



## This is Your Brain on Drugs – (*Fried Egg not Included*)

Addressing the topic of “Addiction and the Brain” can be likened to a group of people with varying degrees of knowledge and experience, looking through a telescope and trying explain the universe in great detail. Science has come a long way when it comes to understanding the human brain, but we are still only scratching the surface. Our amazing brain still holds out a lot of mysteries as to how exactly it all comes together to function as our source for thinking, feeling and behaving the way we do in our own special way. The exact answers as to why all of us think how we think, and feel how we feel and do what we do, cannot be simply explained alone in terms of just brain chemicals and nueroreceptors, at least not yet. Scientists are making amazing advancements like never before but there is still progress to be made especially when it comes to grasping the way addiction often has many similarities among people, however in many other ways it can often be a uniquely individualized experience from person to person.



To start a broad discussion on addiction and the brain, a good basic understanding is to recognize and acknowledge that addiction impairs one’s ability to effectively **reason**. What is exactly is **reason**?

***Reason: n. – 1: the power of comprehending, inferring, or thinking especially in orderly rational ways: intelligence 2 -proper exercise of the mind 3 - sanity (Merriam-Webster)***





**Discussion** – Review and discuss the following statements about addiction and *impaired reason*. Being as open, honest and reasonable as you can be, check off any that may have applied to you at some point:

- Getting in trouble with the law multiple times for substance use related offenses but insisting that it was all caused by just “bad luck” or “people out to get me” but nothing at all due to substance use.
  - Repeated problems and arguments with family or other relationships about using substances yet insisting it is all based on others treating you unfairly or that they are all just being “crazy”
  - Experimenting over and over with the idea that “I can control this” but repeatedly proving that experiment is a failure by eventually losing control
  - Trying to convince yourself that “I can stop any time I want to” however that time never seems to come or when it does come it never seems to last.
  - Repeatedly falling into the “if trap” by convincing yourself that things would change for the better only “if” this or that happened but the “if’s” are all really just excuses or ways to blame other people
  - Thinking that “this couldn’t happen to me because I’m too smart” when it comes to addiction, when in reality addiction can happen to anyone of any intelligence level.
  - Getting intoxicated to a level where you lose control of your power of reason and then do something you later regret, only to do it again another time in the future, perhaps even repeatedly
  - Convincing yourself that “I just use drugs to have a good time or to feel good and that’s it” however in reality the stress from the consequences increasingly competes with the fun or the good feelings
  - Telling yourself you are fine when deep down you know that your use is compromising you mentally when it comes to your focus, your moods, your motivation, or your ability to handle stress.
  - Thinking that “I only use because I want too” when evidence shows, it’s not just that you want to use, but it has progressed to where you need to use
- **What are some other examples of choices you may have made either directly or indirectly because of substance use that could be considered to be unreasonable or just plain bad decisions?**
- **Even if today, being honest, you still feel like you aren’t sure that you want to stop getting high, what other ways has substance use impacted you mentally? (Focus, mood, motivation, concentration, other?)**

***What if a family member of yours was here what would they say about you for these questions?***

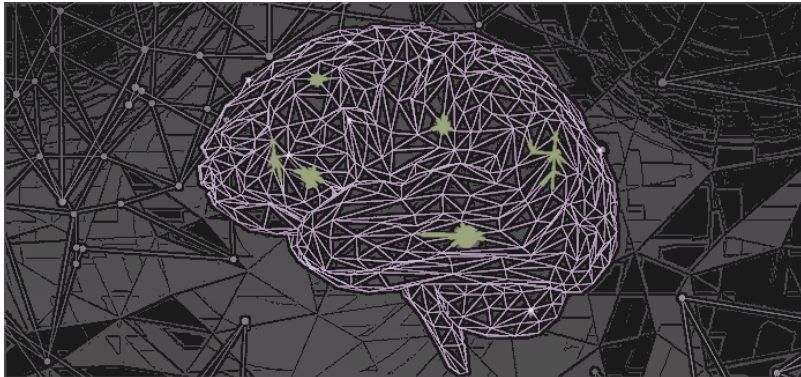


## Addiction and the Brain – Understanding the Basics

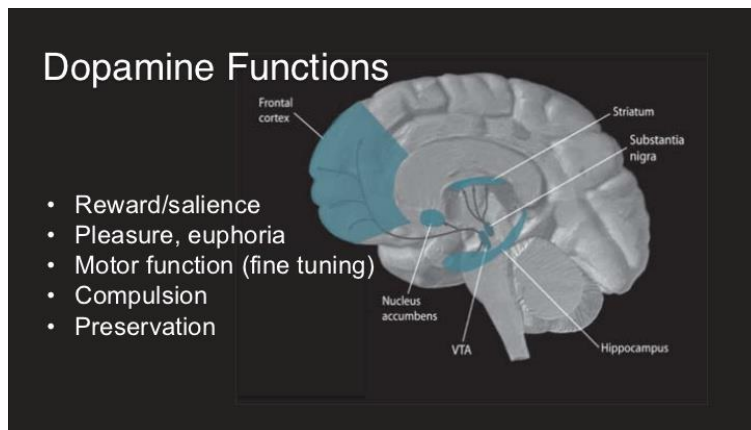
The following information was taken from National Institute of Drug Abuse (NIDA) website - <https://www.drugabuse.gov/publications/drugs-brains-behavior-science-addiction/drugs-brain>

