

Study strengthens link between low dietary fiber intake and increased cardiovascular risk

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A new study published in the December issue of *The American Journal of Medicine* shows a significant association between low dietary fiber intake and cardiometabolic risks including metabolic syndrome, cardiovascular inflammation, and obesity. Surveillance data from 23,168 subjects in the National Health and Nutrition Examination Survey (NHANES) 1999-2010 was used to examine the role dietary fiber plays in heart health.

In the current study investigators have taken a closer look at possible sex, age, racial/ethnic, and socioeconomic disparities in dietary fiber consumption, as well as examined the association between dietary fiber intake and various cardiometabolic risk factors.

Dietary fiber, which previous studies have shown may assist in lowering blood pressure, cholesterol levels, and inflammation, is thought to play an important role in reducing cardiovascular risk. Despite this knowledge, investigators found that dietary fiber intake was consistently below recommended intake levels for NHANES participants.

The Institute of Medicine defines recommended intake levels according to age and sex: 38g per day for men aged 19-50 years, 30g per day for men 50 and over, 25g for women aged 19-50 years, and 21g per day for women over 50. Using data from NHANES 1999-2010, the study reveals that the mean dietary fiber intake was only 16.2g per day across

all demographics during that time period.

"Our findings indicate that, among a nationally representative sample of nonpregnant US adults in NHANES 1999-2010, the consumption of dietary fiber was consistently below the recommended total adequate intake levels across survey years," says senior investigator Cheryl R. Clark, MD, ScD, Center for Community Health and Health Equity, Brigham and Women's Hospital and Harvard Medical School, Boston. "Our study also confirms persistent differences in dietary fiber intake among socioeconomic status and racial/ethnic subpopulations over time."

The research team found variations according to race and ethnicity, with Mexican-Americans consuming higher amounts of dietary fiber and non-Hispanic blacks consuming lower amounts of dietary fiber compared with non-Hispanic whites.

The study highlights the importance of increasing dietary fiber intake for US adults by showing a correlation between low dietary fiber and an increased risk for cardiovascular risk. Participants with the highest prevalence of [metabolic syndrome](#), inflammation, and obesity were in the lowest quintile of dietary fiber intake.

"Overall, the prevalence of the metabolic syndrome, inflammation, and obesity each decreased with increasing quintiles of dietary fiber intake," comments Clark. "Compared with participants in the lowest quintile of dietary fiber intake, participants in the highest quintile of dietary fiber intake had a statistically significant lower risk of having the metabolic syndrome, [inflammation](#), and obesity."

This new data analysis emphasizes the importance of getting adults across diverse ethnicities to increase their dietary fiber intake in order to try and mitigate the risk for cardiovascular damage.

"Low dietary fiber intake from 1999-2010 in the US and associations between higher dietary fiber and a lower prevalence of cardiometabolic risks suggest the need to develop new strategies and policies to increase [dietary fiber](#) intake," adds Clark. "Additional research is needed to determine effective clinical and population-based strategies for improving [fiber intake](#) trends in diverse groups."

More information: "Dietary Fiber Intake and Cardiometabolic Risks Among US Adults, NHANES 1999-2010," by Kya N. Grooms, BA; Mark J. Ommerborn, MPH; Do Quyen Pham, MPH; Luc Djousse, MD, ScD, MPH; Cheryl R. Clark, MD, ScD. (DOI: [dx.doi.org/10.1016/j.amjmed.2013.07.023](https://doi.org/10.1016/j.amjmed.2013.07.023)). It appears in *The American Journal of Medicine*, Volume 126, Issue 12 (December 2013)

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