

Drinking moderate amounts of alcohol is linked to reduced risk of heart failure

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Evidence already exists for the beneficial effects of drinking moderate amounts of alcohol on the risk of developing a number of heart conditions; however, the role it plays in the risk of developing heart failure has been under-researched with conflicting results.

Now, a large study of nearly 15,000 men and women, published online today (Tuesday) in the *European Heart Journal*, shows that drinking up to seven drinks a week in early to [middle age](#) is associated with a 20% lower risk of men developing heart failure in the future when compared to people who did not drink at all, and a more modest 16% reduced risk for women.

Heart failure is a condition in which the heart can no longer pump blood around the body as well as it used to. The most common reason is that the heart muscle has been damaged, for instance by a heart attack. High blood pressure, heart muscle disease (cardiomyopathy), heart valve problems, an irregular heart beat (arrhythmia), viral infections, drinking excessive amounts of [alcohol](#), consuming

recreational drugs and the side-effects of radiotherapy treatment for cancer can all contribute to heart failure developing. Heart failure is a major public health problem with over 23 million people living with it worldwide.

Dr Scott Solomon, Professor of Medicine at Harvard Medical School and Senior Physician at Brigham and Women's Hospital, Boston, USA, Dr Alexandra Gonçalves, a research fellow at Brigham and Women's Hospital, and colleagues analysed data from 14,629 people aged between 45-64 years who had been recruited to the Atherosclerosis Risk in Communities Study between 1987 and 1989 in four communities in the USA. They followed the participants for 24-25 years to the end of 2011, and they questioned them about their alcohol consumption at the start and at each of the three subsequent visits made at three-yearly intervals.

They defined a drink as one that contains 14g of alcohol, equivalent to approximately one small (125ml) glass of wine, just over half a pint or a third of a litre of beer, and less than one shot of liquor such as whisky or vodka. The study participants were divided into six categories: abstainers (people who recorded having drunk no alcohol at every visit by the researchers), former drinkers, people who drank up to seven drinks a week, or between 7-14 drinks, 14-21 drinks, or 21 or more drinks a week.

During the follow-up period 1271 men and 1237 women developed heart failure. The lowest rate of heart failures occurred in those drinking up to 7 drinks per week and the highest rate was seen among former drinkers.

After taking account of various factors that could affect the results such as age, diabetes, high blood pressure, heart disease or heart attacks, body mass index, cholesterol levels, physical activity, education and smoking, men who consumed up to seven drinks a week had a 20% reduced risk of

developing heart failure compared to abstainers, while the risk was reduced by 16% in women consuming the same amount. Former drinkers had the highest risk of developing heart failure - a 19% and 17% increased risk among men and women respectively compared to abstainers. Interestingly, among both men and women consuming the most amount of alcohol (14 or more drinks a week), the risk of heart failure was not significantly different compared to the risk for abstainers. Drinking excessive amounts of alcohol over a long period of time is known to increase the risk of cardiomyopathy. However, the number of very heavy drinkers in the study was small, which could have limited its power to detect such an association.

However, when the researchers looked at death from any cause, there was an increased risk of death of 47% for men and 89% of women who reported consuming 21 or more drinks a week at the start of the study.

Professor Solomon said: "These findings suggest that drinking alcohol in moderation does not contribute to an increased risk of heart failure and may even be protective. No level of alcohol intake was associated with a higher risk of heart failure. However, heavy alcohol use is certainly a risk factor for deaths from any cause.

"The people who were classified as former drinkers at the start of the study had a higher risk of developing heart failure and of death from any cause when compared with abstainers. This could be related to the reasons why they had stopped drinking in the first place, for instance because they had already developed health problems that might have made them more likely to go on to develop heart failure."

The protective effect of moderate drinking were more marginal in women than in men and the authors think this may be due to the fact that women metabolise alcohol in a different way to men and it can affect them differently.

Overall, most participants were abstainers (42%) or former drinkers (19%), with 25% reporting up to seven drinks a week, eight percent reporting seven

to 14 drinks a week, and three percent reporting drinking 14-21 and 21 or more drinks a week respectively. Most drinkers also drank more than one type of drink. This meant that the researchers were unable to assess the role of binge drinking or any differences between types of drink.

"It is important to bear in mind that our study shows there is an association between drinking moderate amounts of alcohol and a lower risk of [heart failure](#) but this does not necessarily mean that moderate alcohol consumption causes the lowered risk, although we did adjust our results to take account, as far as possible, for a variety of other lifestyle factors that could affect a person's risk," concluded Professor Solomon.

More information: "Alcohol consumption and risk of heart failure: the Atherosclerosis Risk in Communities Study", by Alexandra Gonçalves et al. *European Heart Journal*. DOI: [10.1093/eurheartj/ehu514](https://doi.org/10.1093/eurheartj/ehu514)

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