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Studies find treating vitamin D deficiency significantly reduces heart disease risk

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Preventing and treating heart disease in some patients could be as simple as supplementing their diet with extra vitamin D, according to two new studies at the Intermountain Medical Center Heart Institute in Murray, Utah.

Researchers at the Intermountain Medical Center Heart Institute last fall demonstrated the link between vitamin D deficiency and increased risk for coronary artery disease. These new studies show that treating vitamin D deficiency with supplements may help to prevent or reduce a person's risk for cardiovascular disease and a host of other chronic conditions. They also establish what level of vitamin D further enhances that risk reduction.

Study findings will be presented at the American College of Cardiology 59th annual scientific session in Atlanta.

"Vitamin D replacement therapy has long been associated with reducing the risk of fractures and diseases of the bone," says Dr. J. Brent Muhlestein, MD, director of cardiovascular research at the Intermountain Medical Center Heart Institute. "But our findings show that vitamin D could have far greater implications in the treatment and reduction of cardiovascular disease and other chronic conditions than we previously thought."

For the first study, researchers followed two groups of patients for an average of one year each. In the first study group, over 9,400 patients,

mostly female, reported low initial vitamin D levels, and had at least one follow up exam during that time period. Researchers found that 47 percent of the patients who increased their levels of vitamin D between the two visits showed a reduced risk for cardiovascular disease.

In the second study, researchers placed over 31,000 patients into three categories based on their levels of vitamin D. The patients in each category who increased their vitamin D levels to 43 nanograms per milliliter of blood or higher had lower rates of death, diabetes, cardiovascular disease, myocardial infarction, heart failure, high blood pressure, depression, and kidney failure. Currently, a level of 30 nanograms per milliliter is considered "normal."

Heidi May, PhD, a cardiovascular clinical epidemiologist with the Intermountain Medical Center Heart Institute, and one of the study's authors, says the link between low levels of vitamin D and increased risk for a variety of diseases is significant.

"It was very important to discover that the 'normal' levels are too low. Giving physicians a higher level to look for gives them one more tool in identifying patients at-risk and offering them better treatment," says Dr. May.

Dr. Muhlestein says the results of these studies will change the way he treats his patients.

"Although randomized trials would be useful and are coming, I feel there is enough information here for me to start treatment based on these findings," he says.

Treatment options in this case are simple, starting with a blood test to determine a patient's vitamin D level. If low levels are detected, supplements and/or increased exposure to sunlight may be prescribed.

Increasing vitamin D intake by 1000 to 5000 international units (IU) a day may be appropriate, depending on a patient's health and genetic risk, says Dr. Muhlestein. He says supplements are the best source of vitamin D because they are relatively inexpensive and can be found at almost any supermarket or drug store. Most supplements provide an average of 400 IU per tablet.

While exposure to 20-30 minutes of sunlight can provide up to 10,000 IU, Dr. Muhlestein says it is important to use sunscreen and avoid the hottest parts of the day in order to avoid sunburn and the harmful UV rays associated with skin cancer.

Provided by Intermountain Medical Center

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