

Effect of red wine and red grape extract on blood lipids, haemostatic factors, and other risk factors for cardiovascular disease.

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ABSTRACT

OBJECTIVE: Some epidemiological studies found a lower risk of cardiovascular disease among wine drinkers than among drinkers of other types of ethanol. This difference might be due to an effect of nonalcohol compounds in wine on important cardiovascular risk factors. The objective of this study was to compare the effect of red wine, nonalcohol compounds of red wine and placebo on established cardiovascular risk factors. **DESIGN:** A parallel, four-armed intervention study. **SUBJECTS:** A total of 69 healthy 38-74-y-old men and women. **INTERVENTIONS:** Subjects were randomised to either 1: red wine (males: 300 ml/day, 38.3 g alcohol/day, female subjects: 200 ml/day, 25.5 g alcohol/day), 2: water + red grape extract tablets (wine-equivalent dose), 3: water + red grape extract tablets (half dose), or 4: water + placebo tablets for a period of 4 weeks. No other sources of alcohol or anthocyanin were allowed. Plasma high-density lipoprotein (HDL)-cholesterol (HDL-C), low-density lipoprotein (LDL)-cholesterol (LDL-C), HDL-C/LDL-C-ratio, very-low-density lipoprotein (VLDL)-triacylglycerol, total cholesterol, fibrinogen, factor VII coagulant activity (FVIIc), blood pressure, and body weight were determined before and after intervention. **RESULTS:** Wine consumption was associated with a significant 11-16% increase in fasting HDL-C and 8-15% decrease in fasting fibrinogen relative to not drinking wine. There were no significant treatment effects on fasting LDL-C, HDL-C/LDL-C-ratio, VLDL-triacylglycerol, total cholesterol, FVIIc, or blood pressure. Drinking wine was associated with relative body weight increments closely corresponding to the energy contributed by the alcohol component. **CONCLUSION:** Moderate red wine consumption for 4 weeks is associated with desirable changes in HDL-C and fibrinogen compared with drinking water with or without red grape extract. The impact of wine on the measured cardiovascular risk factors thus seems primarily explained by an alcohol effect. Our finding suggests that the putative difference in cardiac risk associated with wine vs other alcoholic beverages might be rather explained by other life-style confounders than by red wine contents of nonalcohol components.