

# **Study finds drinking wine with meals was associated with lower risk of type 2 diabetes**

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An analysis of health data for nearly 312,400 current drinkers suggests consuming alcohol, most notably wine, with meals is associated with a lower risk of developing type 2 diabetes, according to preliminary research to be presented at the American Heart Association's Epidemiology, Prevention, Lifestyle & Cardiometabolic Health Conference 2022.

"The effects of [alcohol consumption](#) on health have been described as a double-edged sword because of its apparent abilities to cut deeply in either direction—harmful or helpful, depending on how it is consumed," said study author Hao Ma, M.D., Ph.D., a biostatistical analyst at the Tulane University Obesity Research Center in New Orleans. "Previous studies have focused on how much people drink and have had mixed results. Very few studies have focused on other drinking details, such as the timing of [alcohol](#) intake."

Alcohol consumption is linked to short- and long-term health risks, including motor vehicle crashes, violence, sexual risk behaviors, high blood pressure, obesity, stroke, breast cancer, liver disease, depression, suicide, accidents, alcohol abuse and alcoholism. These [health risks](#) increase as the amount of alcohol an individual drinks increases. For some cancers and other health conditions, the risk increases even at very low levels of alcohol consumption—less than one drink daily.

The American Heart Association and the U.S. Centers for Disease Control and Prevention (CDC) recommend that adults who do not drink alcohol should not start. Among those who drink alcohol regularly, they

should talk with their doctors about the benefits and risks of consuming alcohol in moderation. Some people should not drink at all, including women who are pregnant or trying to get pregnant, people under the age of 21 and people with certain health conditions.

A key for those who already drink alcohol is moderation. Moderate drinking is defined as one glass of wine or other alcoholic beverage daily for women and up to two glasses daily for men. That works out to be up to 14 grams, or about 150 ml, of wine a day for women and up to 28 grams, or about 300 ml, of wine daily for men, according to Ma.

"Clinical trials have also found that [moderate drinking](#) may have some health benefits, including on glucose metabolism. However, it remains unclear whether glucose metabolism benefits translate into a reduction of type 2 [diabetes](#)," he said. "In our study, we sought to determine if the association between alcohol intake and risk of type 2 diabetes might differ by the timing of alcohol intake with respect to meals."

In this study researchers specifically examined the effect moderate drinking may have related to new-onset type 2 diabetes among all study participants over about 11 years (between 2006 and 2010). Data was reviewed for nearly 312,400 adults from the UK Biobank who self-reported themselves as regular alcohol drinkers. The participants did not have diabetes, cardiovascular diseases or cancer at the time of study enrollment. People who reduced their alcohol consumption due to illness, doctor's advice or pregnancy were excluded from the study. The average age of participants was about 56 years, slightly more than half of the adults were women and 95% were white adults.

The analysis found:

- During an average of nearly 11 years of follow-up, about 8,600 of the adults in the study developed type 2 diabetes.

- Consuming alcohol with meals was associated with a 14% lower risk of type 2 diabetes compared to consuming alcohol without eating food.
- The potential benefit of moderate drinking on type 2 diabetes risk was evident only among the people who drank alcohol during meals, although the specific time of meals was not collected in this study.
- The beneficial association between alcohol drinking with meals and type 2 diabetes was most common among the participants who drank wine vs. other types of alcohol.
- Consuming wine, beer and liquor had different associations with type 2 diabetes risk. While a higher amount of wine intake was associated with a lower risk of type 2 diabetes, a higher amount of beer or liquor was associated with a higher risk of type 2 diabetes.

"The message from this study is that drinking moderate amounts of wine with meals may prevent type 2 diabetes if you do not have another [health](#) condition that may be negatively affected by moderate alcohol consumption, and in consultation with your doctor," Ma said.

Despite the findings of this robust analysis of healthy drinkers, the relationship between alcohol consumption and new-onset type 2 diabetes remains controversial, according to Robert H. Eckel, M.D., FAHA, a past president (2005-2006) of the American Heart Association, who was not involved in the study.

"These data suggest that it's not the alcohol with meals but other ingredients in wine, perhaps antioxidants, that may be the factor in potentially reducing new-onset type 2 diabetes. While the type of wine, red versus white, needs to be defined, and validation of these findings and mechanisms of benefit are needed, the results suggest that if you are consuming alcohol with meals, [wine](#) may be a better choice," said Eckel,

professor of medicine, emeritus in the Division of Endocrinology, Metabolism and Diabetes and the Division of Cardiology at the University of Colorado Anschutz Medical Campus.

A study limitation is that most of those participating were self-reported white adults and of European descent. It is unknown whether the findings can be generalized to other populations.

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**More information:** This preliminary research was presented at the American Heart Association's [Epidemiology, Prevention, Lifestyle & Cardiometabolic Health Conference 2022](#).

Provided by American Heart Association

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