Flodgren Gerd, J Alzheimers Dis Parkinsonism 2016, 6:5(Suppl)
http://dx.doi.org/10.4172/2161-0460.C1.022

Primary and secondary prevention interventions for cognitive decline and dementia - An overview

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Background: The prevalence of dementia, including Alzheimer's Disease (AD), is increasing due to the aging of the world's population. As there is no cure for dementia, there is a great need to identify effective interventions to delay or prevent its onset.

Methods: We searched eight databases from inception and up to January 2016. We included high quality systematic reviews of any intervention that included people who were either cognitively healthy or had mild cognitive impairment, We used standard review methods with independent screening, assessment and data extraction.

Results: We identified eight eligible reviews. Five reviews involved interventions (blood pressure or cholesterol lowering drugs, Omega 3 FAs, cognitive training, and aerobic training) targeting cognitively healthy people. Three reviews concerned interventions (cholinesterase inhibitors, Omega 3 FAs, and vitamin E) targeting people with mild cognitive impairment. High to moderate certainty of evidence from seven of these reviews suggest that neither the pharmacological interventions, nor any of the nutritional supplements evaluated are effective in delaying or preventing cognitive decline, dementia or AD. The effects of aerobic training on cognition are uncertain, due to low to very low quality of evidence from one review. Moderate evidence from one review suggest that computerised cognitive training may lead to a small short-term improvement in cognitive function.

We found no reviews of interventions to promote other healthy lifestyle changes, e.g. conversion to a healthy diet, decreased alcohol intake, smoking cessation, etc., or addressing other risk factors for dementia, e.g. depression, lack of social interaction, and low educational attainment.

Conclusion: Evidence from systematic reviews of effective interventions to prevent cognitive decline, AD and dementia are lacking. Only single faceted interventions have been evaluated in systematic reviews. Due to the multifactorial aetiology of dementia, interventions addressing more than one modifiable risk factor may be needed.

Biography

Flodgren has a PhD in Sports Medicine from Umeå University, Sweden. He has for the last eight years worked in the Cochrane Effective Practice and Organisation of care group, first at the Univeristy of Newcastle, and the last five years at Oxford University. She is the first author of a number of Cochrane systematic reviews.

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