

Effect of Alcohol on Lipid Profile and Male Sex Hormones**Atul B. Agte****Professor, Department of Biochemistry, Parbhani Medical College and R.P. Hospital and Research Center, Parbhani, Maharashtra****Received: 25-09-2022 / Revised: 25-10-2022 / Accepted: 30-11-2022****Corresponding author: Dr. Atul B. Agte****Conflict of interest: Nil****Abstract**

Introduction: In fact, alcohol consumption exceeded a number of traditional risk factors, including poor water and sanitation, hypertension, high cholesterol, and tobacco use, according to the World Health Organization's (WHO) most recent comparative risk assessment. Only unsafe sex and childhood underweight were more detrimental to the global burden of disease and damage. Alcohol use, especially binge drinking, increases the risk of many health issues and, as a result, adds significantly to the global burden of disease. In fact, alcohol consumption exceeded a number of traditional risk factors, including poor water and sanitation, hypertension, high cholesterol, and tobacco use, according to the World Health Organization's (WHO) most recent comparative risk assessment. Only unsafe sex and childhood underweight were more detrimental to the global burden of disease and damage.

Aim: Effect of Alcoholic Males in Sex Hormones.

Material and Method: In total, 30 guys between the ages of 25 and 60 were included in this study. They were split into two groups, one of whom drank alcohol twice per week and the other of whom consumed it every day. Previous history of being a chronic alcoholic or the most recent amount of alcohol ingested, among other topics, were subjects who came from OPD. Subjects covered by the Department of Psychiatry and the Department of Biochemistry at the Government Medical College of Nandurbar.

Result: Comparison between twice in a week takes alcohol males and daily in a week's takes alcohol males serum cortisol and Testosterone values are significantly increased in to daily in a week's takes males to comparison twice in a week's subjects the valves are normal in subjects the valves are shows statistically significant. $P < 0.0001$.

Conclusion: Our study demonstrates that drinking too much alcohol on a regular basis increases the chance of developing heart disease, liver disease, kidney disease, and problems with the reproductive system including erectile dysfunction and early ejaculation or issues with anxiety and depression.

Keywords: Alcohol, Who, Testosterone, Hypertension, Cortisol.

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Introduction

Alcohol has an effect on both the physical and mental selves. A person's overall risk of mortality from many causes, such as various cancers and some forms of cardiovascular disease, appears to increase even with modest drinking. This article

will address some often asked questions about the short- and long-term effects of alcohol on the body as well as how alcohol impacts your physical health. For a brief period of time, alcohol can make individuals feel upbeat, pleasant, and

sociable, but excessive or chronic, long-term drinking can lead to alcohol dependence or addiction, also known as an alcohol use disorder. Additionally, chronic alcohol use has been related to a variety of cognitive and mental health issues, including learning and memory deficits, as well as exacerbating or causing serious mental health conditions, such as depression and anxiety. [1]

This can happen if your body is overloaded from drinking too much alcohol and is unable to adequately digest it. The heart rate, gag reflex, and breathing rate might all be negatively impacted. You can go into a coma from severe alcohol poisoning, or you might even pass away. Alcohol has the potential to damage many of your body's major organ systems when consumed in excess and over an extended period of time. These health risks include the following. Although your liver is a strong organ, prolonged, excessive alcohol drinking puts you at risk for: Fatty liver (steatosis). One of the risks to the health of the pancreas is vitamin deficiency. Alcohol is associated with vitamin deficits due to malabsorption and inadequate food intake. Pancreatitis, a disorder in which the pancreas is inflamed and blood vessels expand, can be brought on by chronic alcohol usage. [2]

In fact, alcohol consumption exceeded a number of traditional risk factors, including poor water and sanitation, hypertension, high cholesterol, and tobacco use, according to the World Health Organization's (WHO) most recent comparative risk assessment. Only unsafe sex and childhood underweight were more detrimental to the global burden of disease and damage. Alcohol use, especially binge drinking, increases the risk of many health issues and, as a result, adds significantly to the global burden of disease. In fact, alcohol consumption exceeded a number of traditional risk factors, including poor

water and sanitation, hypertension, high cholesterol, and tobacco use, according to the World Health Organization's (WHO) most recent comparative risk assessment. Only unsafe sex and childhood underweight were more detrimental to the global burden of disease and damage. Alcohol use, especially binge drinking, increases the risk of many health issues and, as a result, adds significantly to the global burden of disease. These findings emphasize the need for effective preventative approaches to decrease the suffering and costs related to binge drinking. [3]

Aim

Effect of Alcoholic Males in Sex Hormones

Material and Method

This study included total 30 males to age 25-60 years and divided in two groups one is twice in week drinks and second group daily drinking alcohol. Previous history chronic alcoholic or last how many years consumed alcohol etc included subjects were comes from OPD. Subjects under Observe Short-course focus in the Dept. of psychiatry, and Dept. Biochemistry Government Medical College of Nandurbar.

