Multivitamin use and cardiovascular disease in a prospective study of women.

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BACKGROUND: Although multivitamins are widely used, there are limited prospective studies investigating their association with both long- and short-term risk of cardiovascular disease (CVD).

OBJECTIVE: The objective was to investigate how multivitamin use is associated with the long- and short-term risk of CVD.

DESIGN: A prospective cohort study was conducted of 37,193 women from the Women's Health Study aged ≥45 y and free of CVD and cancer at baseline who were followed for an average of 16.2 y. At baseline, women self-reported a wide range of lifestyle, clinical, and dietary factors. Women were categorized into 1) no current use and 2) current use of multivitamins. Duration and updated measures over the course of the follow-up to address short-term effects were also considered. Women were followed for major CVD events, including myocardial infarction (MI), stroke, and CVD death.

RESULTS: During the follow-up, 1493 incident cases of CVD [defined as myocardial infarction (MI), stroke, and CVD death] occurred. In multivariable analyses, multivitamin use compared with no use was not associated with major CVD events (HR: 1.01; 95% CI: 0.89, 1.15), MI (HR: 1.04; 95% CI: 0.84, 1.27), stroke (HR: 0.99; 95% CI: 0.83, 1.18), or CVD death (HR: 1.10; 95% CI: 0.84, 1.45). A nonsignificant inverse association was observed between baseline multivitamin use and major CVD events among women aged ≥70 y (P-interaction = 0.04) and those consuming <3 servings/d of fruit and vegetables (P-interaction = 0.01). When updating information on multivitamin use during the course of follow-up, no associations were observed for major CVD events (HR: 0.91; 95% CI: 0.82, 1.02), MI (HR: 0.89; 95% CI: 0.74, 1.06), stroke (HR: 0.91; 95% CI: 0.78, 1.06), and CVD death (HR: 0.91; 95% CI: 0.71, 1.16).

CONCLUSIONS: In this study of middle-aged and elderly women, neither baseline nor time-varying multivitamin use was associated with the long-term risk of major CVD events, MI, stroke, cardiac revascularizations, or CVD death. Additional studies are needed to clarify the role of multivitamins on CVD.

PMID: 25527758