

INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Efficacy of Acupuncture in Animal Models of Alzheimer 's Disease: A Systematic Review and Network Meta-Analysis

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Review question / Objective: Is acupuncture effective in animal models of Alzheimer 's disease? **P:** animal. **I:** Acupuncture, drug, sham operation, sham acupuncture. **C:** normal group or model group. **O:** morriswater maze, A β and P-Tau content. **S:** RCT.

Condition being studied: AD is the largest type of dementia worldwide, and cognitive decline is one of its main manifestations, however the pathogenic mechanisms of AD have not been fully elucidated. Animal studies are an important part of clinical research, and this study is mainly to investigate the efficacy of acupuncture in AD animal models. This team is composed of master 's degree, doctor' s degree and professor 's team and has academic conditions to carry out this study.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 10 November 2022 and was last updated on 10 November 2022 (registration number INPLASY2022110048).

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INTRODUCTION

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METHODS

Participant or population: AD animal models.

Intervention: Acupuncture, sham acupuncture, medicine.

Comparator: sham operated or normal animals.

Study designs to be included: Only randomized designed animal studies of acupuncture for AD were included in this study, which had to have water maze results.

Eligibility criteria: This study needed to exclude studies without water maze indicators and non-randomized controlled studies.

Information sources: In this meta-analysis, pubmed, web of science, embase and medline databases were searched by YLS and CHY from database establishment to August 2022, respectively.

Main outcome(s): Escape latency, number of crossings, time spent in target quadrant, swimming speed.

Quality assessment / Risk of bias analysis: Two investigators independently assessed the risk of bias for each included study using the SYRCLE's Risk of Bias tool, which included the following: selection bias (sequence generation, baseline characteristics and allocation concealment), performance bias (random housing and blinding), detection bias (random outcome assessment and blinding), attrition bias (incomplete outcome data), reporting bias (selective

outcome reporting), other sources of bias. If disagreements are encountered, they will be resolved through discussions with a third author.

Strategy of data synthesis: Pair-wise Meta-Analysis: Direct comparisons between interventions were calculated using the Pair-wise Meta-analysis panel of Addis 1.16.8, under the premise of a random effects model based on the D-L method. Network Meta-Analysis: The results of continuous variables were expressed as mean differences (MD) and 95% CI according to the type of the variable. The network diagrams were drawn using Stata 14, and network meta-analysis was performed using Addis 1.16.8. Addis' model analysis included "consistency" and "inconsistency". Consistency models can assess the size of effect sizes between interventions and can also calculate the rankings between groups of interventions. When the 95% CI of the results did not contain 0, it indicated that the comparison between interventions was statistically significant ($P < 0.05$).

Subgroup analysis: Subgroup analysis if required.

Sensitivity analysis: Sensitivity analyses were performed to identify sources of heterogeneity based on outcomes with greater heterogeneity in direct comparisons.

Country(ies) involved: China.

Keywords: acupuncture, alzheimer 's disease, animal, network meta-analysis.

Contributions of each author:

Author 1 - Yuling Shi.

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Author 3 - Guangyao Li.

Author 4 - Min Li.

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