

FROM THE MEDICAL LITERATURE

Are grapes and thus wine good prophylaxis for the aging brain?

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Lee et al.¹ in a small randomized, placebo controlled, double blinded trial evaluated whether the consumption of 36g of freeze-dried grape powder twice a day for 6 months would alter cognitive decline in comparison with a placebo identical in appearance but polyphenol-free. Of the 356 mg of polyphenols in this daily dose of grape powder, resveratrol makes up just 0.14%. There were 5 subjects of comparable age (66-80yrs, mean 72yrs, 50% female) in each group selected on the basis of cognitive deficit and/or personality change present for at least 6 months as observable by a physician and/or close contact of the subject whose history deemed reliable by the subject's physician. These individuals were assessed at baseline and after 6 months with an extensive battery of neuropsychological assessments (30 in all) and neuroimaging with 18F-deoxyglucose (FDG), analyzed by standardized volume of interest (sVOI) methods and statistical parametric mapping software dedicated to analysis of brain PET. 47 sVOIs were evaluated. Because of the small number of subjects, statistical correction for multiple comparisons was not made.

The authors found significant differences on neuroimaging in two of the 47 sVOIs, namely the right superior parietal cortex and the left inferior lateral anterior temporal cortex, which showed a decline in metabolism in the placebo group (all five declined) but not in the grape powder-fed group (4/5 improved or remained at baseline). Moreover, this latter group did not show a decline in any of the other 45 sVOIs. The authors state that these two sVOIs that differed between the two groups are known to be affected in early stages of Alzheimer's disease. The statistical comparison of components of the neuropsychological battery did not show significant benefits of the grape powder between the groups, but the group ingesting the grape powder did show a significant improvement in attention/working memory over baseline.

What are we to make of this study? Double blinded Randomized Controlled Trials comparing grape components on cognitive function are few and far between. This study is certainly carefully done, and the results are consistent with animal studies. But it is small, and the findings could easily be due to chance, given the large number of comparisons and limited number of those that reached significance. Quite rightly the authors call for larger studies. That said, it is nice to think that a little red wine rich in polyphenols might keep our brains sharp as we enter into senior status. Whether the small amount of resveratrol in grape powder can claim any credit is a different question.

1. Lee J, Torosyan N, Silverman DH. 2017. Examining the impact of grape consumption on brain metabolism and cognitive function in patients with mild decline in cognition: a double-blinded placebo controlled pilot study. *Exper Gerontol* 2017; 87: 121-128.