MedPress
Public Health and Epidemiology

Dopamine Detox in Realm of Habits and Behavior

Editorial

Muhammad Ahmad Alamgir[1,*]

[1] Associate professor Medicine, Bahawalpur Medical and Dental College, Bahawalpur, Pakistan.

***Corresponding author**

Muhammad Ahmad Alamgir, Associate professor Medicine, Bahawalpur Medical and Dental College, Bahawalpur, Pakistan,
Cell: 03027777158;
Email: alamgirkhan916@yahoo.com.

Article Information

Received: 21-08-2022;
Accepted: 30-08-2022;
Published: 02-09-2022.

Editorial

Since the beginning of human evolution, our brain developed its reward and punishment center. The human brain started to release an integral feel–good hormone Dopamine. This hormone had an important role to keep a person motivated to perform certain required actionable acts ex playing music or eating certain foods rich in fats and sugar [1]. Hence, release of dopamine caused people to perform tasks with greater motivation. Humans started to link this important brain function with their own habits. An external stimulus caused a rapid release of this hormone from substantia nigra, ventral tegmental area, and hypothalamus of the brain [2]. Every time a person performs a certain pleasurable activity, our brain is wired to perform such action against all odds since higher dopamine levels created a sense of fulfilment and happiness. The person performs such activities repeatedly until a person makes such habit a part of their life and he enters a state of no return [3]. If the external stimuli are removed, a lack of dopamine secretion will now trigger areas of brain related to sadness and grief, hence a state of anxiety ensues.

Habits contributing to the state of no return

Research have proven the link of certain habituation, for instance cigarette smoking with a temporary release of dopamine in the brain and hence people who are depressed find smoking as a way out. It is the case with the chronic use of social media as a temporary relief from depression leading to a much bigger international problem [4]. Addiction, which is even more difficult to treat. Social media abuse is behavioral addiction, and it is characterized by uncontrollable urge to log on different social media platforms [5].

Drug addiction is currently another burning issue in United States and important cause of mortality and morbidity [6,7]. Some addictive drugs like cocaine have worse effects and lead to depression. The mechanism is that dopamine released from nerve cells is removed by dopamine transporter (dopamine (DAT) and reused subsequently. Cocaine blocks DAT and the nerve cells want more cocaine for dopamine pleasure. Lack of its availability results in depression and possible suicidal tendency [8].

Recommendations

It takes almost 90 days for a person's brain to rewire itself to normal dopamine levels in the absence of the pleasurable external stimuli. During this time, the person will face mood swings, irritability and a constant urge to get back to the addictive substance. The physician should know that during the treatment of a patient suffering from such wiring disorders like obesity, cigarette and other drug addictions. Hence, patient should be advised to decrease the stimuli gradually and during this phase, he should be monitored completely to see if any he develops irritability and mood swings. The physician should also advise meditation and cardiovascular exercises since they have proven to have a major role in decreasing stress levels. Playing music, charity programs, reading and social work along with happy behavior are natural ways to boost mind. Also, facilitate beneficial tasks as kindness is always rewarded.

Acknowledgement

None.

Conflict of interest

Author declares that there is no Conflict of interest.

References:

1. Grove JCR, Gray LA, Medina NLS, Sivakumar N, Ahn JS, et al. Dopamine subsystems that track internal states. Nature. 2022; 608(7922): 374–380.
2. Guzmán F(n.d.). The Four Dopamine Pathways Relevant to Antipsychotics Pharmacology [Video blog post]. Retrieved November 15, 2016, from: http://psychopharmacologyinstitute.com/antipsychotics–videos/dopamine–pathways–antipsychotics–pharmacology/s
3. Wise RA, Jordan CJ. Dopamine, behavior, and addiction. Journal of Biomedical Science. 2021;28: 83.
4. Burhan R, Moradzadeh J. Neurotransmitter Dopamine (DA) and its Role in the development of social media. Addiction. Journal of Neurology & Neurophysiology. 2020:11(7): 507.
5. Cheik D. A brief note on Social Media Addiction. Journal of Addiction Research & Therapy. 2022;13(1): 446.
6. Wise RA, Robble MA. Dopamine and Addiction. Ann Rev Psychol. 2020;71: 79–106.
7. Centers for Disease Control and Prevention. (2020, March 20). Drug and Opioid–Involved Overdose Deaths—United States, 2017–2018. Morbidity and Mortality Weekly Reports. Retrieved from https://www.cdc.gov/mmwr/volumes/69/wr/mm6911a4.htm
8. Schmidt SG, Malle MG, Nielsen AK, Bohr SSR, et al. The dopamine transporter antiports potassium to increase the uptake of dopamine. Nature Communications. 2022;13(1).

Citation: Alamgir MA. Dopamine Detox in Realm of Habits and Behavior. Medp Public Health Epidemiol. 2022; 1(1): mpphe–202208005.