Sample Collection

5ml of blood sample were taken from each subjects and divided into Plain Vial. Sample were used for the estimation of the plain sample were used to estimate the level of lipid profile and Testosterone, Sr. Cortisol level

Biochemical Analysis

The sample was used to estimate the levels of Lipid profile, serum Cortisol, Testosterone, were estimated on AU480 Analyser.

Result

Table 1 Comparison between twice in a week alcohol takes males other one daily takes alcohol males

Parameters	Twice in a week N-15	Daily in a week N-15	P-value
Total Cholesterol(mg/dl)	161.3±13.4	310.7±52.5	P <0.0001
Triglyceride(mg/dl)	131.4±10.8	178.2±36.7	P<0.0001
HDL(mg/dl)	44.2±2.21	30.9±3.32	P<0.0001
LDL(mg/dl)	120.3±12.6	220.2±16.52	P<0.0001
VLDL(mg/dl)	22.34±4.57	34.44±8.1	P<0.0001
Sr. Cortisol level	13.3±1.0	19.3±1.09	P<0.0001
Testosterone (ng/dl)	466.2 ± 128.21	306.1 ± 116.2	P <0.0001

comparison between twice in a week's takes alcohol males and daily in a weeks takes alcohol males serum lipid profile valves are serum total cholesterol, serum triglyceride, serum HDL, serum LDL and serum VLDL are increased in who takes daily in a week's alcohol males. To comparisons twice in a week alcohol males are shows slightly normal subjects the valves are shows statistically significant. P < 0.0001

Comparison between twice in a week takes alcohol males and daily in a week's takes alcohol males serum cortisol and Testosterone valves are significantly increased in to daily in a week's takes males to comparison twice in a week's subjects the valves are normal in subjects the valves are shows statistically significant. P < 0.0001

Discussion

As a result, it could damage your ability to digest meals and absorb nutrients. Alcoholic hepatitis is characterised by the signs of fibrosis, cirrhosis, and liver cancer. Immune system hazards When you drink excessively for an extended period of time, your body's ability to fend off illness and infection is hurt. issues with health related to the musculoskeletal system. You're more prone to sustain fractures and break bones since drinking weakens your bones. People with alcohol use disorders are more likely to develop gout and have high uric acid levels. an elevated danger of cancer. Alcohol, a known carcinogen, can influence the

emergence of several types of cancers. Heavy drinking has been found to affect the development of and increase the risk of breast, liver, esophageal, head and neck, and colorectal cancer (particularly when associated with smoking). According to current research, there is an increased risk for pancreatic, pancreatic prostate, and melanoma cancer. The National Cancer Institute estimates that having 3.5 or more drinks per day more than doubles your chance of developing head and neck cancer. [4]

The predominance of disease categories such alcoholic liver disease, alcoholic liver cirrhosis, and alcohol-induced acute or chronic pancreatitis is proof that alcohol intake has obvious and specific effects on the liver and pancreas. The relative risk dose-response curves are almost exponential for these disease groups. According to Rehm et al. (2010), hazards connected to abstinence are generally distinct from those related to light to moderate drinking (i.e., up to 24 grammes of pure alcohol per day). As a result, the beginning of liver and pancreatic disorders has been linked to binge drinking. [5]

As a result, while the risk of infectious diseases is comparable for people who use less than 40 grammes of pure alcohol per day compared to abstainers, the risk increases significantly for those who consume more or have been diagnosed with a AUD. One mechanism by which alcohol raises the risk of various illnesses is by harming the immune system (Rehm et al. 2009c;7 Romeo et al. 2010). The

word "cardiovascular disease" refers to a wide range of illnesses, and each illness has a different impact on how alcohol affects the body. Alcohol consumption, for instance, has a nearly entirely negative impact on hypertension, with a dose-response relationship showing a linear increase in relative risk with increasing consumption (Taylor et al. 2009)[9]. The relationship between alcohol intake and heart disease brought on by a reduction in blood flow to the heart (also known as ischemic heart disease) is depicted by a J-shaped curve, with frequent mild drinking exhibiting some preventive benefits. [5]