### 1- How Drugs Affect the Brain:

- Drugs chemically affect the way neurons (nerve cells that make up the brain) normally send, receive and process information. Because of this, repeated drug use impacts the messages being transmitted through your mental “network”



- One side effect of this process is that drugs target the brain’s reward system (often fueled by the natural brain chemical: dopamine) thus making people feel pleasure, relaxation, euphoria or other “good” feelings; however, unfortunately that is not the only effect

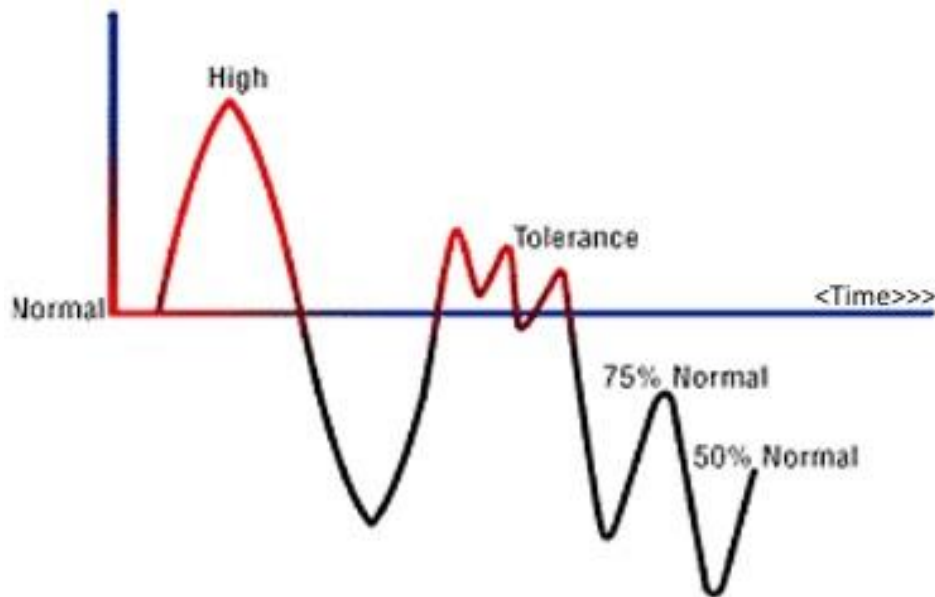


- Our brains are wired to make us want to repeat things that increase dopamine levels and thus feel good. For example, if we taste a good food like a cookie, dopamine is increased, and we naturally want another one. Drugs can have an exponentially stronger impact, thus overstimulating the production of dopamine to unnatural levels which can be problematic.





- Flooding the brain with dopamine often motivates an individual to use drugs again, often repeatedly. However, over time if you are using drugs to stimulate dopamine production your brain slows down its production of dopamine on its own. This results in a depletion of natural dopamine levels in the brain when the drug is not present. The result then is that a person goes from using drugs to feel better to needing larger amounts of drugs to get them same effect then (over time) to eventually needing drugs just to feel “normal”



## 2 - Why are Drugs So Hard to Quit?

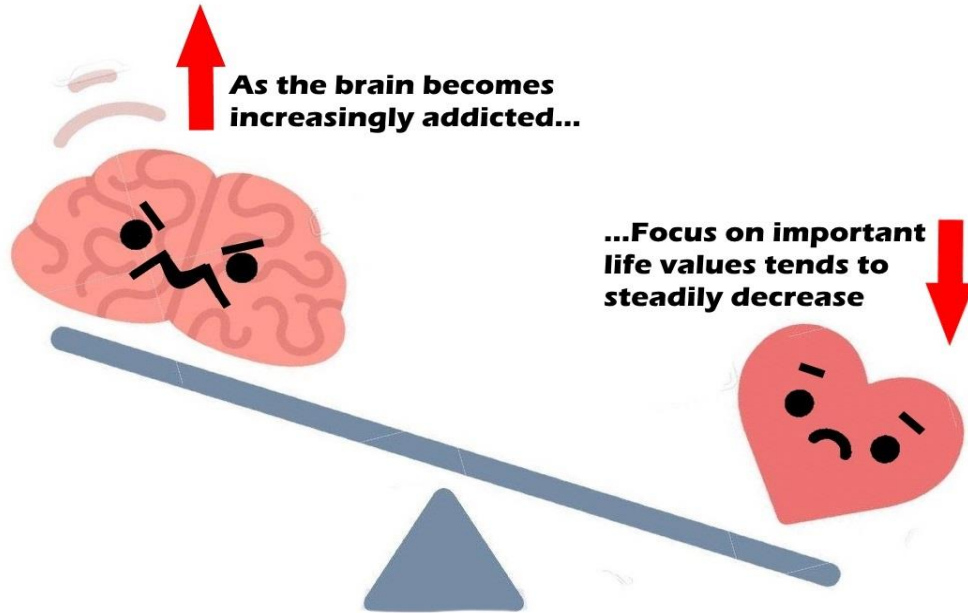
- Addiction is a brain disease characterized by a strong desire to use a drug, even if it is causing problems. This is why an addicted person will often go to great lengths to get high even when consequences pile up.



