Wine, beer or spirit drinking in relation to fatal and non-fatal cardiovascular events: a meta-analysis.


In previous studies evaluating whether different alcoholic beverages would protect against cardiovascular disease, a J-shaped relationship for increasing wine consumption and vascular risk was found; however a similar association for beer or spirits could not be established. An updated meta-analysis on the relationship between wine, beer or spirit consumption and vascular events was performed. Articles were retrieved through March 2011 by PubMed and EMBASE search and a weighed least-squares regression analysis pooled data derived from studies that gave quantitative estimation of the vascular risk associated with the alcoholic beverages. From 16 studies, evidence confirms a J-shaped relationship between wine intake and vascular risk. A significant maximal protection-average 31% (95% confidence interval (CI): 19-42%) was observed at 21 g/day of alcohol. Similarly, from 13 studies a J-shaped relationship was apparent for beer (maximal protection: 42% (95% CI: 19-58%) at 43 g/day of alcohol). From 12 studies reporting separate data on wine or beer consumption, two closely overlapping dose-response curves were obtained (maximal protection of 33% at 25 g/day of alcohol). This meta-analysis confirms the J-shaped association between wine consumption and vascular risk and provides, for the first time, evidence for a similar relationship between beer and vascular risk. In the meta-analysis of 10 studies on spirit consumption and vascular risk, no J-shaped relationship could be found.