

## **To Eating whole Fruit Less often a Survey of 371,000 Adults Links Heart Disease**

Researchers examined differences in the frequency of whole-fruit and 100% fruit-juice consumption between individuals with and without [cardiovascular disease](#) (CVD) or CVD risk factors in the United States (US).

The 2020–25 [Dietary Guidelines for Americans](#) (DGAs) recommend two cup-equivalents of fruit per day for a 2,000-calorie dietary pattern. The 2025–30 DGAs retain that recommendation while advising people to limit and dilute juice. Yet a majority of the population (~80%) fails to meet the recommended levels, consuming less than one cup of fruit per day. Whole fruit accounts for about half of reported fruit intake in the US, according to figures cited by the authors.

The fiber, nutrients, and bioactive compounds in whole fruit may work together to support health. Higher fruit consumption has been associated with a lower risk of various [chronic diseases](#), including CVD.

While the relationship between whole fruit intake and CVD risk is well known, the relationship between [fruit juice](#) and CVD remains less clear. How the consumption frequencies of whole fruit and fruit juice differ between people with and without CVD or CVD risk factors is also uncertain.



### **Study**

In the present study, researchers investigated differences in the frequency with which adults with and without CVD risk factors or CVD in the US consumed whole fruit and 100% fruit juice. They used data from the Behavioral Risk Factor Surveillance System (BRFSS), a series of telephone-based surveys that collect data on [chronic conditions](#), access to care, use of preventive services, and risk behaviors among US residents.

This study used data from the 2019 BRFSS, which included 418,268 adults. The team performed a secondary analysis of the BRFSS data to examine whether the frequencies of whole-fruit and fruit-juice consumption differed between people with and without CVD and between those with and without CVD risk factors. CVD measures included [myocardial infarction](#) (heart attack), angina/coronary heart disease (CHD), and stroke.

CVD risk factors included self-reported high cholesterol and high blood pressure (BP). Independent-samples t tests and regression models were used to evaluate whether the mean frequencies of whole-fruit and fruit-juice consumption differed between groups with CVD risk factors or CVD and those without. Regression analyses were controlled for age, race or ethnicity, education, [smoking status](#), and income.

## **Results**

In total, 371,038 BRFSS respondents were included. Based on [survey-weighted percentages](#), just over half were female (51%), 62.3% were non-Hispanic White, and those aged 65 years or older formed the largest age category (21.8%).

On average, fruit juice was consumed 0.3 times per day, while whole fruit was consumed 1.06 times per day. These figures describe frequency, not the number of cups or servings consumed. In the respective analyses, 151,983 respondents reported high blood pressure, and 130,399 reported high cholesterol. Further, 21,603, 21,151, and 16,489 respondents reported a heart attack, angina/CHD, and [stroke](#), respectively.

In the initial comparisons, the frequency of fruit juice consumption was higher among individuals with high BP, a heart attack, stroke, or angina/CHD compared to those without the respective CVD risk factor or condition. It was lower in subjects with high [cholesterol](#) than in those without.

Whole-fruit consumption was less frequent in respondents with high BP, high cholesterol, a heart attack, CHD, or stroke compared to groups without the respective [CVD risk factor](#) or condition.

In regression analyses, participants with high cholesterol consumed [fruit juice](#) less frequently, whereas those with a heart attack consumed it more frequently. Fruit juice consumption frequency did not differ significantly after adjustment between individuals with and without high BP, stroke, or CHD.

After adjustment, whole-fruit consumption was less frequent among participants reporting [high BP](#), high cholesterol, CHD, or a heart attack.

The initial whole-fruit difference between those with and without stroke did not persist after adjustment. The differences in consumption frequency were small. These comparisons cannot establish whether dietary habits preceded the reported [diagnoses](#).

## **Conclusion**

Collectively, individuals with less favorable CVD status (high BP, high cholesterol, CHD, or a heart attack) reported less frequent [whole-fruit consumption](#); adjusted fruit-juice differences remained only for high cholesterol and heart attack, in opposite directions.

The study's limitations include its cross-sectional design (which precludes causal inference) and the possibility of respondents misclassifying [sugar-sweetened beverages](#) as fruit juice. Consumption may also have changed after a diagnosis.

The survey measured how often participants consumed fruit and juice, not how much they consumed on each occasion, and its respondents were not representative of the US population. The study controlled for several demographic factors and smoking but did not account for some

lifestyle factors, including [physical activity](#), body mass index, and whole-grain and vegetable intake.

The study also did not assess comorbidities or address potential overlap between whole-fruit and fruit-juice consumers. One author disclosed employment with VDF [FutureCeuticals Inc.](#) and tuition-related financial support.

Further studies may investigate how CVD status influences fruit consumption and define strategies to promote [fruit intake](#).

**Source:**

<https://www.news-medical.net/news/20260928/A-survey-of-371000-adults-links-heart-disease-to-eating-whole-fruit-less-often.aspx>