

# Study suggests lower risk of coronary heart disease from alcohol, even with hazardous drinking

April 27 2011

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A study suggests a lower risk of coronary heart disease from alcohol, even with hazardous drinking.

The analysis assesses the 12-month prevalence of [coronary heart disease](#) (CHD) in individuals according to their category of [alcohol](#) use. The 2001 National Epidemiologic Survey on Alcohol and Related Conditions study (the NESARC study, n = 43,093) identified 16,147 abstinent individuals, 15,884 moderate [consumers](#), 9,578 hazardous drinkers — defined as exceeding sex-specific weekly limits established by the World Health Organization, and 1,484 alcohol-dependent subjects. Diagnoses were generated using the Alcohol Use Disorder and Associated Disabilities Interview Schedule-DSM-IV version. Both moderate and hazardous drinking were associated with decreased odds of CHD when compared with abstinence, whereas odds of CHD were not significantly different between alcohol-dependent and abstinent participants. A moderate or even a hazardous consumption of alcohol was associated with a decreased likelihood of CHD after controlling for socio-demographic, psychiatric, and addictive risk factors. Our study shows that alcohol may have cardio-protective effects not only in moderate drinkers, but also in individuals with patterns of use traditionally considered as hazardous.

**International Scientific Forum on Alcohol Research  
Comments**

There were adequate numbers of subjects in most analysis groups, in that 36% of subjects were abstinent in the last year and almost one quarter of subjects were in the group classified as "hazardous drinking." One Forum reviewer commented: "This exhibition of a rightward extension of the revered J-shaped curve for coronary [heart disease](#) (CHD) has been reported before. I find the results acceptable. I wonder, however, what happens to the rates of cirrhosis and other directly alcohol-related disorders and what might be the long-term total mortality experience in this group." An interesting finding in this study is that participants with CHD were more likely to have lifetime mood disorder, lifetime anxiety disorder, and personality disorder than those without CHD.

If indeed the risk of coronary disease does not increase despite consuming alcohol at a level often classified as "hazardous," it is possible that the increase in cardiovascular disease from heavy drinking reported in many studies may be due to arrhythmias, cardiomyopathy, or other heart conditions that are not actually coronary artery disease.

Limitations to paper: Appropriate socio-economic variables were available for adjustment for confounding, with good assessments for alcohol intake, tobacco use, and drug abuse. However, sick quitters and unhealthy hazardous drinkers dying earlier than the healthy ones may have confounded the results. Further, unmeasured factors such as exercise and diet that were not adjusted for may have led to further confounding.

A key concern of Forum reviewers related to the method used to diagnose CHD in this analysis. Not only was it self-reported, but only 1.0% of cases stated that they had had a myocardial infarction, the primary "hard" criterion for CHD. Most reported angina pectoris, a "softer" criterion for coronary disease. Further, "arteriosclerosis" is a vague term and not one generally used in normal communication with patients. It could have referred to conditions other than CHD.

Most studies have found that frequent, light-to-moderate drinking is the healthiest approach for alcohol intake, and the average amount per week is an inadequate measure of intake. In this study, it is unclear whether or not the frequency of drinking was informative regarding CHD. Further, both rare, occasional, and regular drinkers who did not meet criteria for "hazardous drinking" were included in the "moderate" group, so it is not possible to separate daily drinkers from occasional drinkers.

The authors state that "Hazardous drinking was defined as exceeding sex-specific weekly limits as defined by the NIAAA (men, more than 14 drinks of 14g per week; women, more than 7 drinks per week) or exceeding daily drinking limits (men,  $\geq 5$  drinks per day; women,  $\geq 4$  drinks per day) at least once in the past year." One possibility is that this definition of "hazardous drinking" is too restrictive, including some people who might better be classified as moderate drinkers. As a Forum reviewer commented: "The definition of "moderate drinking" is very strict and the subgroup with 'hazardous drinking' would include many European drinkers with no alcohol problems. The 'hazardous' subgroup includes really hazardous drinking associated with liver disease mortality and detrimental effects on other organs. The heterogeneity of the subgroup of 'hazardous drinkers' is a serious problem of the study."

The authors acknowledge this shortcoming, stating that " . . .the criteria used for the definition of the 'hazardous drinking' subgroup of subjects is too broad. Indeed, women having a little more than one drink every day and men having used five drinks in a single day only once in the previous year are both included in this group. This suggests that alcohol dependence and [hazardous drinking](#) should be routinely distinguished, and that a quantitative assessment of alcohol use may be more relevant than a qualitative approach when assessing the risk of cardiovascular disorders.'

Forum Summary: Using data from The 2001 National Epidemiologic

Survey on Alcohol and Related Conditions study (the NESARC study, n = 43,093), the authors of this paper conclude that alcohol may have cardioprotective effects not only in moderate drinkers, but also in individuals with patterns of use traditionally considered as "hazardous." While such a finding has been shown in some population studies, there were questions by Forum reviewers as to the adequacy of the method for diagnosing coronary artery disease: self-report, with most subjects listing angina pectoris, a "soft" criterion for coronary disease.

In addition, the categories of drinking used in this study were very broad: rare or only occasional drinkers were combined with regular drinkers up to 7 or 14 drinks per week in the "moderate" category, and the "hazardous category" included a broad range of drinkers, from a minimal increase over the recommended limits to very heavy drinkers. The pattern of drinking (especially the number of days per week that alcohol was consumed) was not reported, making it difficult to separate regular from heavy week-end only drinkers. The effects of heavier drinking on other conditions (such as alcohol-related liver disease, mortality, etc.) were not included in this analysis.

It is physiologically possible that even hazardous use of alcohol, like moderate use, may well lead to cleaner arteries and therefore lower rates of coronary artery disease. If this is the case, an explanation for the increases in cardiovascular mortality reported for heavy drinkers in many studies may relate not directly to coronary artery disease, but to conditions such as cardiomyopathy or cardiac arrhythmias. However, the rates of accidents, suicide and other morbidity associated with hazardous alcohol use may well overcome any protective effects on coronary disease.

**More information:** Le Strat Y, Gorwood P. Hazardous drinking is associated with a lower risk of coronary heart disease: Results from a national representative sample. *Am J Addict* 2011;20:257.

Provided by Boston University Medical Center

Citation: Study suggests lower risk of coronary heart disease from alcohol, even with hazardous drinking (2011, April 27) retrieved 24 April 2024 from

<https://medicalxpress.com/news/2011-04-coronary-heart-disease-alcohol-hazardous.html>

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