

## **Response and Summary of Research on the Effects of Alcohol Use**

The time I have spent over the past few months digesting academic material and medical information on the effects of alcohol has led me to a more informed outlook; one where I can make more rational decisions about my relationship with alcohol. There are many factors that can lead to alcoholism. There are many side effects of continued use that prevent a user from making an accurate assessment of their use and abuse of alcohol. The timing and quantity of use or abuse can make a user more likely to use in the future by altering the way the brain communicates with the body. These factors all apply to my situation, and I was glad to find in my research that there is more than one way forward once the decision to stop drinking has been made.

The first step in this research was to find an applicable definition for alcoholism. There are many similar definitions, but after taking a Center for Intervention class I decided to change the definition used in this paper. This simple definition leaves very little grey area and makes it very clear to the user where he or she can find himself or herself on the spectrum of alcohol use and abuse. Alcoholism is defined as: “Continued use despite the decision of the user to stop.”

I wanted to develop a thorough understanding of what leads to abuse of alcohol. The major contributing factors that put me at a higher risk of alcoholism are heredity, blackouts, and the lack of a “hangover.” A family history of alcohol abuse is a strong indicator of one’s future potential to do the same. In regards to my own life, there is a list of regular alcohol users on both sides of my family. I had heard this before, but this information coupled with the scientific explanation of how prolonged use affects the brain made this the strongest “eye opener.”

Overconsumption of alcohol can cause a user to “blackout,” which temporarily impairs the brain's conversion of short term memory into long term memory. A history of alcohol induced blackouts, even if just once in their past, further the likelihood of a user to become an alcoholic. This information is relevant to my situation, and really solidified the importance of me making a decision. Finally, early stages of the user’s drinking do not lead to a hangover or a manifestation of the negative side affects as the user metabolizes the ethanol. A user who does not experience the negative side affects of alcohol, especially, in the experimental phases of use, is much more likely to further their relationship into abusive stages. I do not recall strong negative side effects, even more so when I look back to my earliest use of alcohol. There are many strong indicators of risk for the abuse of alcohol, but those discussed here were the most relevant to my situation and further development of the mechanism of these indicators through research and the CFI class has made it difficult to rationalize alcohol use without also confirming the way the indicators work.

The interesting thing about the abuse of alcohol, and perhaps the abuse or addiction to any drug, is that some side effects of the drug keep the user from rationally assessing their relationship with the drug. Alcohol is a perfect example of users being blind to the true nature of their abuse of the drug because of its negative side effects. Alcohol withdrawal can heighten stress, increase anxiety, and decrease sociability, all of these are

reasons many people, including myself, drink alcohol. These negative effects are often attributed to many other factors in a person's life. Stress and anxiety is regularly associated with work, money, and personal relationships. Alcohol initially decreases stress and reduces anxiety, so it follows logically that alcohol is a solution to regular stress and anxiety. This logic can quickly create a more serious problem, especially in a user with other indicators of alcoholism. When someone is using alcohol to relieve problems that are exacerbated by withdrawals from alcohol, the user may try to rationalize continued abuse of the drug. The idea that alcohol makes socializing easier is clearly evidenced by the nickname, social lubricant. This is another example of negative side effects increasing the likelihood of abuse. When someone is drinking to become more sociable, it can become a self fulfilling prophecy. The user may associate comfort in social situations to the fact that they are drinking and with continued use of the drug a user can become unaccustomed to socializing when not drinking. Primarily because the withdrawal symptoms of alcohol include a decreased desire to socialize. It is common for a user to rationalize the use of alcohol to quell these negative feeling, not realizing that ultimately it will only develop the feelings further. This specific side effect and the resulting cycle of alcohol use is incredibly relevant to college campus, and may continue to affect "social binge drinkers" long after they have left their college campus.

The regular or excessive use of alcohol at a young age can do severe and lasting damage a developing brain. According to many sources young adults who drink regularly or excessively, "binge drinking," are up to 40% more likely to develop alcoholic tendencies. The strongest defense of these arguments is that alcohol use in a developing brain may alter the brain or the way the brain develops. The most important aspects of this change can be realized in the synapses of the brain. Neurotransmitters naturally form in the brain, and are necessary for the body to perform tasks both consciously and unconsciously. Alcohol can interfere with the regular operation of these neurotransmitters. First, it may simply overload receptor sites and over time cause them to decrease in number. Changes like this in the brain may increase tolerance of alcohol. Second, significant changes to the brain may stunt the natural development of the adolescent brain, with altered receptor sites or altered neurotransmitter production the brain will struggle to develop naturally. Finally, the adolescent period is a time for many types of development beyond what goes on in the brain. Alcohol may more easily become a developing habit or preference when used frequently or excessively at a young age. These simple explanations of the effects of adolescent use made it clear that I am at risk to develop an addictive relationship with alcohol.

An important outcome of this research and the CFI class is to find that there are now more resources to those who want to stop using alcohol. This was an important find for me because I have found traditional support structures condescending or to have an overly religious focus. Options like the "Rational Recovery" have offered me much more successful solutions.

The information I have presented represents more specific information about the general ideas, e.g. "alcohol kills brain cells," I thought I knew about alcohol. Many of the facts were things that I saw in other people, but was blind to seeing them played out in my own

life. I have rationalized the damage I have done to my body for a long time, and the time I have spent completely abstaining from alcohol has helped me realize this.

***Disclaimer: The Yolo County District Attorney's Office has made minor changes to the research paper to correct typographical/grammatical errors; however, no changes have been made to the content of the research paper.***