



Is Any Amount of Alcohol Safe? Experts Weigh In

By Lindsay Morris
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Much has been said about the [detrimental effects](#) of excessive alcohol consumption. But when it comes to moderate drinking, opinions are mixed. Some say no amount of drinking is healthy, whereas others point to the health benefits of drinking a glass a day. So, which is correct? And does moderate drinking have a place in a healthy diet? We dug into the latest research and consulted the experts to answer some of your most frequently asked questions.

Alcohol and Heart Health

[Heavy drinking](#) can increase your risk of heart failure, hypertension, heart attack, and stroke. And one 2022 report, published in *JAMA Network Open*, says that drinking *any* quantity of alcohol can negatively affect your heart.

The study, conducted by researchers at Massachusetts General Hospital and the Broad Institute of MIT and Harvard, included nearly 400,000 people—with an average age of 57 years and average alcohol consumption of 9.2 drinks per week—who were part of the UK Biobank, a large-scale biomedical database containing in-depth genetic and health information.

Researchers used genetic and phenotypic data to highlight the association between habitual drinking and cardiovascular disease. They found that subjects with genetic variants that predicted heavy alcohol consumption were more likely to drink more and have hypertension and coronary artery disease. There were also substantial differences in cardiovascular risk across the alcohol-consumption spectrum. Risk increased minimally when someone went from zero to seven drinks a week, but it jumped much higher when someone progressed from seven to 14 drinks per week. The risk was especially high by the time someone consumed 21 or more drinks a week.

These findings suggest a rise in cardiovascular risk even at levels the U.S. Department of Agriculture has deemed low risk (i.e., below two drinks a day for men and one drink a day for women). However, not everyone is sold on the idea that all alcohol is bad for the heart.

“It’s like everything else in science: You have to look at the entirety of the data,” says cardiologist [Joel Kahn, MD](#), author of *The Plant-Based Solution*.

The *JAMA Network Open* study used [Mendelian randomization](#), an analytic method that uses measured gene variation to determine whether an observed association between a risk factor and a clinical outcome is consistent with a causal effect.

Rather than assigning people to abstain or drink at various levels, researchers looked at certain genetic variants that predisposed individuals to heavier or lighter drinking. They queried the database to see if those with variants linked to greater alcohol consumption had a higher incidence of heart disease and hypertension than those with variants linked to lower consumption or abstinence.

“It’s a predictive model that has flaws,” says Kahn.

Kahn points out that within the same month, an [unpublished National Institutes of Health–funded study](#) from Tulane University School of Public Health and Tropical Medicine (which used the same biobank) reported a 14 percent lower risk of Type 2 diabetes among people who drank wine with meals. He also notes that certain wines, including Sardinian cannonau, pinot noir, and French Tannat, are rich in the polyphenol [resveratrol](#), which may help protect the lining of blood vessels in the heart, reduce LDL (bad) cholesterol, and prevent blood clotting.

Still, although some studies suggest wine is better for the heart than beer or hard liquor, [others do not](#), according to a review published in the American Heart Association’s journal *Circulation* in 2017.

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“[Alcohol consumption] is a complex topic that will never be studied by a randomized trial,” says Kahn. “And it’s probably what we’d call a [J-shaped curve](#) or a sweet spot or Goldilocks. There’s clearly too much. And there’s probably not too little, but is there a just-right spot? A glass of low-alcohol, low-sugar red wine three, four days a week, is that favorable? For a lot of situations, it appears to be.”

Is Alcohol Bad for the Brain?

While [heavy drinking](#) has been linked to the atrophy of gray and white matter and the risk of ischemic and hemorrhagic stroke, there has been conflicting evidence regarding the effects of moderate drinking on the brain.

A 2020 [University of Georgia study](#) found that light to moderate drinkers (people who had a drink or two a day) tended to perform better on cognitive tests than nondrinkers.

