

## Moderate drinking improves heart health? Genes say ‘not so fast’

An alcoholic beverage a day, especially wine, is widely believed to help keep heart disease risk low, but [research from the University of Gothenburg](#) shows that only about 15 percent of the human population — those with a specific the form of the [cholesteryl ester transfer protein \(CETP\)](#) gene — actually gain this benefit from moderate alcohol consumption.

What the study shows, beyond the fact that our understanding of alcohol's health benefits needs to be more subtly shaded, is that genetics may play an underrated role in many health factors. We talk about health in absolutes, but how many of the “rules” we follow (e.g. don't eat red meat) are in fact conditional on our particular genetic makeup?

The Gothenburg study, published in the journal *Alcohol*, re-examined the effects of moderate alcohol consumption on 618 patients of both genders, under the age of 75. The researchers collected blood samples from all participants and included over 3,000 types of heart-healthy control subjects. In addition, all participants were measured for parameters such as height and weight.

First, researchers singled-out patients with a genotype (CETB TaqIB) known to reduce the risk of heart disease. Within these patients, they found two distinct groups with based on whether they had the B1 or B2 version of the CETB gene.

Results revealed that people with the B2 allele exhibited a lower risk of coronary heart disease, and the result was more significant on people who enjoyed moderate alcohol consumption. However, in their testing group, only 19 percent of their patients had the B2 allele. People who already have an innate resistance allele mutation to heart disease had their resistance boosted further by moderate alcohol consumption.

Professor Lauren Lissner, head of the Public Health Epidemiology Unit at Gothenburg and an author of the study, stress that a common attitude toward alcohol focuses on the idea that “moderate drinking has health benefits for everyone.” Unfortunately, evidence suggests that this advice may be untrue for a large portion of the population.

Now consider other health advice in the context of these findings.

When my mother was pregnant with me, her obstetrician told her to drink a small glass of red wine each day to benefit her heart and my fetal development. Some doctors recommend that you completely avoid alcohol when you're expecting; others still say that occasional light drinking is unlikely to harm your baby.

A 2009 [study published in the \*Journal of Sexual Medicine\*](#) found that the chances of erectile dysfunction were reduced by 25 to 30 percent among alcohol drinkers. The lead researcher, Kew-Kim Chew, an epidemiologist at the University of West Australia, conducted the study with 1,770 Australian men. However, even Chew himself said that more research was needed to accurately complete the connection between male performance and alcohol.

It seems likely as more studies like that at Gothenberg take place, we'll come to understand that our health recommendations cannot be issued as absolutes, whether they're about alcohol or exercise or disease. Instead, genetic analysis will allow us to follow increasingly customized guidelines based on our own unique genetics. Until then, perhaps we should take sweeping medical recommendations with a grain of salt.

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#### **Additional Resources:**

- [Select Few Can Truly Drink to Their Health](#), Scientific American
- [Do you Drink Too Much Alcohol?](#) Science 2.0
- [Alcohol: Balancing the Benefits and Risks](#), Harvard School of Public Health