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Vitamin K intake and atherosclerosis.

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Abstract

PURPOSE OF REVIEW: It has been hypothesized that insufficient intake of vitamin K may increase soft-tissue calcification owing to impaired gamma-carboxylation of the vitamin K-dependent protein matrix gamma-carboxyglutamic acid. The evidence to support this putative role of vitamin K intake in atherosclerosis is reviewed.

RECENT FINDINGS: In animal models, multiple forms of vitamin K have been shown to reverse the arterial calcification created by vitamin K antagonists. The human data, however, are less consistent. Phylloquinone, the primary dietary form, has not been associated consistently with the risk of cardiovascular diseases. High menaquinone intake may be associated with lower risk of coronary heart disease mortality, but this needs to be confirmed.

SUMMARY: The role of vitamin K in calcification remains controversial. Although biologically plausible, results from the human studies have not consistently supported this hypothesis.

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