

Low childhood vitamin D linked to adult atherosclerosis

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Low levels of 25-OH vitamin D in childhood were associated with subclinical atherosclerosis over 25 years later in adulthood, according to a new study published in the Endocrine Society's *Journal of Clinical Endocrinology & Metabolism*.

The importance of vitamin D for cardiovascular health has been the focus of increasing interest. Low levels of vitamin D have previously been shown to be related to increased risk of stroke and heart attack. Vitamin D deficiency and insufficiency are highly prevalent among children worldwide, and this study examined the relationship between low [childhood](#) vitamin D levels and adult increased carotid intima-thickness (IMT). IMT is a marker of structural [atherosclerosis](#), which correlates with cardiovascular risk factors, and predicts cardiovascular events.

"Our results showed an association between low 25-OH vitamin D levels in childhood and increased occurrence of subclinical atherosclerosis in [adulthood](#)," said one of the *JCEM* study's authors, Markus Juonala, MD, PhD, of the University of Turku Finland. "The association was independent of conventional [cardiovascular risk factors](#) including serum lipids, blood pressure, smoking, diet, physical activity, obesity indices and socioeconomic status."

This study analyzed 2,148 subjects from the Cardiovascular Risk in Young Finns Study, aged 3-18 years at baseline. Subjects were re-examined at age 30-45 years. Childhood levels of vitamin D were

measured from stored serum. Carotid IMT was measured on the posterior wall of the left carotid artery using ultrasound technology. Study subjects with 25-OH vitamin D levels in the lowest quartile in childhood had a significantly higher prevalence of high-risk IMT as adults (21.9% vs. 12.7%).

"More research is needed to investigate whether low vitamin D levels have a causal role in the development increased carotid artery thickness," Juonala said. "Nevertheless, our observations highlight the importance of providing children with a diet that includes sufficient vitamin D."

More information: "Childhood 25-OH Vitamin D Levels and Carotid Intima-media Thickness in Adulthood: The Cardiovascular Risk in Young Finns Study," *Journal of Clinical Endocrinology & Metabolism*, 2015.

Provided by The Endocrine Society

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