

## Alcoholism Is an Addiction, Not a Disease

Kari Poikolainen

Department of Public Health, University of Helsinki, Helsinki, Finland

### \*Corresponding author

Kari Poikolainen, Department of Public Health, University of Helsinki, Helsinki, Finland

Submitted: 14 July 2021; Accepted: 20 July 2021; Published: 16 Aug 2021

**citation:** Kari Poikolainen (2021) Alcoholism Is an Addiction, Not A Disease J Addict Res, 2021 5 (2): 106-108.

### Introduction

I will argue that addictions are not diseases, and certainly not chronic brain diseases. Diseases do not bring about pleasure or expectations of pleasure. Diseases are qualitatively different from behavioral extremes. Addictions are simply extremes of behavior. They are addictions, a kind of its own. The necessary cause is a normal but extreme desire for enjoyment (or happiness, pleasure or serenity). Triggering causes vary, and these are usually different for different people. Together they constitute the sufficient cause.

### Dopamine and Desire

From the evolutionary perspective it makes sense that life-supporting activities like eating, drinking, procreation, caring of the offspring and interpersonal relationships are pleasurable. Dopamine is central in these activities. The major role of dopamine in the brain is to transfer electric impulses from certain nerve endings to the next ones. These nerve cells carry information on positive emotions. In most contemporary theories of emotion, the processes of desire, happiness, and pleasure are separable yet affect each other. These theories are in line with Sigmund Freud's concept of erotic pre-pleasure that makes humans to search for ways of satisfaction [1]. This search increases mental tension. Satisfaction arouses the desire to get more of the same. Hence, the aim is always to get more satisfaction. There is no end to this, no final goal. Some phenomenological theories support this view.

Desire reflects a focused interest in a goal and the drive to reach it. Happiness is an emotional state linked to the feeling of progress towards the goal. The experience is called "flow" by some. Pleasure is a positive feeling when the goal has been reached. In the brain, dopamine transmission influences each of the above processes. Findings suggest that dopamine plays a major role in wanting the addictive behavior, and a substantial role in supporting happiness when seeking and preparing for this behavior. Dopamine seems to influence the pleasure resulting from the addictive activity to a lesser extent. Dopamine levels have been found in many studies to be increased when eating tasty food, winning money,

and using alcohol, tobacco, amphetamine and cocaine [2]. A few small studies have found similar changes in relation to beauty, sex, porn and romantic love [3]. The levels return to normal when the positive emotions wane. Thus, the quest for pleasure is a normal motivational force, even if it is enhanced by certain chemicals. The strength of the quest can vary in intensity between individuals and over time. The possible range in human populations includes extremes. These extremes in normal variation can be called addictions, meaning simply that the addict is extremely attached to a certain activity. One of these is alcoholism.

### Roads to Alcoholism

Imbibing alcoholic beverages is an intentional activity. Motivations or reasons to drink may be in conflict with other motivations, and they may be conscious or subconscious [4]. Alcoholics tend to have a mental battle between a strong will to seek pleasure in drinking and a (often less) strong will to avoid related harms.

There are many motivations to drink, also called reasons or causes (Table gives some examples). Choosing or not choosing alcohol depends on earlier life experiences, in particular social groupings and an individual's life history. Some people drink to restore their balance of social, mental or physical state of being. Lack of balance may be caused by suffering or boredom. Some others may be in good balance but drink because they are aiming at experiencing more pleasure. There are many motivating forces leading to drinking. The effect of drinking is variable, sometimes succeeding in reaching the goal, sometimes not. If the outcome is variable, the need to try again increases. Were the outcome constantly a success there would be less need to repeat it because reaching a balance would be certain. Contradicting motivations (to drink but to avoid consequent harms) may cause suffering. Failure to reach the desired balance raises the motivation to try again. If repetition is frequent, it becomes automatic. A habit is formed. This can be called an addiction, especially when there are more harmful than beneficial consequences.

**Table 1: Some Causes of Drinking Alcoholic Beverages**

Imbalances that motivate	Social	Mental	Physical
Boredom, may motivate to relieve	Seeking fun, partying, novelty, excitement	Promotes stimulation, bravery, risk taking	Counteract fatigue, contributes to taste of food
Suffering, may motivate to decrease	Loneliness	Worry, anxiety, depression, fear	Hangover, pain, tremor and other unpleasant symptoms

### Addictions are a Kind of Bad Habits

Addiction, or dependence, if you prefer, is simply a frequent repetition. When judged by the usual behavior patterns of the population, it becomes excessive behavior where something, thought to be worth wanting, seeking and practicing, causes positive emotions. Addictive behaviors are at the extreme end of normal motivational functions. Addictions are a kind of its own. Alcoholism is not a disease but an addiction. Diseases are not extremes of the biologically normal. They are qualitatively different. Diseases do not produce positive emotions, nor desire, happiness or pleasure.

A common factor in addictions is the preference to value short-term benefits over the long-term benefits, even if the latter are greater [3, 5]. It is a kind of mental shortsightedness. A common human weakness is revealed in an ancient Greek myth. The tale tells that Zeus sought to punish Prometheus because he taught humankind how to use fire. Zeus made Pandora present a box to Epimethius, the brother of Prometheus, warning of opening it. Epimethius, whose name denotes shortsightedness with regard to consequences, opened the box, releasing disease, death and other misfortunes to the world. In like vein, preferring to satisfy immediate or short-term wishes before long-term goals raises the risk of the adverse consequences of addictive behaviors for the *homo improvidus* [3].

