

## **Vitamin D linked to lower heart disease risk**

By raising low levels of the vitamin to normal levels, patients reduce their risk of heart disease by about 30%, an observational study finds.

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By Shari Roan

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Raising the amount of vitamin D in the blood appears to help some people -- at least those deficient in the vitamin -- reduce their risk of heart disease by about 30%, researchers announced Monday. The findings, though preliminary, support further investigation of the interplay between vitamin D and heart health.

Observational studies have linked heart disease with low vitamin D levels in the blood. In recent years, studies have shown that as many as three-quarters of Americans have a concentration in their blood that is under the normal level of 30 nanograms per milliliter.

But it has been unclear if people with low vitamin D have more heart disease because of the vitamin deficiency or for other reasons, such as lack of exercise, said Dr. J. Brent Muhlestein, the lead author of the new study and director of cardiovascular research at Intermountain Medical Center Heart Institute in Salt Lake City .

He announced the findings at the American College of Cardiology annual meeting in Atlanta . "The question we looked at is, if you do something about it, like taking vitamin D supplements, does that reduce the risk?" he said.

Researchers have been uncomfortable randomizing people with low vitamin D into a group that receives supplements and a group that does not because, in theory, every vitamin D deficiency should be treated. Low vitamin D levels can contribute to weaker bones and have been associated with increased risks of several diseases, including several types of cancer.

Instead, Muhlestein's group examined data from more than 9,000 people who had been diagnosed with low vitamin D and who had a blood sample taken at a later date.

About half of the people had normalized their vitamin D levels by the time of the second blood sample, and they showed much less heart disease compared to people whose levels were still below normal.

"What we did was observational and not definitive, but we think it adds significantly to the story," Muhlestein said. "It's at least a reasonable piece of evidence to add to the hypothesis that low vitamin D is causative of cardiovascular risk and treatment can reduce cardiovascular disease risk."

It's not clear, however, whether the people who improved their vitamin D levels did other things to benefit their health, such as lowering their cholesterol or blood pressure, that might account for the lower risk of heart disease. Moreover, the pages of science journals are littered with now-disproved studies suggesting that various nutrients, such as vitamins E, C and folic acid, might prevent or treat heart disease.

"It turned out those things didn't help. The low levels seem to be just markers for people who are less healthy," said Dr. Douglas Weaver, immediate past president of the American College of Cardiology and chief of cardiology at the Henry Ford Health System in Detroit. "But I think these studies that show a relationship between heart attack and vitamin D are going to provoke a lot more research to understand what is going on."

Vitamin D is synthesized in the skin from exposure to sunlight. It's also found in a limited number of foods, including salmon and fortified milk. Adequate levels may strengthen the immune system and reduce inflammation, Muhlestein said.