Antioxidants No Magic Bullet for Heart Disease in Women

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MONDAY, Aug. 13 (HealthDay News) -- A large study has found that popular antioxidant supplements such as vitamins C, E and beta-carotene don't prevent heart disease in high-risk women.

"Antioxidants are clearly not the magic bullet for heart disease prevention," said Dr. JoAnn E. Manson, the study's principal investigator and chief of preventive medicine at Brigham and Women's Hospital, in Boston. "We didn't see an overall benefit or risk for these vitamins and cardiovascular disease."

The study shows that vitamins C, E and beta-carotene supplements are no substitute for conventional cardiovascular medications with proven results, added Dr. Nanette K. Wenger, an associate professor in the division of cardiology at the Emory University School of Medicine.

Women patients, in particular, seem to "love their antioxidants, and sometimes, for some reason, stop life-saving medications and start taking them," added Wenger, chairwoman of the data safety and monitoring board for the study.

The findings also mean "we have to redouble the efforts on conventional prevention" such as healthy diet, exercise, weight control and avoiding tobacco, Manson said. "One problem is that occasionally, if there is an expectation of benefit from popping a pill, people are less vigilant about controlling established risk factors and much more difficult lifestyle modifications," she added.

The results are published in the Aug. 13 issue of *Archives of Internal Medicine*.

The Women's Antioxidant Cardiovascular Study (WACS) traced the cardiovascular impact of vitamins C, E and beta-carotene supplements on 8,171 high-risk women for more than nine years. The women, all at least 40 years old, had a history of cardiovascular disease or at least three risk factors.

The randomized, double-blind, placebo-controlled study was "the first large-scale trial of vitamin C in cardiovascular disease prevention," said Manson, who is also a professor of medicine at Harvard Medical School. The study looked at the effectiveness of vitamin C, vitamin E and beta-carotene supplements individually, as well as all three supplements at doses above the recommended daily allowance in two- and three-way combinations.

The study does hint at the possibility that a combination of vitamins C and E appears to reduce the risk of stroke, said Manson. This finding "could be the result of chance" but "warrants further study," she said. But "people should not rush out and take vitamin C and vitamin E with the promise of stroke benefit," she said, adding that the finding is "not ready for prime time."

These WACS findings echo a 2004 American Heart Association (AHA) advisory that said research from 1994 to 2002 did not support the use of antioxidant supplements for the prevention or treatment of heart disease. Earlier this year, the AHA's guidelines on women's lifetime risk of heart disease stated that antioxidants such as vitamins C, E and beta-carotene should not be used for the prevention of heart disease.

Cardiovascular disease is the leading cause of death among U.S. women. About 37 percent of U.S. women live with cardiovascular disease, and even more are at risk for the condition, according to the heart association.

Dr. Ishwarlal Jialal is an expert on antioxidants and director of the Laboratory for Atherosclerosis and Metabolic Research and professor of internal medicine at the University of California, Davis, Medical Center. He agreed the new study results show "we need to look to other therapies" for heart disease. He said he'd like to see more research into the vitamin C and vitamin E combination. The study is also valuable, because it shows that vitamin C, vitamin E and beta-carotene alone or in combination cause no harm, he said.

The WACS results on vitamin C, vitamin E, and beta-carotene supplements also don't throw out the cardiovascular antioxidant theory, which the study describes as antioxidants scavenging "free radicals" and limiting "the damage they can cause," Wenger said. Other less common antioxidants are being tested in clinical trials, she added.

In a follow-up to the WACS trial, the research team will look at whether the combination of vitamins C and E affect the biomarkers in blood that strongly predict stroke, Manson said. That work will use blood samples from 300 participants taken at the beginning and end of the WACS study.