



Editorial

MIND diet and cognition in older adults



Healthy Aging has become one specific focus of the World Health Organization (WHO) that defines the concept as “The process of developing and maintaining the functional ability that enables well-being in older age” [1]. The maximization of the functional ability, which is the relationship between the intrinsic capacity and the environment of an individual, is thus the common targeted goal for actions. The concept of intrinsic capacity, which plays therefore a central role in the Healthy Aging framework, is computed of 5 domains: locomotion, psychology, vitality, sensory function, and cognition [2]. In 2021, a study by Tavassoli et al. observed that cognitive function was the most common IC domain declining alongside sensory function [3].

The global prevalence of mild cognitive impairment reaches over 15% in community-dwelling adults over 50 years old [4], and its prevalence increases with age [4]. In terms of prevention, recent studies have evidenced the role of lifestyle factors in cognitive decline at older age including investigations depicting a potential relationship between nutrition and cognition [5]. Indeed, diets rich in vegetables, fruits, fish, unsaturated fatty acids, and antioxidant and anti-inflammatory nutrients have been characterized as protective against cognitive impairment such as the Mediterranean-type diets [5]. A dietary pattern has been specifically designed for its cardiovascular and neurological protective effects which is the “Mediterranean-DASH Intervention for Neurodegenerative Delay” (MIND) diet. The MIND diet consists of the intake of vegetables, berries, nuts, olive oil, whole grains, fish, poultry, and beans and the restriction of dairy products, red meat, butter and margarine, pastries, fried and sweet foods [6]. In this issue of the Journal of Nutrition Health and Aging, Sager et al. published a novel article with the objective of analyzing the effect of adherence to the MIND diet at baseline on mild cognitive impairment progression through three years of follow-up and the relation with changes in the inflammatory biomarkers high-sensitivity C-reactive protein (hsCRP) and interleukin-6 (IL6), in older adults over 70 years old. A total of 2028 healthy older adults were included in the analyses, and over the follow-up no significant relationships were found between MIND diet adherence and, on one hand, the odds of mild cognitive impairment and the hsCRP and IL6, on the other hand. Several reasons for these nonsignificant results were evoked, such as the good cognitive function and health state of the participants at baseline, and the maybe not long enough follow-up to highlight a potential cognitive decline.

The authors mentioned another recent study that observed similar results: a randomized controlled trial of Barnes et al. published in 2023 that enrolled 604 older adults in which they observed no significant effect of the MIND diet versus a control one on the global cognition score over three years [7]. These nonsignificant results are somewhat contradictory to the conclusion of the review by Kheirouri and Alizadeh who found that

the MIND diet was significantly related to better cognitive functions and with even greater effects than other diets like the Mediterranean and the Ketogenic dietary patterns [8]. Also, two other longitudinal epidemiological studies resulted in a significant correlation between the MIND diet and cognitive function [9,10]. Behind their longer follow-up, 6 years instead of 3 years in the study of Sager et al., it suggests that the MIND diet may have an impact on specific components of the cognitive function but not on the global measure as assessed by both Sager and Barnes. In fact, the first study observed a significant association of the MIND diet with the verbal memory score but not with global cognition [10], and the outcome of the second longitudinal study was subjective memory complaints [9]. Furthermore, in a recent review of Devranis et al., the MIND diet showed a beneficial impact on working memory, verbal recognition, memory, and attention specifically [6].

Such mixed findings suggest further studies are still needed in this domain. Looking at how adherence to the MIND diet associates with different cognitive functions longitudinally is of major importance, as well as how generalizable are the results across different populations, with different cultures, levels of education, and accessibility to afford appropriate food.

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