

Alcohol consumption after age 75 associated with lower risk of developing dementia

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3202 German individuals (75+) attending general practitioners , who were free of dementia were studied at baseline, were followed up 1.5 years and 3 years later by means of structured clinical interviews including detailed assessment of current alcohol consumption and DSM-IV dementia diagnoses. Associations between alcohol consumption (in grams of ethanol), type of alcohol (wine, beer, mixed alcohol beverages) and incident dementia were examined using Cox proportional hazard models, controlling for several confounders.

There was good ascertainment of the development of dementia, even among subjects who died during follow up. Of 3,202 subjects free of dementia at baseline, 217 subjects met criteria for dementia during follow up. Subjects consuming alcohol had approximately 30% less overall dementia and 40% less Alzheimer dementia than did non-drinking subjects. No significant differences were seen according to the type of [alcoholic beverage](#) consumed. Overall, these results are similar to several previous studies in the very elderly and suggest that moderate drinking is associated with less dementia, even among individuals aged 75 years and older.

The authors conclusions suggests that light-to-moderate alcohol consumption is inversely related to incident dementia, also among individuals aged 75 years and older.

Forum Comments

Background: In the last 31 years (1980 – 2011) the association between moderate alcohol intake and cognitive function has been investigated in 71 studies comprising 153,856 men and women from various populations with various drinking patterns. Most studies showed an association between light to [moderate alcohol consumption](#) and better cognitive function and reduced risk of dementia, including vascular dementia and Alzheimer dementia.

Comments on the present study: This new study from Germany is well done and has some interesting features:

- a large sample size of 3,202 men and women with a mean age of 80.2 years.
- participants recruited from general practice (probably reducing selection bias)
- a thorough baseline examination and almost complete follow up
- a large number of non-drinkers and moderate drinkers
- substantial incidence rates of dementia during the follow-up period of 3 years
- ascertainment of dementia even among subjects who died during follow up.

As stated by Forum member Erik Skovenborg, "The association found between alcohol consumption and incident overall dementia [adjusted hazard ratio (HR) 0.71, 95% CI 0.53-0.96], respectively, incident Alzheimer dementia (adjusted HR 0.58, 95% CI 0.38-0.89) are in accordance with most other studies, including the large Rotterdam

Study¹ and The Cardiovascular Health Study.² Since a randomized, controlled study of alcohol consumption and risk of dementia has not been done (and would not be feasible), the jury is still out concerning the importance of confounding. Persons who continue drinking alcohol throughout old age are the remainder population, as mentioned by the authors of this study, exhibiting a survivor phenomenon. Happy people with many friends have the most opportunities for social drinking, and in this study alcohol consumption was significantly associated with factors that are protective for the development of dementia: better education, not living alone, and absence of depression. However, even after controlling for these and several other factors, the risk for incident dementia was still significantly lower among light-to-moderate alcohol consumers. Even so it may still be a part of the explanation that old German men and women, who drank alcohol sensibly in old age, also have a healthier lifestyle in terms of physical, dietary, and mental perspectives."

Forum member Roger Corder adds: "From all I have read on this subject, I fully agree that it is very difficult to separate alcohol consumption from other healthy lifestyle factors in populations where moderate drinking is commonplace. In this respect, the study doesn't correct for a healthy diet, which is also likely very important, as a poor diet is associated with increased risk of dementia due to deficiencies such as low omega-3 fat intake, inadequate vitamin B12, etc. However, it is also known that improved vascular function in alcohol drinkers could account for some element of reduced dementia risk."

Forum member David Vazour comments: "Mechanistically speaking, I don't think that the antioxidant capacity of wine phenolics would be the only explanation for these findings. First of all, following absorption these compounds are readily bio-transformed, therefore decreasing their antioxidant potential. There is also the question of whether or not they are able to cross the blood brain barrier and act in situ. Knowing the

concentration of antioxidant enzymes and molecules within brain tissue, it is almost impossible to provide protection through only an antioxidant mechanism. Anti-inflammatory and vascular? Maybe. Further, wines vary in their phenolic composition (due to type of grape, climate, soil variations, etc.). It would be interesting to re-analyze the results based on phenolic composition."

Other Forum reviewers thought this was a well-performed study, with a result supporting previous ones, but there were limitations to the study. It included ex-drinkers with never drinkers in the referent group; there was a rather short period of follow up; among subjects reporting "mixed" types of beverage intake (that had the greatest estimated effect), numbers of subjects according to the percentage of their total alcohol intake from wine (e.g., dementia and for other dementias. a forum member added: "my only complaint is that it is a bit surprising to still see in 2011 analyses of all stroke considered as one group. the authors do discuss the disparate relations of alcohol drinking to ischemic and hemorrhagic stroke, a fact that makes it imperative to consider them separately."

A German Forum member, Ulrich Keil, stated: "The Swiss physician and philosopher Paracelsus (1493-1541) wrote: "Alle Dinge sind Gift, und nichts ist ohne Gift. Allein die Dosis macht, dass ein Ding kein Gift ist." (An approximate English translation is "All things are poison, and nothing is without poison. However it is the dose that makes a thing not a poison.") The subjects in this study were in general very moderate drinkers.

An American reviewer, Harvey Finkel, added: "The badge of age is not a warning label of fragility. While, I believe, one should not start to drink just because one has attained seniority, neither must one stop! Elderly folks handle alcohol with more responsibility than do the young, and they may derive greater health benefits from [moderate drinking](#). Age is

not a reason for abstinence."

More information: *Age and Ageing* 2011; [doi: 10.1093/ageing/afr007](https://doi.org/10.1093/ageing/afr007)

1. Ruitenberg A, van Swieten JC, Witteman JC, et al. Alcohol consumption and risk of dementia: the Rotterdam Study. *Lancet* 2002;359:281-286.
2. Mukamal KJ, Kuller LH, Fitzpatrick AL, et al. Prospective study of alcohol consumption and risk of dementia in older adults. *JAMA* 2003;289:1405-1413.

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