

INPLASY PROTOCOL

To cite: Zhao et al. Effects of exercise intervention on cognitive function and quality of life in Patients with Alzheimer's disease: a systematic review and meta-analysis. Inplasy protocol 202220038. doi: 10.37766/inplasy2022.2.0038

Received: 13 February 2022

Published: 13 February 2022

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Support: None.

Review Stage at time of this submission: Preliminary searches.

Conflicts of interest:
None declared.

Effects of exercise intervention on cognitive function and quality of life in Patients with Alzheimer's disease: a systematic review and meta-analysis

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Review question / Objective: The purpose of this study was to systematically analyze the effects of exercise intervention on cognitive function, physical and mental conditions, and quality of life of patients with Alzheimer's disease. In addition, Subgroup analysis was performed according to possible factors, such as exercise program, type of exercise, different regions, time and frequency of intervention. P :Patients with Alzheimer's disease. I: Exercise intervention. C usual care, no physical activity, and no-intervention control group. O 1 Cognitive function (MMSE scale; Alzheimer's Disease Assessment Scale -- Cognitive Sub Scale); 2 Physical condition (6-min Walk Test (6-MWT); 3 mental condition (Neuropsychiatric Scale of psychological status [NPI]); 4 quality of life (Sf-36; The Alzheimer's disease-related Quality of Life (ADQRL) Scale.) S RCT.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 13 February 2022 and was last updated on 13 February 2022 (registration number INPLASY202220038).

INTRODUCTION

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Abstract])) OR (Dancing[Title/Abstract]))
 AND (randomized controlled trial[Publication Type] OR randomized[Title/Abstract] OR placebo[Title/Abstract])
 scopus: (TITLE-ABS-KEY ("Alzheimer Disease" OR "Alzheimer Dementia" OR "Alzheimer Dementias" OR "Dementia, Alzheimer" OR "Alzheimer's Disease" OR "Dementia, Senile" OR "Senile Dementia" OR "Dementia, Alzheimer Type" OR "Alzheimer Type Dementia" OR "Alzheimer-Type Dementia (ATD)" OR "Alzheimer Type Dementia (ATD)" OR "Dementia, Alzheimer-Type (ATD)" OR "Alzheimer Type Senile Dementia" OR "Primary Senile Degenerative Dementia" OR "Dementia, Primary Senile Degenerative" OR "Alzheimer Sclerosis" OR "Sclerosis, Alzheimer" OR "Alzheimer Syndrome" OR "Alzheimer's Diseases" OR "Alzheimer Diseases" OR "Alzheimers Diseases" OR "Senile Dementia, Alzheimer Type" OR "Acute Confusional Senile Dementia" OR "Senile Dementia, Acute Confusional" OR "Dementia, Presenile" OR "Presenile Dementia" OR "Alzheimer Disease, Late Onset" OR "Late Onset Alzheimer Disease" OR "Alzheimer's Disease, Focal Onset" OR "Focal Onset Alzheimer's Disease" OR "Familial Alzheimer Disease (FAD)" OR "Alzheimer Disease, Familial (FAD)" OR "Familial Alzheimer Diseases (FAD)" OR "Alzheimer Disease, Early Onset" OR "Early Onset Alzheimer Disease" OR "Presenile Alzheimer Dementia" OR "AD") AND TITLE-ABS-KEY ("Exercise" OR "Exercises" OR "Isometric Exercise" OR "Resistance Training" OR "Aerobic Exercise" OR "Aerobic Fitness" OR "Anaerobic Exercise" OR "Physical Activity" OR "Physical Activities" OR "Physical Exercise" OR "Exercise Training" OR "Physical Fitness" OR "Sport" OR "Movement" OR "Train" OR "Training" OR "Walking " OR "Jogging" OR "Cycling " OR "Running " OR "Swimming " OR "Pilates " OR "Yoga " OR "Rowing " OR "Climbing" OR "Baduanjin" OR "Tai Chi" OR "Dance" OR "Dancing") AND TITLE-ABS-KEY ("randomized controlled trial" OR "randomized" OR "placebo" OR "RCT" OR "Random")).

Participant or population: Alzheimer Disease.

Intervention: Exercise.

Comparator: Usual care, no physical activity, and no-intervention control group.

Study designs to be included: RCT.

Eligibility criteria: 1 assessing solely patients with a diagnosis of (or probable) AD;2 RCT design;3 assessing the effects of a physical exercise intervention compared with a control (usual care) group not performing this intervention.

Information sources: Pubmed; Embase; qvid; scopus; cochrane library; Web Of Science; CNKI; WanFang; sinomed; VIP.

Main outcome(s): 1 Cognitive function (MMSE scale; Alzheimer's Disease Assessment Scale -- Cognitive Sub Scale); 2 quality of life (Sf-36 ;The Alzheimer's disease-related Quality of Life (ADQRL) Scale.)

Additional outcome(s): 1Physical condition (6-min Walk Test (6-MWT); 2 mental condition (Neuropsychiatric Scale of psychological status[NPI]).

Data management: Endnote.

Quality assessment / Risk of bias analysis: Cochrane Tool.

Strategy of data synthesis: In case of heterogeneity, the random effect model was selected to merge the data. There was no heterogeneity, and the fixed effect model was selected to merge the data.

Subgroup analysis: Subgroup analysis was performed according to possible factors, such as exercise program, type of exercise, different regions, time and frequency of intervention.

Sensitivity analysis: After deleting any one of them, the combined results of the remaining papers are not significantly different from those without deletion, which

means that the sensitivity analysis is passed.

Country(ies) involved: China.

Keywords: Exercise; Alzheimer Disease.

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