Efficacy and Safety of Cognitive Enhancers for Mild Cognitive Impairment: A Systematic Review and Meta-analysis

What is the current situation?
Mild cognitive impairment (MCI) is characterized by memory and cognitive deficits, and increases with age. Between 3% and 17% of MCI cases progress to dementia, a serious public health burden with over 4.6 million new cases a year. Cognitive enhancers, used to treat dementia, are a possible strategy to prevent the progression of MCI, but their efficacy in MCI patients is unclear.

What is the objective?
This study examines the efficacy and safety of cognitive enhancers for patients with MCI.

How was the review conducted?

- A systematic review and meta-analysis was conducted; two independent reviewers completed the screening, data abstraction and risk of bias appraisal.
- Selected studies examined MCI patients prescribed donepezil, rivastigmine, galantamine, and/or memantine compared to placebo, other cognitive enhancers and/or supportive care. Outcomes included cognition, function, mortality, and potential harms.

What did the review find?

- Of the 15, 556 titles and abstracts and 1,386 full-text articles, 8 RCTs (4 examining donepezil 5-10 mg, 2 examining galantamine 16-24 mg, 1 each examining memantine 10-20 mg and rivastigmine 3-12 mg) and 3 companion reports were included.
- No statistically significant differences were found between cognitive enhancers and placebo across cognition, function, and mortality outcomes.
- Patients taking cognitive enhancers experienced significantly more nausea, diarrhea, vomiting, and headaches compared to those on placebo. There were no differences in major adverse events between those taking cognitive enhancers and placebo.

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For more information, please contact Dr. Andrea Tricco: triccoa@smh.ca

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