Vitamin D deficiency linked to arterial stiffness in black teens

EurekAlert

Vitamin D deficiency is associated with arterial stiffness, a risk factor for heart disease and stroke, in black teens according to a new study accepted for publication in The Endocrine Society's www.endo-society.org (JCEM). Black teens taking vitamin D supplementation of 2,000 international units (IU) per day had a decrease in central arterial stiffness.

"While we think of the sun as providing humans with most of our body's requirement of vitamin D, 95 percent of the 44 black teenagers living in sunny Georgia who took part in this study were classified as vitamin D deficient," said Yanbin Dong, MD, PhD, of the Medical College of Georgia in Augusta and lead author of the study. "Our study shows that vitamin D supplementation may improve cardiovascular health in black teens who don't get enough vitamin D from their diet and sun exposure."

In this study, 44 black teenagers (male and female) were randomly assigned to receive either 400 IU of vitamin D per day as recommended by the American Academy of Pediatrics or 2,000 IU of vitamin D per day. Study subjects taking 400 IU of vitamin D per day did not achieve vitamin D sufficiency, while their peers who took 2,000 IU of vitamin D per day on average became vitamin D sufficient.

Researchers measured arterial stiffness in study subjects using pulse wave velocity (PWV), a non-invasive procedure where a pulse is emitted at two arterial sites. The pulse's transit time and distance travelled help researchers reliably calculate arterial stiffness. Results from the study showed that vitamin D may protect vascular systems and that sufficient supplementation of vitamin D could elicit favorable alterations in the arterial system and in cardiovascular function in general.

"Our study is the first clinical trial of vitamin D intervention to use 2,000 IU in black subjects and to include cardiovascular risk factors as outcomes in youth," said Dong. "Our study indicates that the current recommendations for vitamin D intake in black teenagers may need to be revised upward."

SOURCE [1]

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