

# Men with vitamin D deficiency may have increased risk of heart attack

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Low levels of vitamin D appear to be associated with higher risk of myocardial infarction (heart attack) in men, according to a report in the June 9 issue of *Archives of Internal Medicine*, one of the JAMA/Archives journals.

Studies have shown that the rates of cardiovascular disease-related deaths are increased at higher latitudes and during the winter months and are lower at high altitudes, according to background information in the article. "This pattern is consistent with an adverse effect of hypovitaminosis D [vitamin D deficiency], which is more prevalent at higher latitudes, during the winter and at lower altitudes," the authors write. While other explanations are possible, vitamin D has been shown to affect the body in ways that may influence the risk of heart attack or heart disease.

Edward Giovannucci, M.D., Sc.D., of Harvard School of Public Health and Brigham and Women's Hospital, Boston, and colleagues reviewed medical records and blood samples of 454 men (age 40 to 75) who had non-fatal heart attack or fatal heart disease from the date of blood collection (between January 1993 and December 1995) until January 2004. They then compared the data from these men with records and blood samples of 900 living men who did not have a history of cardiovascular disease. The men's diet and lifestyle factors, recorded by self-administered questionnaires were also noted.

Men with a vitamin D deficiency (having 15 nanograms per milliliter of

blood or less) had an increased risk for heart attack compared with those with a sufficient amount (having 30 nanograms per milliliter of blood or more) of vitamin D. "After additional adjustment for family history of myocardial infarction, body mass index, alcohol consumption, physical activity, history of diabetes mellitus and hypertension, ethnicity, region, marine omega 3 intake, low- and high-density lipoprotein cholesterol levels and triglyceride levels, this relationship remained significant," the authors write. Men with intermediate levels of vitamin D had a higher risk of heart attack than those with sufficient vitamin D levels.

Source: JAMA and Archives Journals

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