Meanwhile, a 2022 [study](#) published in *Nature Communications* reviewed brain MRIs from more than 36,000 middle-aged adults and found that even light to moderate alcohol consumption was associated with reductions in overall brain volume, similar to the shrinkage that occurs with aging. Among 50-year-olds, researchers found that increasing from one alcohol unit a day to two (half a beer or half a glass of wine to a full pint or wine glass) resulted in the brain-shrinkage equivalent to aging two years. Increasing from two units to three was like aging three and a half years. Even going from zero drinks to just half a beer or glass of wine a day was associated with shrinkage indicative of an extra half a year of aging.

“Alcohol can definitely have a damaging effect on the brain, but the question is how much alcohol intake is needed to bring about those damaging effects,” says Marc Dingman, PhD, associate teaching professor of biobehavioral health at The Pennsylvania State University and author of *Your Brain, Explained*. “The major shortcoming of [the study published in *Nature Communications*] is that they collected all of their data at one point in time. The reason this is a problem is that it makes it more difficult to determine if the alcohol consumption is actually causing the structural changes to the brain.”

On the other hand, Dingman points out, the University of Georgia study used a long-term approach, tracking participants over a decade and testing them every two years.

Still, he says, such observational studies tend to have a lot of variables, which explains why health advice about dietary practices changes over time. And it remains unclear what would cause beneficial effects of alcohol consumption. “Is it the pleasure of having a drink, the benefits of potential social interaction that might go along with it, the reduction in stress?” he asks.

When it comes to drinking, Dingman recommends erring on the side of caution. “In my opinion, there’s not enough evidence to be confident the potential cognitive benefits of low alcohol consumption outweigh the potential risks—both to the brain and to overall health.”

Does Moderate Alcohol Consumption Increase Cancer Risk?

Drinking alcohol led to nearly 750,000 cancer cases in 2020, according to a modeling study published in *Lancet Oncology*. While most instances were attributed to heavy drinking, light to moderate drinking (one or two alcoholic beverages a day) accounted for more than 100,000 cases of cancer.

“When people do partake in drinking alcoholic beverages, they should know that there’s a health risk to it,” says William Li, MD, physician, scientist, president and medical director of the Angiogenesis Foundation, and author of *Eat to Beat Disease: The New Science of How Your Body Can Heal Itself*.

Alcohol’s underlying chemical, ethanol, is known to be toxic to every organ in the body, says Li. And, he says, it’s also highly correlative with cancer in several ways.

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For one, [alcohol can damage DNA](#) and cause healthy cells to develop mutations. Secondly, alcohol has been shown to [suppress the immune system](#), which we rely on to conduct surveillance in our bodies against microscopic cancers. Third, alcohol can help spark [new blood vessels](#) to grow and feed cancers.

“Consuming alcohol is a revered social tradition that should be practiced modestly,” says Li. “On the other hand, from the medical perspective, if you asked me to put on my physician’s hat, I would say that alcohol in every case should be considered a toxin to the body.”

Is 1 Drink a Day OK?

“Whether [one glass a day] is where the line is drawn is, I think, rather arbitrary and not exactly an established, optimal intake,” says Deirdre Tobias, ScD, assistant nutrition professor at Harvard University’s T.H. Chan School of Public Health. “If someone was otherwise going to be a nondrinker for whatever reason, and then heard recommendations to start drinking, that could have its own public health implications on the other end if the person’s perhaps predisposed to be more of a heavy drinker. That’s important to keep in mind with public health recommendations.”

Additionally, not all glasses of alcohol are equal, says Tobias, noting that many people consume alcohol in the form of sugary cocktails. “If [your daily drink] is a margarita or a rum and coke ... sometimes those can contain hundreds of calories. And so even a modest intake of those types of beverages would add up and [could] have its own health effects independent of the alcohol.”

The Bottom Line

Consuming alcohol, even in moderation, can negatively impact the brain and increase the risk for several types of cancer. And while previous observational studies have linked light alcohol consumption with heart-health benefits, recent research calls into question the nature of that connection.

“If you choose to embark on the social practice of drinking an alcoholic beverage, just recognize that there are well-defined health risks,” says Li.

To learn more about scientifically documented connections between diet and diseases including Type 2 diabetes, heart disease, and cancer, explore our [Health Topics](#).