

Genetic study ties higher alcohol consumption to increased stroke and PAD risk

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Higher alcohol consumption was shown to be associated with an increased risk of having a stroke or developing peripheral artery disease, according to new research published today in *Circulation: Genomic and Precision Medicine*, an American Heart Association journal.

While [observational studies](#) have consistently shown that heavy [alcohol](#) consumption is associated with an [increased risk](#) of certain cardiovascular diseases, they often use self-reported data and are unable to determine cause. Researchers in this study used a different technique called Mendelian randomization that identifies genetic variants with a known association to potential risk factors to determine the potential degree of [disease](#) risk.

"Since genetic variants are determined at conception and cannot be affected by subsequent environmental factors, this technique allows us to better determine whether a risk factor—in this case,

heavy alcohol consumption—is the cause of a disease, or if it is simply associated,"

said Susanna Larsson, Ph.D., senior researcher and associate professor of cardiovascular and nutritional epidemiology at Karolinska Institutet in Stockholm, Sweden. "To our knowledge, this is the first Mendelian randomization study on alcohol consumption and several cardiovascular diseases."

Researchers analyzed the genetic data from several large-scale consortia and the UK Biobank, which follows the health and well-being of 500,000 United Kingdom residents. Results indicate that with higher alcohol consumption:

- a three-fold increase of peripheral artery disease, a narrowing of arteries that results in reduced [blood flow](#), usually to the legs;
- a 27% increase in stroke incidence; and
- some evidence for a positive association of coronary artery disease, atrial fibrillation and aortic aneurysm.

"Higher alcohol consumption is a known cause of death and disability, yet it was previously unclear if alcohol consumption is also a cause of cardiovascular disease. Considering that many people consume alcohol regularly, it is important to disentangle any risks or benefits," Larsson said.

Researchers noted that this study suggested the mechanism by which higher consumption was associated with the risk of stroke and PAD may be blood pressure.

According to a statement on dietary health, the American Heart Association believes that alcohol intake can be a component of a healthy diet if consumed in moderation (no more than one [alcoholic drink](#) per day for women and 2 alcohol

drinks per day for men) and only by nonpregnant women and adults when there is no risk to existing health conditions, medication-alcohol interaction, or personal safety and work situations. One drink is equivalent to 12 ounces of beer (5% alcohol); 5 ounces of wine (12% alcohol); or 1.5 ounces of 80-proof distilled spirits (40% alcohol).

The study has some limitations. According to Dr. Larsson, the prevalence of heavy drinking in the UK Biobank was low, and it is unlikely that the burden of increased risk of cardiovascular disease is restricted to heavy drinkers alone. Also, the exact amount and frequency of alcohol consumed could not be quantified for this study. The researchers said the causal role of [alcohol consumption](#) on cardiovascular diseases other than stroke and [peripheral artery disease](#) requires further research.

Provided by American Heart Association

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