

Neurotransmitters, Addiction, and Self-Medicating

How do you win the war when you don't know who the enemy is? What's the war? It's the physiological and emotional reactions to the neurotransmitter imbalances within your physiology, which expresses as an addiction and/or abuse of drugs and alcohol.

Who's the enemy? The specific neurotransmitter levels involved in the creation of less than optimal levels. Problem: Abuse and addictions are not being addressed at the biomarker level. Solution: Read below for an explanation of the objective, quantifiable pinpointing of biomarkers involved in addictions and abuse.

Recent advances in science have led us to a greater understanding of the neurobiological basis for drug and alcohol abuse and addictions. Brain chemicals, referred to as neurotransmitters, play a key role in the development and expression of addictions, be it alcohol, drugs, sex, gambling, food, etc. Neurotransmitters are chemical messengers that are involved in both physical as well as emotional processes. Each neurotransmitter has a clinical correlation, which in turn, sends a message for our bodies to act out both physically as well as emotionally.

We have two types of neurotransmitters -- they are excitatory and inhibitory. Excitatory get us revved up and allow our body respond to danger. The purpose of inhibitory neurotransmitters is to make us feel calm and relaxed. Our bodies always aim to be in homeostasis or balance. When we have an addiction, we have a dysregulation of neurotransmitter(s). Rarely is it just one chemical. When functioning properly, neurotransmitters act as a Checks and Balances System. Many people who self-medicate with alcohol or drugs do so without even knowing that they are trying to optimize their brain chemicals. Today, we have the ability to objectively measure these neurotransmitters with lab work. This is where I come in.

This specialty is what I have been doing in my practice of over fourteen of my thirty-three years as a doctor. I actually order lab work, which gives me objective, quantifiable biomarkers. With that information, I can then look at the normal functioning of biochemical pathways, and I see what we need to add or subtract to get the balanced result (optimization) we are pursuing in each particular neurotransmitter.

Let's explore a few of the neurotransmitters, starting with serotonin. I start with serotonin because if you have heard of any neurotransmitter, it's probably this one. Why? Because we are bombarded with antidepressants or SSRI drugs on TV and radio commercials, print ads, and the like. Actually, we write 254 million prescriptions yearly on this type of drug.

Well, here is where I say we have faulty logic. First off, we are being prescribed these drugs based on vocabulary words for our diagnosis, rather than objective lab data. What if my vocabulary is different than yours? What would you be diagnosed as? Second problem is that if we were getting better, I'd agree and be all in with these prescriptions. The truth is, we are not getting better. Decades ago, the National Institutes of Health predicted that by 2020, the second leading cause of medical disability would be depression. 2020 has come and gone, and because nothing was done differently, they were right. Clearly these prescriptions are not achieving their intended results.

Serotonin is a key neurotransmitter that is involved in sleep, appetite, and aggression. Serotonin imbalances are commonly seen in patients with mood disorders, depression, and anxiety. So, wouldn't self-medication make sense if you don't understand how these brain chemicals truly work? Have a few drinks to help us sleep, make us less aggravated with life, or just take the edge off? Sure.

Let's take a look at dopamine which is responsible for feelings of pleasure and satisfaction, memory, and motor control. Pleasure and satisfaction is known as the Brain Reward System. Memory issues are common in people with both too little as well as too much dopamine. Caffeine and other stimulants used for, say, ADD and ADHD often improve focus by increasing dopamine release however, over time, it can deplete the body of dopamine. Low levels of dopamine are associated with depression, loss of motor control, cravings, compulsions, loss of satisfaction, and addictive behaviors including drug and alcohol use, smoking cigarettes, gambling, and overeating.

Next, let's look at GABA. Gamma-aminobutyric acid, or GABA, is a neurotransmitter that sends chemical messages through the brain and the nervous system and is involved in regulating communication between brain cells. GABA plays an important role in behavior, cognition, and the body's response to stress.

Stress? Would, then, elevated GABA levels make you try to self-medicate to reduce the stress response that's creating your anxiety? I'd say, yes. It's because research suggests that GABA helps to control fear and anxiety when neurons become over-excited. We do it not even knowing the science behind it. Lower-than-normal levels of GABA in the brain have been linked to schizophrenia, depression, anxiety, and sleep disorders.

Prescription medications called benzodiazepines bind to the same receptors as GABA. They mimic GABA's natural calming effects. Valium and Ativan are among the most widely prescribed benzodiazepines for insomnia and anxiety disorders. They slow down the body's Central Nervous System and cause sleepiness. Benzodiazepines should be used only as prescribed. Taking too much can lead to shallow breathing, clammy skin, dilated pupils, weak pulse, coma, and death.

The Benzo Crisis is next in line after the Opioid Crisis due to the high numbers prescribed today. Medications used to treat insomnia, including Ambien and Lunesta, work by improving the ability of GABA to bind to GABA receptors in the brain.

Just discussing these three neurotransmitters alone sets the stage for understanding how we just might begin to get involved in abusive/addictive behaviors. The underlying issues of less than optimal neurotransmitter levels will never be addressed by self-medicating, and will only get worse with time as the body tries to compensate for the depletion of vitamins, minerals, enzymes and co-factors involved in the abuse process. It may also make you aware that unless these areas are addressed and optimized, then we are struggling in an uphill battle for sobriety.

Testing neurotransmitters provides an objective, quantifiable look at biomarkers, allowing for a defined and targeted treatment with improved clinical outcome. There is a logical course of action. If this makes sense to you, send an email to staff@neurotransmitterresetprogram.com or book an appointment online at www.neurotransmitterresetprogram.com and we can explore your roadmap to sobriety and better health.