

Is that the reason I have a substance abuse problem?



*Treatment options and tips on how
to become drug and alcohol free*

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Is that the reason I have a substance abuse problem?

When most people think of addiction they think of physical addiction, but for our purposes I want to broaden that definition a bit. Addiction is any behavior or action that is all compulsive and aimed towards making feelings less painful or stopping the realization of a feeling all together. It eventually has self-destructive ramifications, but people continue to use despite these consequences. So, addiction is much more than just the physical abuse of a substance. It is more than being addicted to chemicals; it can also be an activity that has self-destructive consequences over time.

We are going to be talking about physical addiction, emotional addiction, and compulsions in general. In some ways these are distinctly different things and in others they are very much the same. The main thing I want you to look at is balance.

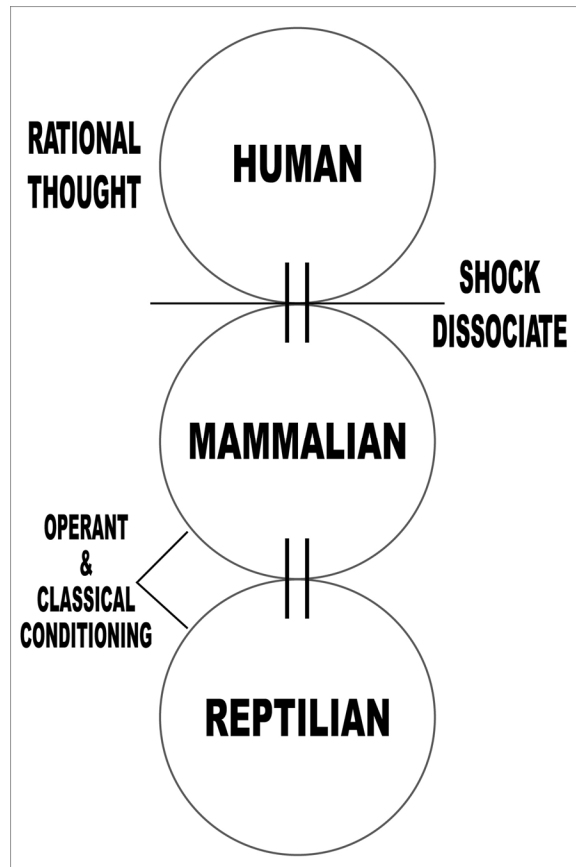
To be able to really talk about chemical dependence it is essential to know how the brain and body work so I am going to do a bit of a thumbnail sketch for that. When there is a threat to the organism, what occurs in the back part of our brain, the reptilian brain, is that the body goes into flight, fight or freeze. That is a tremendously complex set of processes that happens instantaneously. The heartbeat increases, the pupils dilate so that you can see any kind of threat on the outside in the periphery, the hands tend to sweat, and the muscles become taught and ready for action. Insulin and adrenalin pump into the system and all non essential functioning is put on the back burner. If a person needs to eat the body won't notice the hunger if someone is pointing a gun at them. The body goes into fight or flight immediately. Either a person is going to run or try to take the gun away or they are going to freeze at that moment. The body essentially goes into a hyper alert mode. This is a rather primitive process that happens in the back of the brain and had tremendous beneficial results for primitive man.

A person can not possibly be in this state for any period of time and remain healthy. Once they get into that position they are ready for action but the body is out of balance. Eventually it has to come down to homeostasis or balance again. It is what the human organism wants to do or what nature wants to do. Everything that is healthy has a sense of balance even if that balance is dynamic like breathing. Breathing in and breathing out. One goes out of balance and back into balance. This is the essence of Newton's Law. "What goes up must come down in an equal and opposite reaction."

Often what occurs in today's environment is people go into fight or flight but their tension doesn't come all the way down. The body almost comes down to a balanced position. That leaves the body in a generalized anxiety

pattern as if it is expecting the next stress to come. We have already talked about the body wanting homeostasis and wanting to be in balance and there is a really quick way for people to get back into balance. If a person just took a drink of alcohol, they could relieve the anxiety and return to balance. Or at least feel as if they had regained balance. The difficulty or part of the difficulty is that the modern world is so stressful that it leaves people geared and ready to use chemicals more often. Stress has become a chronic condition.

