

# Abstract

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## High dietary menaquinone intake is associated with reduced coronary calcification.

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**BACKGROUND:** Dietary vitamin K is thought to decrease risk of cardiovascular disease by reducing coronary calcification, but inconsistent results are reported. This may be due to different effects of vitamin K(1) (phylloquinone) and vitamin K(2) (menaquinone, MK), but few studies included both.

**METHODS:** We investigated the association of intake of phylloquinone and menaquinone, including its subtypes (MK4-MK10), with coronary calcification in a cross-sectional study among 564 post-menopausal women. Phylloquinone and menaquinone intake was estimated using a food-frequency questionnaire.

**RESULTS:** Sixty-two percent (n=360) of the women had coronary calcification based on 1.5-mm thick slices. Phylloquinone intake was not associated with coronary calcification with a relative risk (RR) of 1.17 (95%-confidence interval: 0.96-1.42; p(trend)=0.11) of the highest versus lowest quartile. Menaquinone intake was associated with decreased coronary calcification with an RR of 0.80 (95%-CI: 0.65-0.98; p(trend)=0.03).

**CONCLUSION:** This study shows that high dietary menaquinone intake, but probably not phylloquinone, is associated with reduced coronary calcification. Adequate menaquinone intakes could therefore be important to prevent cardiovascular disease.

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