

Diet modifications—including more wine and cheese—may help reduce cognitive decline

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The foods we eat may have a direct impact on our cognitive acuity in our later years. This is the key finding of an Iowa State University research study spotlighted in an article published in the November 2020 issue of the *Journal of Alzheimer's Disease*.

The study was spearheaded by principal investigator, Auriel Willette, an assistant professor in Food Science and Human Nutrition, and Brandon Klinedinst, a Neuroscience Ph.D. candidate working in the Food Science and Human Nutrition department at Iowa State. The study is a first-of-its-kind large scale analysis that connects specific foods to later-in-life cognitive acuity.

Willette, Klinedinst and their team analyzed data collected from 1,787 aging adults (from 46 to 77 years of age, at the completion of the study) in the United Kingdom through the UK Biobank, a large-scale biomedical database and research resource containing in-depth genetic and [health information](#) from half-a-million UK participants. The database is globally accessible to approved researchers undertaking vital research into the world's most common and life-threatening diseases.

Participants completed a Fluid Intelligence Test (FIT) as part of touchscreen questionnaire at baseline (compiled between 2006 and 2010) and then in two follow-up assessments (conducted from 2012 through 2013 and again between 2015 and 2016). The FIT analysis provides an in-time snapshot of an individual's ability to "think on the fly."

Participants also answered questions about their [food](#) and [alcohol consumption](#) at baseline and through two follow-up assessments. The Food Frequency Questionnaire asked participants about their intake of fresh fruit, dried fruit, raw vegetables and salad, cooked vegetables, oily fish, lean fish, processed meat, poultry, beef, lamb, pork, cheese, bread, cereal, tea and coffee, beer and cider, red wine, white wine and champaign and liquor.

Here are four of the most significant findings from the study:

1. Cheese, by far, was shown to be the most protective food against age-related cognitive problems, even late into life;
2. The daily consumption of alcohol, particularly red wine, was related to improvements in cognitive function;
3. Weekly consumption of lamb, but not other red meats, was shown to improve long-term cognitive prowess; and
4. Excessive consumption of salt is bad, but only individuals already at risk for Alzheimer's Disease may need to watch their intake to avoid cognitive problems over time.

"I was pleasantly surprised that our results suggest that responsibly eating cheese and drinking [red wine](#) daily are not just good for helping us cope with our current COVID-19 pandemic, but perhaps also dealing with an increasingly complex world that never seems to slow down," Willette said. "While we took into account whether this was just due to

what well-off people eat and drink, randomized clinical trials are needed to determine if making easy changes in our diet could help our brains in significant ways."

Klinedinst added, "Depending on the [genetic factors](#) you carry, some individuals seem to be more protected from the effects of Alzheimers, while other seem to be at greater risk. That said, I believe the right food choices can prevent the disease and cognitive decline altogether. Perhaps the silver bullet we're looking for is upgrading how we eat. Knowing what that entails contributes to a better understanding of Alzheimer's and putting this disease in a reverse trajectory."

More information: Brandon S. Klinedinst et al, Genetic Factors of Alzheimer's Disease Modulate How Diet is Associated with Long-Term Cognitive Trajectories: A UK Biobank Study, *Journal of Alzheimer's Disease* (2020). [DOI: 10.3233/JAD-201058](#)

Provided by Iowa State University

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