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The effect of sustained, long-term changes in alcohol intake on cardiovascular risk

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ABSTRACT

Objective: To investigate whether sustained long-term changes in alcohol intake are predictive of cardiovascular risk. **Methods:** The study population was a subpopulation of the five-year intervention study, Inter99 study, (1999-2006), Copenhagen, Denmark (n = 2117; 30 - 60 years). Alcohol intake was assessed by questionnaires at baseline, one-, three- and five-year follow-up. The associations between sustained long-term changes in alcohol intake and cardiovascular risk factors (HDL and non-HDL cholesterol, systolic and diastolic blood pressure (BP); the absolute risk of ischemic heart disease (CRS)) at five-year follow-up were explored by linear regression models. The alcohol variables were tested for linear association with the response variable. **Results:** Sustained increased alcohol intake was significantly associated with increased CRS ($\beta = 0.0028$; $P = 0.006$) and a decreased HDL cholesterol ($\beta = -0.0028$; $P = 0.005$). Among participants with a moderate overall alcohol in-take at baseline increased alcohol intake was significantly associated with an increased plasma triglyceride ($\beta = 0.0069$; $P = 0.04$). No association with triglyceride was found for participants with a high alcohol intake. Change in wine intake was significantly negatively associated with changes in diastolic BP ($\beta = 0.0015$; $P = 0.02$). **Conclusions:** Sustained increase in the long-term intake of alcohol was a significant risk factor for an increased CRS, increased triglyceride level and decreased HDL cholesterol. Increased wine intake was associated with decreased diastolic BP.

KEYWORDS

Alcohol Consumption; Cardiovascular Disease; Intervention Studies

Cite this paper

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