REVIEW ARTICLE

AMOUNT OF ALCOHOL CONSUMPTION EFFECTS ON YOUR HEALTH

Atilla BEKTAS[1,*], Harun ERDAL[2] and Meltem ULUSOY[3]

[1]Department of Internal Medicine and Gastroenterology, Akropol Hospital, Ankara, Turkey
[2]Department of Gastroenterology, Gulhane Training and Research
Hospital, Health Sciences University, Ankara, Turkey
[3]Department of Biology, Hacettepe University, Ankara, Turkey

ARTICLE INFO	ABSTRACT
	A recent article has suggested that alcohol consumption is completely harmful for human health. However, this argument is the result of several mistakes and wrong assumptions in the methodology chosen. On the contrary, our opinion about this matter is that consuming alcohol moderately has positive impacts on people by protecting them from coronary heart disease. As it has been revealed in evidence-based trials, it might even be beneficial in relation to NASH and NAFLD.

INTRODUCTION

We have read "Burton R, Sheron N. No level of alcohol consumption improves health. Lancet. 2018 Sep 22; 392(10152):987-988." In our opinion, the hypothesis made by the author in the article has several methodological mistakes and deficiencies. It also completely omits some truth about ethanol that have been established based on scientific evidences. The relationship between alcohol (ethanol) consumption and diseases, as well as dangerous effects of alcohol are already well known. Furthermore, the relationship between low/medium alcohol consumption and cardiovascular protection has been proven by many randomized clinical trials (Mukamal, 2001). The claim of the journal is that there is strong support for the guideline published by the Chief Medical Officer of the UK who found that there is "no safe level of alcohol consumption". The UK health authority specifies measures of alcohol consumption based on the results of a large study including nearly 600,000 drinkers. The study revealed that people who drank more than 12.5 units (100 g) of
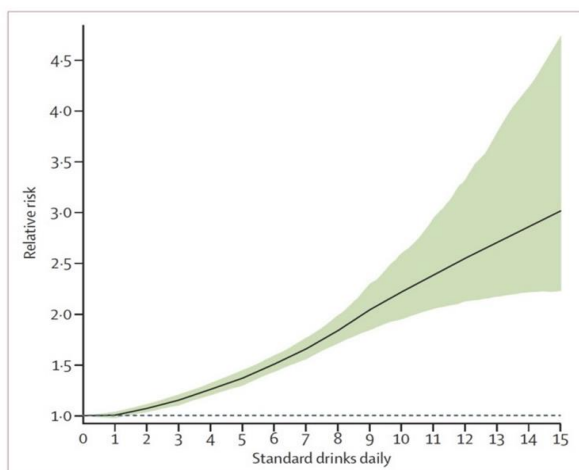
ethanol within a week were likely to die sooner than those who drank less than this amount. The results applied equally to women and men. The researchers said their detailed analysis of cardiovascular conditions helped to explain the complex links between drinking alcohol and cardiovascular disease, which increased risk of conditions mainly caused by high blood pressure but slightly decreased risks of heart attacks. Finally, this study supports adoption of lower limits of alcohol consumption than are recommended in most current guidelines (https://www.nhs.uk/news/lifestyle-and-exercise/people-who-drink-above-uk-alcohol-guidelines-lose-one-two-years-life/).

The Lancet article is following a path that does not support most recent scientific evidence. The Mediterranean diet has been accepted as one of the world's healthiest diets, small amounts of alcohol consumption is are allowed in this diet. A value of one was given to men consuming from 10 g to less than 50 g of ethanol per day and to women consuming from 5 g to 25 g (Trichopoulou, 2005). In addition, The European Association for the Study of the Liver (EASL) allow alcohol consumption below 30g/day for men and 20g/day for women. Because daily alcohol consumption up to 30 g (men) or 20 g (women) is insufficient to induce alcoholic steatosis and might even be protective against Nonalcoholic fatty liver disease (NAFLD), nonalcoholic steatohepatitis (NASH) and fibrosis as compared with total abstinence (European Association for the Study of the Liver, 2016).

