

# Moderate drinking protects against Alzheimer's and cognitive impairment

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Moderate social drinking significantly reduces the risk of dementia and cognitive impairment, according to an analysis of 143 studies by Loyola University Chicago Stritch School of Medicine researchers.

Researchers reviewed studies dating to 1977 that included more than 365,000 participants. Moderate drinkers were 23 percent less likely to develop [cognitive impairment](#) or Alzheimer's disease and other forms of dementia.

Wine was more beneficial than beer or spirits. But this finding was based on a relatively small number of studies, because most papers did not distinguish among different types of alcohol.

Results are reported in the journal *Neuropsychiatric Disease and Treatment*. The authors are Edward J. Neafsey, PhD. and Michael A. Collins, PhD., professors in the Department of [Molecular Pharmacology and Therapeutics](#).

Heavy drinking (more than 3 to 5 drinks per day) was associated with a higher risk of cognitive impairment and dementia, but this finding was not statistically significant.

"We don't recommend that nondrinkers start drinking," Neafsey said. "But moderate drinking -- if it is truly moderate -- can be beneficial." Moderate drinking is defined as a maximum of two drinks per day for men and 1 drink per day for women.

Among the studies reviewed, 74 papers calculated the ratios of risk between drinkers and non-drinkers, while 69 papers simply stated whether cognition in drinkers was better, the same or worse than cognition in nondrinkers. Neafsey and Collins did a meta-analysis of the studies that calculated risk ratios and found that moderate drinkers were 23 percent less likely to develop dementia or [cognitive decline](#).

Other findings:

- The protective effect of moderate drinking held up after adjusting for age, education, sex and smoking.
- There was no difference in the [effects of alcohol](#) on men and women.
- The beneficial effect of moderate drinking was seen in 14 of 19 countries, including the United States. In 3 of the remaining 5 countries, researchers also found a benefit, but it was not strong enough to be statistically significant.
- The findings were similar across different types of studies (longitudinal cohort studies, case-control studies and cross-sectional studies).

It is unknown why moderate drinking can have a [beneficial effect](#). One theory suggests that the well-known cardiovascular benefits of moderate alcohol consumption, such as raising good HDL cholesterol, also can improve blood flow in the brain and thus brain metabolism.

A second possible explanation involves "sick quitters." According to this theory, nondrinkers have a higher risk of cognitive impairment and dementia because the group includes former heavy drinkers who damaged their brain cells before quitting. But the analysis by Neafsey and Collins did not support this explanation. They found that in studies that excluded former heavy drinkers, the protective effect of moderate

drinking still held up.

Neafsey and Collins suggest a third possible explanation: Small amounts of alcohol might, in effect, make brain cells more fit. Alcohol in moderate amounts stresses cells and thus toughens them up to cope with major stresses down the road that could cause dementia.

For people who drink responsibly and in moderation, there's probably no reason to quit. But because of the potential for alcohol to be abused, Neafsey and Collins do not recommend that abstainers begin drinking.

The researchers note that there are other things besides [moderate drinking](#) that can reduce the risk of dementia, including exercise, education and a Mediterranean diet high in fruits, vegetables, cereals, beans, nuts and seeds. Even gardening has been shown to reduce the risk of [dementia](#).

Moreover, there are times when people should never drink, including adolescence, pregnancy and before driving, the researchers said.

Provided by Loyola University Health System

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