Mental shortsightedness is a necessary but not a sufficient cause for addictions. Other factors are needed to form one of the many paths together constituting a sufficient cause. For example, risk of alcohol dependence is associated with parental history of alcoholism, smoking, impulsivity and other externalizing behavior patterns as well as anxiety and internalizing behavior patterns. Parental history points to genetic, intrauterine and early child-rearing influences. Many other factors may be involved as well. These risk factors have been reviewed elsewhere in detail in my book *Perfect drinking and its enemies* [6].

The role of genes is usually vastly exaggerated [6]. While the functions of the brain and other parts of the body are based on genes, there are none that create addiction, but only some that may increase the probability of becoming exposed to behaviors that contribute to the risk of addiction.

### Chronic Brain Disease View

Because it is as important to know how things are not, as how they are, let us look at the chronic brain disease hypothesis. It goes like this: Repetitive drug use or similar behavior hijacks the pleasure-related nerve cell circuits in the brain. The nerve cells fire electrical impulses at a higher rate because hijacking increases the release of dopamine from the nerve endings and thus stimulates the nerve circuits more. This is what they call addiction. For drug misuse or other addictive behaviors, withdrawal symptoms emerge

if there is an abrupt break in the process. This leads to stress and another cycle of behavior begins. This repetition is called dependence, and is compulsive, meaning that you cannot evade it. Nevertheless, treatment is provided [7]. The brain disease assumption is likely to lead us astray, undermining efforts to find solutions that really help. The pleasure-related nerve cell circuits are not being hijacked but instead overstimulated.

### Addictions Are Not Insurmountable Compulsions

Several studies have shown that the majority of addicted persons can abstain or decrease use so much that the dependence criteria are no longer satisfied [5, 6]. The remission rate is rather constant but is known to differ among cocaine, marijuana and alcohol addicts [5]. The causes of remission are many.

Withdrawal is a fuzzy concept. Ending an addictive behavior can bring about varying symptoms and signs (functional bodily changes) which can range in degree from barely noticeable hangover to hugely unpleasant symptoms. This variation depends on many things, like amount, speed and route of use (drugs, alcohol, coffee, tobacco), social situation and a multitude of other factors. Some non-addictive drugs can cause withdrawal symptoms. Withdrawal does not require being dependent on something. Experiencing hangover is common also among non-addicts. Nevertheless, severe withdrawal symptoms can be alleviated by medical treatment.

The distinction between addiction and behavior nearer to optimal adaptation cannot be closely defined [6]. Diagnosis of addiction (or drug use disorder in some current vocabularies) is usually made when behavior deviates greatly from what is normal in a given society, brings about notable harms and offends the moral codes of the majority. This becomes a moral diagnosis more than a medical one.

### What does this mean?

I am not saying that the medical profession should not try to help addicted people. The profession is completely entitled to treat other entities than diseases as long as it is sensible, the treatments are effective and bring about more benefits than adverse effects. Examples abound, such as pregnancy, birth control and cosmetic surgery. Moreover, among the antecedents of addictions are mental disorders and among the consequences there are some physical diseases.

As the Cochrane systematic reviews and meta-analyses show, drug treatment for alcohol addiction is ineffective. Believing that addiction is a brain disease that can be treated by manipulating brain chemistry with drugs is erroneous. Drugs may alleviate the symptoms but fail to solve the problem. However, recovery from addiction is possible by exercising self-control. Self-control may

---

be improved in several kinds of behavioral and group therapies. These all produce roughly similar results [8]. It is not known if such treatments are effective. Definitive studies of effectiveness are hampered, and probably impossible, because untreated control groups are not feasible. However, some addicts recover, with or without treatment.

## References

1. The Freud Reader (1995) ed. Peter Gay. London: Vintage.
2. Leyton M (2010) The neurobiology of desire: Dopamine and the regulation of mood and motivational states in humans. In ML Krangelbach, KC Berridge (Eds.), Pleasures of the brain 2010: 222-243.
3. Ainslie G (2013) Intertemporal bargaining in addiction. *Frontiers in Psychiatry* 4:63.
4. Cox W M, Klinger E, Fadardi JS (2006) Motivational basis of cognitive determinants of addiction. In M Munafò, IP Albery (Eds.), *Cognition and addiction* 2006: 101-116.
5. Heyman GM (2013) Addiction and choice: theory and new data. *Frontiers in Psychiatry* 4: 31.
6. Poikolainen K (2020) Perfect drinking and its enemies, 2nd Edition. Independently published, Kindle Direct Publishing. - Kindle eBook and paperback. On sale from Amazon websites.
7. Goodwin D, Cham J (2016) Understanding Addiction. *Scientific American*, January 1. - A brief presentation of addiction as a brain disease in a comic strip. The final panel tells that the best treatment for dependence is to depend on other people. Not on your dealer, I hope.
8. Kelly JF, Humphreys K, Ferri M (2021) Alcoholics Anonymous and other 12-step programs for alcohol use disorder. *Cochrane Database of Systematic Reviews* 2020: Issue 3. Art. No.: CD012880. DOI: 10.1002/14651858.CD012880.pub2. Accessed 05 July 2021.

**Copyright:** ©2021 Kari Poikolainen. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.