*Corresponding author: **Atilla BEKTAS,**
Department of Internal Medicine and Gastroenterology, Akropol Hospital, Ankara, Turkey.

There was a positive correlation between moderate alcohol use and decreased NASH and fibrosis, ~~but~~ namely heavy drinking may accelerate fibrosis progression and development of hepatocellular carcinoma in patients with advanced fibrosis (Veeral, 2017). Light to moderate ethanol levels may also directly reduce inflammation by increasing HDL cholesterol and adiponectin levels, by improving insulin sensitivity and endothelial function. In particular, those individuals who drank between 5 and 14.9 g of alcohol per day had significantly lower risk of CVD compared to those who abstained from alcohol or drank 15 g of alcohol per day or more (https://academic.oup.com/ageing/article/45/6/747/2499235). Furthermore, there are different kinds of alcohol containing beverages such as wine, beer or vodka. Red wine contains resveratrol and this ingredient can be beneficial for health at certain doses. The French paradox is the observation of low coronary heart disease (CHD) related death rates despite high intake of dietary cholesterol and saturated fat (Renaud, SD, 1992). Moderate alcohol drinking (two or three times a day) has a protective effect against CHD. Alcohol intake raises high density lipoprotein (HDL) cholesterol concentrations, and approximately 50% of the risk reduction attributable to alcohol consumption is explained by changes in HDL cholesterol (Gronbaek, 2000). Red wine contains a variety of polyphenols derived from grape skins. One of the most studied polyphenols is resveratrol, which is found most abundantly in grapes and, therefore, red wine has a range of promising health benefits (Wu, 2011).

Age- standardized weights determined by the DALY rate in 2016, for both sexes The dotted line is a reference line for a relative risk of 1. DALY=disability-adjusted life-year

Figure 1. Weighted relative risk of alcohol for all attributable causes by standard drinks consumed per days

Heavy ethanol consumption is harmful to human health, and there is no doubt about that within the scientific evidence. Alcohol should not be used by risky groups, such as children, the elderly and those with a secondary disease. Moreover, persistent alcohol use may also result in physical dependence leading to significant health problems. However, the aim of science is to deal with facts and evidence-based information before the conclusion can be generalized. We do not have enough data in the social context to prove and generalize the negative effects of moderate alcohol consumption on health. Furthermore, some other studies pointing to the beneficial effects of alcohol-like consumption of red wine containing positive antioxidants such as resveratrol have been reported. Numerous epidemiological studies have also maintained that a moderate consumption of wine lowered the risks of mortality due to coronary diseases (Renaud, 1998; Goldberg, 1999).

Thus, we do not have clear evidence that moderate alcohol use may be harmful. Further studies on this issue are needed. When we further examine the study which constitutes the basis of the Lancet article we clearly notice that it is an observational study (GBD, 2016). Observational studies usually offer low levels of evidence. Results of any observational study are viewed with suspicion, but randomized, controlled trial is considered to reveal truth (Concato, 2004). Observational study has bias within its design not present in the randomized trial (Petrisor, 2007). Observational studies in nutrition are only supposed to be hypotheses, not evidence-based statements about how a single food or nutrient would increase or decrease the risk of disease. However in the Lancet article, authors used definitive, causal language. Furthermore, when we look at Figure 1 in the study which constitutes the basis of the present article (Gakidou, 2018) we notice that the difference in health risk between those who do not drink and those who have a daily drink (10 ml of pure ethanol per serving) is negligible. The risk factor between zero and one drink, as seen at the left bottom corner of the chart, is virtually indistinguishable. This tiny difference is quite insignificant for an observational study.

Conclusion

In conclusion, we agree with the opinion and the recommendations of the article about keeping children away from alcohol. However, the views in the article on ethyl alcohol and its consumption-related changes do not always concur with the existing literature, given the above-mentioned scientific evidence.

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