

## Binge Drinking in College Can Lead to Heart Disease Later in Life

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Frequent binge drinking in college can cause more than a hangover.

Regularly consuming multiple drinks in a short window of time can cause immediate changes in circulation that increase an otherwise healthy young adult's risk of developing cardiovascular disease later in life, according to research published online in the *Journal of the American College of Cardiology*.

"Regular binge drinking is one of the most serious public health problems confronting our college campuses, and drinking on college campuses has become more pervasive and destructive," said Shane A. Phillips, PT, PhD, senior author and associate professor and associate head of physical therapy at the University of Illinois at Chicago. "Binge drinking is neurotoxic and our data support that there may be serious cardiovascular consequences in young adults."

College students age 18 to 25 years old have the highest rates of binge drinking episodes, with more than half engaging in binge drinking on a regular basis. Prior studies have found that binge drinking among adults age 40 to 60 years old is associated with an increase in risk for stroke, sudden cardiac death and heart attack, but the effect on younger adults has not been studied.

Researchers looked at two groups of healthy nonsmoking college students: those who had a history of binge drinking and those who abstained from alcohol. Binge drinking was defined as consuming five or more standard size drinks (12 ounces of beer, 5 ounces of wine, 1.5 ounces of 80 proof spirits or 8-9 ounces of malt liquor) in a two-hour period for males and four or more standard size drinks in a two-hour period for females. On average, the students who binge drink had six such episodes each month over four years. Abstainers were defined as having consumed no more than five drinks in the prior year.

Students were also questioned about their medical history, diet, history of family alcohol abuse and frequency of binge drinking.

The study found that the binge drinkers had impaired function in the two main cell types

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(endothelium and smooth muscle) that control blood flow. These vascular changes were equivalent to impairment found in individuals with a lifetime history of daily heavy alcohol consumption and can be a precursor for developing atherosclerosis, or hardening of the arteries, and other cardiovascular diseases such as heart attack and stroke.

Binge drinkers were not found to have increased blood pressure or cholesterol, which are well-established risk factors for heart disease; however, both high blood pressure and cholesterol cause changes in vascular function similar to what the students demonstrated.

"It is important that young adults understand that binge drinking patterns are an extreme form of unhealthy or at-risk drinking and are associated with serious social and medical consequences," Mariann Piano, PhD, RN, co-author of the study and professor and head of the department of biobehavioral health science at the University of Illinois at Chicago, said. "Discoveries and advances in many different areas of medical science have cautioned against the notion that youth protects against the adverse effects of bad lifestyle behaviors or choices."

According to the investigators, more research is needed to determine if damage caused by binge drinking in young adulthood can be reversed before the onset of cardiovascular disease and to determine the timeframe for onset of disease.

Visit [www.CardioSmart.org](http://www.CardioSmart.org) for more information on the harmful effects of heavy alcohol use on heart health or for information on teen alcohol abuse.

[Click here](#) to learn more about Underage and College Drinking on NCADD's website.