

Abstract

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Vitamin D deficiency an important, common, and easily treatable cardiovascular risk factor?

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BACKGROUND: Vitamin D deficiency is a highly prevalent condition, present in approximately 30% to 50% of the general population. A growing body of data suggests that low 25-hydroxyvitamin D levels may adversely affect cardiovascular health.

DISCUSSION: Vitamin D deficiency activates the renin-angiotensin-aldosterone system and can predispose to hypertension and left ventricular hypertrophy. Additionally, vitamin D deficiency causes an increase in parathyroid hormone, which increases insulin resistance and is associated with diabetes, hypertension, inflammation, and increased cardiovascular risk. Epidemiologic studies have associated low 25-hydroxyvitamin D levels with coronary risk factors and adverse cardiovascular outcomes.

CONCLUSION: Vitamin D supplementation is simple, safe, and inexpensive. Large randomized controlled trials are needed to firmly establish the relevance of vitamin D status to cardiovascular health. In the meanwhile, monitoring serum 25-hydroxyvitamin D levels and correction of vitamin D deficiency is indicated for optimization of musculoskeletal and general health.

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