Concurrent Session 18: Nutrition and Cognitive Development

A controlled trial of homocysteine-lowering on cognitive performance in older people

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Background – The results of observational studies suggest that high plasma homocysteine concentrations are inversely related to cognitive function in older people.

Objective – To test the hypothesis that lowering plasma homocysteine concentration improves cognitive function in healthy older people.

Design – Two year, double-blind, placebo-controlled, randomised clinical trial involving 276 healthy participants, 65 years of age or older, with plasma homocysteine concentrations of at least 13 µmol/L. Homocysteine-lowering treatment was a daily supplement containing folate (1000 µg), vitamins B₁₂ (500 µg) and B₆ (10 mg). Tests of cognition were conducted at baseline and after one and two years of treatment. Treatment effects were adjusted for baseline values, sex, and education.

Outcomes – On average, during the course of the study, plasma homocysteine concentration was 4.36 µmol/L (95% CI, 3.81 to 4.91; P<0.001) lower in the vitamin group than in the placebo group. Overall, there were no significant differences between the vitamin and placebo groups in the scores on tests of cognition (1).

Conclusions – The results of this trial do not support the hypothesis that homocysteine-lowering with B-vitamins improves cognitive performance.

Reference