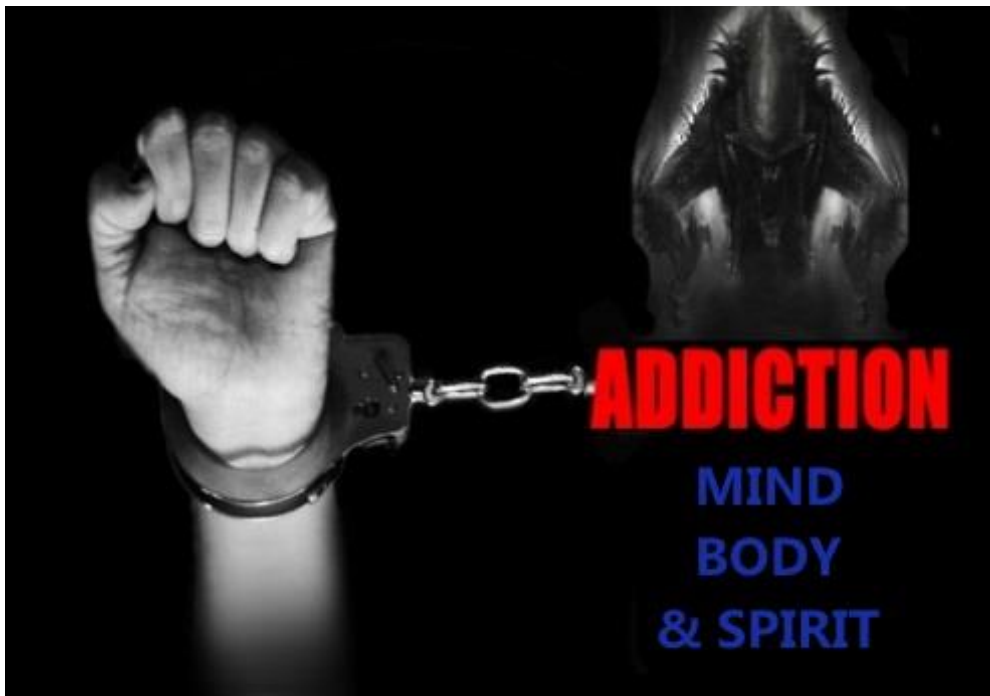
- Addiction over time changes the way a person thinks, feels and acts, even if that person does not realize it at first.



- The feelings of pleasure triggered by drug use are extremely powerful. For people who become addicted, the feelings of pleasure from drugs eventually become more important than many other “normal” day to day pleasurable life areas such as love, hobbies, self-care, goals, etc. (How this occurs from person to person may be different as we all have different values and priorities)



- Advanced stages of addiction result in needing drugs to feel better so quitting can be very challenging because it can be so difficult to give up something that the brain has grown dependent upon. When it comes to physically addicting drugs such as opioids, there is the additional challenge of not only the brain depending on the drug to feel better, but due to withdrawal symptoms, the body is dependent on the drug to feel better as well.





### 3 - Healing the Addicted Brain

Because addiction is a complex brain disease, the solution also has multiple components.

- Treat withdrawal symptoms and care for cravings. There are medications that research has proven to be effective to help someone who is addicted with physical withdrawal symptoms as well as for cravings. This is especially true for opioid addiction which is known for extremely unpleasant withdrawal symptoms as well both physical and psychological cravings which can persist for long periods after drug use has stopped. Medication Assisted Treatment (MAT) for opioid use disorders is strongly supported by the American Society of Addiction Medicine, the American Medical Association, the United States Substance Abuse and Mental Health Services Administration (SAMHSA) and the American Academy of Addiction Psychiatry.
- Combine behavioral therapies and a wide range of other services to help reestablish positive progress in life areas that were disrupted by addiction including:
  - Motivation and insight building – Participating in therapy to increase self-awareness and to enhance motivation and desire to keep moving forward and make changes in a positive manner



- Learning coping skills for challenging life situations, relapse prevention as well as getting assistance with life issues including social, family/relationship, vocational, medical, and/or legal services to foster overall progress and positive lifestyle change across an array of affected life areas
- Seek care for coexisting mental health conditions when present- Addiction is often associated with mental health conditions such as depression, anxiety, mood disturbances, trauma and other areas. Getting the right therapy and/or medication for these coexisting issues when present can also be a critical aspect of the change process
- Seek support- Assistance from others who can empathize and who care is extremely valuable.