The key objective of modern alcohol treatment is to achieve a state of “no cravings” through the use of medications and treatment, thereby avoiding the pitfalls of relapse.
- #26 The mid forebrain bundle, our brain’s CPU, processes the environment around us, placing the images and data in the temporal lobe in the form of memories. It both creates and retrieves memories. The pleasure pathway regulates the mid forebrain bundle. Drugs and alcohol alter the neurotransmitter levels, especially those heavily concentrated in the above-mentioned locations, thereby altering individuals’ perception and memories.
- #27 Blackouts that result from heavy alcohol or opiate use impair the brain’s ability to imprint accurate memories, leading to inaccurate intuitive feelings and skewed or all-together lost data.
- #28 An educated approach must be taken towards leveraging a person into sobriety. Love and understanding are the best negotiation tools a family can use to counter the addict’s tendency toward denial, avoidance and isolation.
- #29 The opiate system is the most dominant out of all the neurotransmitter systems, acting as the central axis of the other seven systems.
- #30 Ninety percent of patients taking narcotics for pain management experience less or the same amount of pain once their detoxification is complete, with the elimination of opiate addiction’s side effect.
- #31 Cross addiction between alcohol and opiates is common because both opiates and alcohol affect the same set of neurotransmitters in a similar fashion.
- #32 Many people who abuse opiates are self-medicating their bipolar disorder, leading to other problems like addiction. Undiagnosed bipolar patients with their symptoms hidden by opiates, have their mood disorder become apparent once detoxification occurs.

- #33 Continued opiate use causes modification of the opiate receptor sites that will last a lifetime.
- #33 When treating patients with pain control issues, the key goal is to let their opiate system up-regulate and get their beta-endorphins working again. This goal can be attained through use of the back door method, where all opiates and benzodiazepines are discontinued, and other GABA drugs are used to stimulate the opiate system, bringing it to its proper balance.
- #34 The best long-term treatment for chemical dependency lies in prescribing the proper medication to address underlying neurochemical deficiencies and prevent cravings.

