

Alcohol may be more risky to the heart than previously thought

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Levels of alcohol consumption currently considered safe by some countries are linked with development of heart failure, according to research presented on May 22 at Heart Failure 2022, a scientific

congress of the European Society of Cardiology (ESC).

"This study adds to the body of evidence that a more cautious approach to [alcohol consumption](#) is needed," said study author Dr. Bethany Wong of St. Vincent's University Hospital, Dublin, Ireland. "To minimize the risk of [alcohol](#) causing harm to the heart, if you don't drink, don't start. If you do drink, limit your weekly consumption to less than one bottle of wine or less than three-and-a-half 500 ml cans of 4.5% beer."

According to the World Health Organization, the European Union is the heaviest-drinking region in the world. While it is well recognized that long-term heavy alcohol use can cause a type of heart failure called alcoholic cardiomyopathy, evidence from Asian populations suggests that lower amounts may also be detrimental. "As there are genetic and environmental differences between Asian and European populations this study investigated if there was a similar relationship between alcohol and cardiac changes in Europeans at risk of heart failure or with pre-heart failure," said Dr. Wong. "The mainstay of treatment for this group is management of risk factors such as alcohol, so knowledge about safe levels is crucial."

This was a secondary analysis of the STOP-HF trial. The study included 744 adults over 40 years of age either at risk of developing heart failure due to risk factors (e.g. [high blood pressure](#), diabetes, obesity) or with pre-heart failure (risk factors and heart abnormalities but no symptoms). The average age was 66.5 years and 53% were women. The study excluded former drinkers and [heart failure patients](#) with symptoms (e.g. shortness of breath, tiredness, reduced ability to exercise, swollen ankles). Heart function was measured with echocardiography at baseline and follow up.

The study used the Irish definition of one [standard drink](#) (i.e. one unit), which is 10 grams of alcohol. Participants were categorized according to

their weekly alcohol intake: 1) none; 2) low (less than seven units; up to one 750 ml bottle of 12.5% wine or three-and-a-half 500 ml cans of 4.5% beer); 3) moderate (7–14 units; up to two bottles of 12.5% wine or seven 500 mL cans of 4.5% beer); 4) high (above 14 units; more than two bottles of 12.5% wine or seven 500 ml cans of 4.5% beer).

The researchers analyzed the association between alcohol use and heart health over a median of 5.4 years. The results were reported separately for the at-risk and pre-heart failure groups. In the at-risk group, worsening heart health was defined as progression to pre-heart failure or to symptomatic heart failure. For the pre-heart failure group, worsening heart health was defined as deterioration in the squeezing or relaxation functions of the heart or progression to symptomatic heart failure. The analyses were adjusted for factors that can affect heart structure including age, gender, obesity, high blood pressure, diabetes, and vascular disease.

A total of 201 (27%) patients reported no alcohol usage, while 356 (48%) were low users and 187 (25%) had moderate or high intake. Compared to the low intake group, those with moderate or high use were younger, more likely to be male, and had a higher body mass index.

In the pre-heart failure group, compared with no alcohol use, moderate or high intake was associated with a 4.5-fold increased risk of worsening heart health. The relationship was also observed when moderate and high levels were analyzed separately. In the at-risk group, there was no association between moderate or high alcohol use with progression to pre-heart failure or to symptomatic heart failure. No protective associations were found for low alcohol intake.

Dr. Wong said: "Our study suggests that drinking more than 70 g of alcohol per week is associated with worsening pre-heart failure or progression to symptomatic heart failure in Europeans. We did not

observe any benefits of low alcohol usage. Our results indicate that countries should advocate lower limits of safe alcohol intake in pre-heart failure patients. In Ireland, for example, those at risk of heart failure or with pre-[heart failure](#) are advised to restrict weekly alcohol intake to 11 units for women and 17 units for men. This limit for men is more than twice the amount we found to be safe. More research is needed in Caucasian populations to align results and reduce the mixed messages that clinicians, patients and the public are currently getting."

More information: [Heart Failure 2022](#)

Provided by European Society of Cardiology

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