

Vitamin D Gets High Grade For Treating Heart Disease

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HONOLULU (American Heart Association) -- Women over age 65 who took vitamin D had nearly one-third less risk of dying from heart disease as women who did not take the supplements, according to research presented today at the American Heart Association's Asia Pacific Scientific Forum meeting today.

Vitamin D and calcium are part of the standard therapy for the bone-thinning disease osteoporosis.

"Low blood levels of certain forms of vitamin D have been associated with increased risk of heart attacks, but to my knowledge no one has studied whether vitamin D supplements affect the risk of heart disease events," says Paul D. Varosy, M.D. a fellow in cardiology and medicine at the University of California at San Francisco and the San Francisco VA Medical Center.

"Because previous investigators have established a possible association between blood levels of vitamin D and heart disease, and because taking a simple multivitamin tablet is inexpensive, safe and common, especially among older adults, we thought it would make sense to address our question," he says.

The researchers studied 9,704 women ages 65 and older enrolled in the Study of Osteoporotic Fractures. The subjects included 4,272 women who reported current use of vitamin D supplements. Varosy says the researchers did not ask for details on the type or amount of vitamin D taken, but they think that most of the women got the standard recommended daily dose of 400 international units contained in multivitamin tablets.

During an average follow-up period of nearly 11 years, 420 of the women died of coronary heart disease (CHD). Women who used vitamin D supplements had 31 percent less risk of heart disease death as those who did not take the supplements. The use of calcium supplements did not affect those results. Researchers controlled for possible factors that could alter the results, such as heart disease risk factors, calcium supplement use, self-reported health status, education and behaviors such as exercise and smoking.

"In short, the benefits we observed seemed due to vitamin D and not due to calcium," Varosy says. He says that vitamin D, which is both a hormone and a vitamin, is one of the most important regulators of calcium absorption in the body.

Atherosclerosis, the accumulation of cholesterol and fat in the walls of arteries, is often associated with calcification, the buildup of the mineral calcium in the arteries.

"A lot of evidence suggests that calcification in the arteries is very similar to the calcification process that occurs in bone," he says. Earlier studies had suggested that low blood levels of vitamin D might play a role in the calcification that may contribute to heart disease. In addition, co-author Warren S. Browner, M.D., was among the first to observe that women with osteoporosis are more likely to die of cardiovascular diseases than women without osteoporosis.

"In fact, women with osteoporosis tend to have more calcium in the walls of their arteries than women with normal bones," Varosy says.

"There is still no clear explanation for the associations, but it is a promising area of research. It is possible that the same hormonal processes that lead to calcium loss from bones may somehow lead to accumulation of calcium in atherosclerotic plaques. But again, the nature of the mechanism is unclear," he says.

Because some other component of multivitamins may have exerted the positive effect found in this study, these results need to be confirmed by future studies that control the type and amount of vitamin D the subjects get, he says.

"In addition, future studies should examine whether this finding holds up in other populations such as in men. Studying how vitamin D supplements affect heart disease risk is a worthy area of investigation, but this study is only a first step. Much more work is needed before I could advocate the use of vitamin D for my patients to treat or prevent heart disease," he says.

The American Heart Association does not advocate the use of vitamin or mineral supplements. The association recommends that healthy people obtain adequate nutrient intakes from a variety of foods.