Alcohol abuse can affect the reproductive system, leading to irregular periods and erectile difficulties. Long-term, heavy drinking may affect both men's and women's fertility. Alcohol-induced mental diseases, such as alcohol-induced bipolar disorder, alcohol-induced depressive disorder, alcohol-induced sleep disorder, and alcohol-induced psychotic illness, among others, can arise from excessive alcohol consumption, even if it is not chronic. These short-term issues might develop as a result of binge drinking and/or withdrawal. [6]

Thiamine deficiency, often known as vitamin B1 deficiency, is what leads to Wernicke-Korsakoff syndrome and is associated with long-term binge drinking. Possible symptoms include confusion, poor coordination, learning difficulties, and memory deficits. Among other symptoms, liver disease can cause sleep problems, mood fluctuations, personality changes, melancholy, anxiety, poor focus, and uncoordinated movements. Additionally, drinking too much alcohol might prevent the growth of new brain cells. [7]

Alcohol abuse can affect the reproductive system, leading to irregular periods and erectile difficulties. Long-term, heavy drinking may affect both men's and women's fertility. Alcohol abuse, even if it

is not chronic, can result in alcohol-induced mental illnesses such as bipolar disorder, depression, insomnia, and psychosis, among others. Binge drinking and/or withdrawal may result in these transient problems. Alcohol abuse can affect the reproductive system, leading to irregular periods and erectile difficulties. Long-term, heavy drinking may affect both men's and women's fertility. [8]

An alcoholic man had acute oligoasthenoteratozoospermia in a human case study, which later progressed to cryptozoospermia and azoospermia. In order to determine the impact of alcohol consumption on semen quality, a meta-analysis of data from 18 cross-sectional studies was performed in 2017. The researchers discovered that frequent alcohol consumption lowers semen quality, particularly in terms of semen volume and sperm shape. Despite all the limitations stated in their analysis, the authors found that occasional drinkers had even stronger sperm motility than never drinkers. However, this effect was not noticed for occasional drinkers. The link between drinking and the quality of semen is actually still up for dispute. Alcohol use has a negative influence on male reproduction in addition to being a substantial public and social concern. Numerous research on both people and animals have shown a correlation between prolonged alcohol use and low semen quality. [9,10,11]

Conclusion

Our study demonstrates that drinking too much alcohol on a regular basis increases the chance of developing heart disease, liver disease, kidney disease, and problems with the reproductive system including erectile dysfunction and early ejaculation or issues with anxiety and depression.

References

1. Centers for Disease Control and Prevention. Dietary Guidelines for Americans. 2020.

2. Sarkar, D., Jung, M. K., & Wang, H. J. (2015). Alcohol and the Immune System. *Alcohol Research: Current Reviews*, 2015;37(2): 153–155.
3. WHO. *Global Health Risks. Mortality and Burden of Disease Attributable to Selected Major Risks*. Geneva, Switzerland: WHO; 2009.
4. National Institute on Alcohol Abuse and Alcoholism. *Health risks and benefits of alcohol consumption*. *Alcohol Research & Health*, 2000; 24(1): 5–11.
5. The relationship of average volume of alcohol consumption and patterns of drinking to burden of disease: an overview. Rehm J, Room R, Graham K, Monteiro M, Gmel G, Sempos CT *Addiction*. 2003 Sep; 98(9):1209-28.
6. Van Heertum K., & Rossi B. Alcohol and fertility: how much is too much? *Fertility research and practice*, 2017; 3(1): 10.
7. National Institute on Alcohol Abuse and Alcoholism. *Alcohol's Damaging Effects on the Brain*. *Alcohol Alert*. No. 63. 2004.
8. Ramesh Shivani, M.D., R. Jeffrey Goldsmith, M.D., and Robert M. Anthenelli, M.D. *Alcoholism and Psychiatric Disorders*. *Alcohol Research & Health*. 2022;26(2): 90-98.
9. Finelli R, Mottola F, Agarwal A. Impact of Alcohol Consumption on Male Fertility Potential: A Narrative Review. *Int J Environ Res Public Health*. 2021 Dec 29;19(1):328.
10. Ricci E., Al Beitawi S., Cipriani S., Candiani M., Chiaffarino F., Viganò P., Noli S., Parazzini F. Semen quality and alcohol intake: A systematic review and meta-analysis. *Reprod. Biomed. Online*. 2017; 34:38–47.
11. Abid Z., Ramzan M. A., Sheroze M. W., Jamal K., Batool R., & Mazher S. Prevalence of Depression and Its Association with Cigarette Smoking among Undergraduate Students; A Cross-Sectional Study from Karachi. *Journal of Medical Research and Health Sciences*, 2022; 5(2): 1786–1790.