

# Alcohol raises heart disease risk, particularly among women

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Young to middle-aged women who reported drinking eight or more alcoholic beverages per week—more than one per day, on average—were significantly more likely to develop coronary heart disease compared with those who drank less, finds a study presented at the [American College of Cardiology's Annual Scientific Session](#).

The risk was highest among both men and women who reported heavy episodic drinking, or "binge" drinking, and the link between alcohol and heart disease appears to be especially strong among women, according to the findings.

The study focused on 18- to 65-year-old adults and is among the largest and most diverse studies to date examining the links between alcohol and heart disease. Heart attacks and other forms of heart disease are on the rise in younger populations in the U.S., fueling concern about worsening [health outcomes](#). At the same time, alcohol use and [binge drinking](#) have become more common among women than in previous decades.

"When it comes to binge drinking, both men and women with excess alcohol consumption had a higher risk of heart disease," said Jamal Rana, MD, Ph.D., FACC, a cardiologist with The Permanente Medical Group, adjunct investigator in the Division of Research at Kaiser Permanente Northern California and the study's lead author.

"For women, we find consistently higher risk even without binge drinking. I wasn't expecting these results among women in this lower age group because we usually see increased risk for heart disease among [older women](#). It was definitely surprising."

The researchers used data from more than 430,000 people who received care in the Kaiser Permanente Northern California integrated health

organization, including nearly 243,000 men and 189,000 women. Participants on average were 44 years old and did not have heart disease at the start of the study.

Information on participants' alcohol intake was collected during primary care visits using the health organization's standard "Alcohol as a Vital Sign" screening initiative, which includes visual reference posters to help patients estimate alcohol quantities according to standard measurements.

Researchers analyzed the relationship between the level of alcohol intake participants reported in routine assessments from 2014–2015 and coronary heart disease diagnoses during the four-year period that followed. Coronary heart disease occurs when the arteries that supply blood to the heart become narrowed, limiting blood flow. This condition can cause [chest pain](#) and acute events, such as a heart attack.

Based on self-report assessments, researchers categorized participants' overall alcohol intake as low (one to two drinks per week for both men and women), moderate (three to 14 drinks per week for men and three to seven drinks per week for women), or high (15 or more drinks per week for men and eight or more drinks per week for women).

They separately categorized each participant as either engaging in binge drinking or not. Binge drinking was defined as more than four drinks for men or more than three drinks for women in a single day in the past three months. People who reported no alcohol use were not included in the study. The researchers adjusted the data to account for age, physical activity, smoking and other known cardiovascular risk factors.

Overall, 3,108 study participants were diagnosed with coronary heart disease during the four-year follow-up period, and the incidence of coronary heart disease increased with higher levels of alcohol consumption.

Among women, those who reported high alcohol intake had a 45% higher risk of heart disease compared with those reporting low intake and had a 29% higher risk compared with those reporting moderate intake. The difference was greatest among individuals in the binge drinking category; women in this category were 68% more likely to develop heart disease compared with women reporting moderate intake. Men with high overall intake were 33% more likely to develop heart disease compared with men who had moderate intake.

"Women feel they're protected against heart disease until they're older, but this study shows that even when you're young or middle aged, if you are a heavy alcohol user or binge drink, you are at risk for [coronary heart disease](#)," Rana said.

The results showed no significant difference in risk between people who reported moderate versus low alcohol intake, regardless of whether they also were categorized as binge drinking.

Alcohol has been shown to raise blood pressure and lead to metabolic changes that are associated with inflammation and obesity. Women also process alcohol differently than men. Researchers said the study calls attention to the health risks of alcohol consumption and underscores the importance of considering [alcohol use](#) in heart disease risk assessment and prevention efforts.

"When it comes to heart disease, the number one thing that comes to mind is smoking, and we do not think about alcohol as one of the vital signs," Rana said. "I think a lot more awareness is needed, and alcohol should be part of routine health assessments moving forward."

One limitation of the study is that people tend to under-report their alcohol intake when asked by a health care provider. As a result, the study likely provides conservative estimates of the heart disease risk

associated with alcohol consumption.

The researchers also said the manner in which alcohol screening is performed in a health clinic can influence how patients and clinicians discuss the risks of alcohol consumption, and that further research could help determine optimal strategies.

**More information:** Rana will present the study, "Habitual Alcohol Intake, with and without 'Binge' Drinking and Risk of Cardiovascular Disease Among 697,985 Men and Women," on Saturday, April 6, 2024.

Provided by American College of Cardiology

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