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Alcohol consumption and all-cause mortality.

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BACKGROUND. Prospective studies of alcohol and mortality in middle-aged men almost universally find a U-shaped relationship between alcohol consumption and risk of mortality. This review demonstrates the extent to which different studies lead to different risk estimates, analyses the putative influence of abstinence as a risk factor and uses available data to produce point and interval estimates of the consumption level apparently associated with minimum risk from two studies in the UK. **METHOD.** Data from a number of studies are analysed by means of logistic-linear modelling, taking account of the possible influence of abstinence as a special risk factor. Separate analysis of British data is performed. **RESULTS.** Logistic-linear modelling demonstrates large and highly significant differences between the studies considered in the relationship between alcohol consumption and all-cause mortality. The results support the identification of abstinence as a special risk factor for mortality, but do not indicate that this alone explains the apparent U-shaped relationship. Separate analysis of two British studies indicates minimum risk of mortality in this population at a consumption level of about 26 (8.5 g) units of alcohol per week. **CONCLUSIONS.** The analysis supports the view that abstinence may be a specific risk factor for all-cause mortality, but is not an adequate explanation of the apparent protective effect of alcohol consumption against all-cause mortality. Future analyses might better be performed on a case-by-case basis, using a change-point model to estimate the parameters of the relationship. The current misinterpretation of the sensible drinking level of 21 units per week for men in the UK as a limit is not justified, and the data suggest that alcohol consumption is a net preventive factor against premature death in this population.

PMID: 7797330 [PubMed - indexed for MEDLINE]