Think of driving to California from Arizona. It is a life or death situation all the way there, but people don't consciously realize it. However, the muscles in the shoulder and neck are stressed and when they finally arrive in California several hours later they realize how tense they feel. They are anxious and out of balance and want to return to homeostasis. That is only normal and natural.



Three Brains

The only way to understand alcohol and drug addiction or addiction in general is to understand physiology. We were just discussing the reptilian response, which is the flight, fight, or freeze response that comes from the back of the brain or the third brain that people have. Most people think we

only have one brain when actually there are three. It is a Reptilian Brain in the Medulla Oblongata, which is located at the base of the head in the back at the top of the neck. This type of brain is something we share with reptiles. It is instinctual. A person's heart is beating because of this particular brain. Consciously one can't tell that brain to slow down and get any appreciable result. The major dynamic of addiction comes from the reptilian part of the brain.

What we are used to is the human brain. The human brain thinks with rational thought. E.g., one plus one equals two. The amazing "just say no" policy on drugs was aimed at this part of the brain. This concept has not worked very well because the people that came up with the plan did not know a whole lot about human beings. They looked completely from the human brain perspective with reality based thinking of "drugs are bad, don't do drugs" and if it all worked like that we would all be fine and the problem of drug addiction would no longer be an issue. It isn't fine, though, because there is a second brain at the very back of the head in the Limbic System which is the Mammalian Brain that we share with other mammals (see Three Brains chart). This brain deals mainly with emotions. Even though everything within your body is connected and every cell is connected, the locus of control for emotions is within the Mammalian Brain. There are three neurotransmitters that are generated in this part of the brain.

UNCONDITIONED STIMULUS	UNCONDITIONED RESPONSE
X FOOD	X SALIVATE
CONDITIONED STIMULUS	CONDITIONED RESPONSE
X BELL	X SALIVATE

Unconditioned and Conditioned Stimulus

These two brains, the mammalian and the reptilian, both operate under classical and operant conditioning which is entirely different than rational thought. Pavlov is the one who came up with the concept of conditioning. He was a Russian neurobiologist working with animals. He discovered that if you took an unconditioned stimulus such as food and presented it to a

starving dog you would get an unconditioned response, the dog would salivate. Pavlov found that if you paired a bell with the unconditioned stimulus, the food, before you gave it to the dog, the dog would again salivate and would eventually become as conditioned to the bell as they were to the sight of the food. If this is done over and over you would be able to use the bell without the food and still get the salivation response from the bell alone. This is considered a conditioned response.

This concept is critical to the concept of addiction. If we were to condition a human in the same way with the bell and food we could reason with and inform them that the reward of food was now going to stop. However, despite understanding that the reward would no longer be forthcoming the conditioning would remain. We ring the bell again and the salivating occurs despite the knowledge. The reason for this lack of learning is because the mammalian and reptilian brains often run 6 months to 5 years behind the human brain or any rational thought. Think of it this way. If a person was very fat as a kid and suddenly lost a tremendous amount of weight, they would know deep down that they are thin, but they would still feel uncomfortable with their weight and they would still feel fat.

Pavlov varied the reinforcement schedules, which would further impede learning new information. There is a human tendency that, what you first learn is remembered longer than recent information. People who use drugs feel good at first. They feel good because they increase the main three neurotransmitters or chemicals in the Mammalian Brain. They also decrease the activity in the Human or logical part of the brain, which lowers inhibitions and critical thought.

Two of these neurotransmitters are natural stimulants, Dopamine and Norepinephrine. The third is Serotonin, which is a basic pleasure neurotransmitter. Almost every street drug that people use and get a high from will take over one or more of these receptor sites or will increase the transmitters. The fact of the matter is that drugs feel good and anyone who says it isn't is lying. They even provide some benefit at first, but unfortunately they very quickly turn the other way so there is a detriment and a severe consequence to the very neurotransmitters that they once increased.

If the drugs take over the neurotransmitters site for too long there is a general tendency for the body to have economy of movement. Let me explain. If a person gets into a car accident and their leg is hanging by a thread, they will be taken to the hospital and will be given a shot of morphine. The Morphine will take over the receptor sites increasing the Endorphins and the Enkephalin System. Endorphins are the natural opiates in