

Lack of vitamin D could spell heart trouble

December 1 2008

Vitamin D deficiency—which is traditionally associated with bone and muscle weakness—may also increase the risk of cardiovascular disease (CVD). A growing body of evidence links low 25-hydroxyvitamin D levels to common CVD risk factors such as hypertension, obesity and diabetes, as well as major cardiovascular events including stroke and congestive heart failure.

In their review article, published in the December, 9, 2008, issue of the *Journal of the American College of Cardiology (JACC)*, the authors issue practical recommendations to screen for and treat low vitamin D levels, especially in patients with risk factors for heart disease or diabetes.

"Vitamin D deficiency is an unrecognized, emerging cardiovascular risk factor, which should be screened for and treated," said James H. O'Keefe, M.D., cardiologist and director of Preventive Cardiology at the Mid America Heart Institute, Kansas City, MO. "Vitamin D is easy to assess, and supplementation is simple, safe and inexpensive."

It is estimated that up to half of U.S. adults and 30 percent of children and teenagers have vitamin D deficiency, which is defined as a 25(OH)D level of

Recent data from the Framingham Heart Study suggest patients with vitamin D levels below 15 ng/ml were twice as likely to experience a heart attack, stroke or other CV event within the next five years compared to those with higher levels. This risk remained even when researchers adjusted for traditional CV risk factors.

"Restoring vitamin D levels to normal is important in maintaining good musculoskeletal health, and it may also improve heart health and prognosis," said Dr. O'Keefe. "We need large randomized controlled trials to determine whether or not vitamin D supplementation can actually reduce future heart disease and deaths."

Vitamin D Basics

Vitamin D deficiency is more prevalent than once thought, and greater attention to its treatment is warranted, according to Dr. O'Keefe. Although most of the body's vitamin D requirements can come from sun exposure, indoor lifestyles and use of sunscreen, which eliminates 99 percent of vitamin D synthesis by the skin, means many people aren't producing enough.

"We are outside less than we used to be, and older adults and people who are overweight or obese are less efficient at making vitamin D in response to sunlight," said Dr. O'Keefe. "A little bit of sunshine is a good thing, but the use of sunscreen to guard against skin cancer is important if you plan to be outside for more than 15 to 30 of intense sunlight exposure."

Vitamin D can also be consumed through supplements and food intake. Natural food sources of vitamin D include salmon, sardines, cod liver oil, and vitamin D-fortified foods including milk and some cereals.

Major risk factors for vitamin D deficiency include: older age, darkly pigmented skin, increased distance from the equator, winter season, smoking, obesity, renal or liver disease and certain medications.

Treating Vitamin D Deficiency

In the absence of clinical guidelines, the authors outline specific recommendations for restoring and maintaining optimal vitamin D levels in CV patients. These patients should initially be treated with 50,000 IU of vitamin D2 or D3 once weekly for 8 to 12 weeks. Maintenance therapy should be continued using one of the following strategies:

1. 50,000 IU vitamin D2 or D3 every 2 weeks;
2. 1,000 to 2,000 IU vitamin D3 daily;
3. Sunlight exposure for 10 minutes for Caucasian patients (longer for people with increased skin pigmentation) between the hours of 10 a.m. to 3 p.m.

Vitamin D supplements appear to be safe. In rare cases, vitamin D toxicity (causing high calcium levels and kidney stones) is possible, but only when taking in excess of 20,000 units a day.

Source: American College of Cardiology

Citation: Lack of vitamin D could spell heart trouble (2008, December 1) retrieved 25 April 2024 from <https://medicalxpress.com/news/2008-12-lack-vitamin-d-heart.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.