**Nutritional interventions for the prevention of cognitive impairment and dementia in East-Asia: a systematic review and meta-analysis**

Dementia is one of the key global health challenges, and developing countries are projected to contribute the most to the rising burden of the disease. The aim of this systematic review is to evaluate the current evidence on nutritional interventions for the prevention of cognitive impairment and dementia in developing economies of East-Asia.

Literature search was conducted from inception until 13 December 2017. The search was restricted to randomised clinical trials (RCTs) conducted in adult humans, assessing the effect of nutritional interventions on cognitive performance, and / or incidence of dementia. Studies with sufficient data on cognitive performance before and after the intervention were included in the meta-analysis. Data was pooled by random model analysis.

Twenty-two RCTs were included in the systematic review. Sixteen studies showed significant beneficial effects, in favour of a nutritional intervention, based on single neuropsychological tests scores and / or scores of global cognitive assessment tools. In addition, sixteen studies had sufficient data reported for meta-analysis, and marginally significant beneficial effects were found on global cognitive performance in elderly for micronutrient supplementation (N=4 studies, std mean difference: 0.41 (-0.03; 0.84), p=0.07), and EPA/DHA supplementation (N=4 studies, std mean difference 0.57 (-0.01; 1.14), p=0.06).

Several promising strategies, as B-vitamin supplementation, EPA/DHA supplementation, and nutrition/lifestyle counselling interventions, seem to be able to decrease cognitive decline in the East-Asian population. Large good quality long term trials are needed to confirm these findings, and to identify if these interventions are feasible and effective to decrease dementia incidence in East-Asia.

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