

# Diet high in total antioxidants associated with lower risk of myocardial infarction in women

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Coronary heart disease is a major cause of death in women. A new study has found that a diet rich in antioxidants, mainly from fruits and vegetables, can significantly reduce the risk of myocardial infarction. The study is published in the October issue of *The American Journal of Medicine*.

"Our study was the first to look at the effect of all [dietary antioxidants](#) in relation to myocardial infarction," says lead investigator Alicja Wolk, DrMedSci, Division of Nutritional Epidemiology, Institute of [Environmental Medicine](#), Karolinska Institute, Stockholm, Sweden. "Total [antioxidant capacity](#) measures in a single value all antioxidants present in diet and the synergistic effects between them."

The study followed 32,561 Swedish women aged 49-83 from September 1997 through December 2007. The women completed a food-frequency questionnaire in which they were asked how often, on average, they consumed each type of food or beverage during the last year. The investigators calculated estimates of total antioxidant capacity from a database that measures the oxygen radical absorption capacity (ORAC) of the most common foods in the United States (no equivalent database of Swedish foods exists). The women were categorized into five groups of total antioxidant capacity of diet.

During the study, 1,114 women suffered a [myocardial infarction](#). Women in the group with the highest total antioxidant capacity had a 20% lower risk, and they consumed almost 7 servings per day of fruit and vegetables, which was nearly 3 times more than the women with the least antioxidant capacity, who on average consumed 2.4 servings.

Dr. Wolk notes that trials testing high doses of antioxidant supplements have failed to see any

benefit on [coronary heart disease](#) and, in fact, in one study higher all-cause mortality was reported. "In contrast to supplements of single antioxidants, the dietary total antioxidant capacity reflects all present antioxidants, including thousands of compounds, all of them in doses present in our usual diet, and even takes into account their synergistic effects," she explains.

In a commentary accompanying the article, Pamela Powers Hannley, MPH, Managing Editor of *The American Journal of Medicine*, observes that with the industrialization of our food supply, Americans began to consume more total calories and more calories from processed food high in fat and sugar. As a result, obesity rates began to climb steadily. "Although weight-loss diets abound in the US, the few which emphasize increasing intake of [fruits and vegetables](#) actually may be on the right track," she says. "Yet only 14% of American adults and 9.5% of adolescents eat five or more servings of fruits or vegetables a day."

**More information:** "Total Antioxidant Capacity from Diet and Risk of Myocardial Infarction: A Prospective Cohort of Women," by S. Rautiainen, E.B. Levitan, N.Orsini, A. Åkesson, R. Morgenstern, M.A. Mittleman, A. Wolk. ([doi:10.1016/j.amjmed.2012.03.008](https://doi.org/10.1016/j.amjmed.2012.03.008)). It appears in *The American Journal of Medicine*, Volume 125, Issue 10 (October 2012)

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