A prospective study of consumption of carotenoids in fruits and vegetables and decreased cardiovascular mortality in the elderly.

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Abstract
Recent evidence suggests that oxidative damage may be involved in atherogenesis, and thus dietary antioxidants, such as beta-carotene, may reduce the risks of cardiovascular disease (CVD). We examined the association between consumption of carotene-containing fruits and vegetables and CVD mortality among 1299 elderly Massachusetts residents who provided dietary information as a part of the Massachusetts Health Care Panel Study. During a mean follow-up of 4.75 years, there were 161 deaths attributable to CVD, 48 of which were due to myocardial infarction. For total CVD death and fatal myocardial infarction, risks were lower among those residents in the highest quartile for consumption of carotene-containing fruits and vegetables as compared with those in the lowest. For death due to CVD, the relative risk (RR) was 0.54 (95% confidence interval (CI), 0.34 to 0.86; P for trend across quartiles, 0.004). For myocardial infarction the RR was 0.25 (95% CI, 0.09 to 0.67; P for trend, 0.002). These observational data are compatible with the hypothesis that increased dietary intake of carotenoids decreases the risks of CVD mortality; however, confounding cannot be ruled out. This hypothesis requires rigorous evaluation in randomized trials of sufficient size to detect reliably whether carotenoids confer small-to-moderate but clinically important protection against CVD.

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