



# GRAPES AND THEIR DERIVATIVES IN MODULATION OF COGNITIVE DECLINE: A CRITICAL REVIEW OF EPIDEMIOLOGICAL AND RANDOMIZED-CONTROLLED TRIALS IN HUMANS

**Background:** According to Axes 4 of the OIV Strategic Plans 2015-2019 “Contribute to the safety of the consumers and consider their expectations”, one role of the OIV is to evaluate physiological and nutritional aspects related to the consumption of vitivincultural products. More precisely, to collect and disseminate scientific information and encourage research on the effects of consumption of wine, grapes and other vine-derived products on human health.

Considering that the work of other international organisations, including the World Health Organization (WHO), on the effect of the consumption of alcoholic beverages on human health should be taken into account,

Considering that the OIV emphasises that all information concerning the effects of wine on health must be presented in a competent and balanced manner,

In march 2017, the “Consumption, Nutrition and Health”, Experts’ Group initiated a discussion on the role of wine consumption in relation to cognitive functions. the Experts’ Group recognised that this topic was important and would be worth discussing in depth. A working group was established coordinated by Italy and including Australia, France, Germany and the General Secretarial of the OIV to prepare a discussion paper on the effects of the wine consumption on cognitive functions. . The paper would include epidemiological studies according to the type of vine products and the type of pathologies.

The group further considered the discussion paper during several sessions.

In 2019, the final document was presented and discussed and has been submitted and published in the Critical Reviews in Food Science and Nutrition.

**Abstract:** With an increase in life expectancy, the incidence of chronic degenerative pathologies such as dementia has progressively risen. Cognitive impairment leads to the gradual loss of skills, which results in substantial personal and financial cost at the individual and societal levels. Grapes and wines are rich in healthy compounds, which may help to maintain homeostasis and reduce the risk of several chronic illnesses, including dementia. This review analyzed papers that were systematically searched in PubMed, MEDLINE, Embase, and CAB-Abstract, using the association between grapes (or their derivatives) and their effects on cognitive functions in humans. Analysis was restricted to epidemiological and randomized-controlled studies.



Consumption of grape juice (200-500mL/day) and/or light-to-moderate wine (one to four glasses/day) was generally associated with improved cognitive performance, while the results for other alcoholic beverages were controversial and inconclusive. Bioactive molecules contained in grapes and wine were also considered, with particular attention paid to resveratrol. Due to the relatively high doses required (150-1000mg/day) for bioactivity coupled with its low bioavailability, resveratrol is only one of the possible grape-derived compounds that may partly underpin the beneficial effects of grapes on the central nervous system.

Finally, it should be kept in mind that the number of papers identified was limited. It is therefore essential to consider the observations reported in this review critically and be aware that further observational studies are necessary for confirmation of bioactivity.

**Reference:** Patrizia Restani, Ursula Fradera, Jean-Claude Ruf, Creina Stockley, PierreLouis Teissedre, Simone Biella, Francesca Colombo & Chiara Di Lorenzo (2020): Grapes and their derivatives in modulation of cognitive decline: a critical review of epidemiological and randomized-controlled trials in humans, *Critical Reviews in Food Science and Nutrition*, DOI: 10.1080/10408398.2020.1740644 <https://doi.org/10.1080/10408398.2020.1740644>