

# INPLASY

## An overview of systematic reviews of acupuncture for Parkinson's Disease

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### ADMINISTRATIVE INFORMATION

**Support** - None.

**Review Stage at time of this submission** - The review has not yet started.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202480049

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 08 August 2024 and was last updated on 08 August 2024.

### INTRODUCTION

**Review question / Objective** The objective of this overview is to evaluate the efficacy and safety of acupuncture in the treatment of Parkinson's disease and to provide clinical guidance.

**Condition being studied** Acupuncture, as a traditional Chinese medicine therapy, has a long history of treating Parkinson's Disease (PD) and has good efficacy and safety. Systematic reviews (SRs)/Meta-analyses (MAs) are important tools to guide evidence-based clinical practice and have been widely used in various medical fields in recent years. As the highest level of evidence-based evidence, MAs/SRs can provide a basis for clinical decision-making, but low-quality MAs/SRs among them can also mislead clinical decisions. Systematic review re-evaluation can comprehensively evaluate the quality of MAs/SRs to guide clinical decision-making. This study aimed to use the Methodological Quality Assessment Tool for Systematic Reviews 2 (AMSTAR-2), the Risk of

Bias Assessment Tool for Systematic Reviews (ROBIS) and the Prioritized Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) to evaluate the methodological quality and reporting of included systematic reviews. Quality and risk of bias. GRADE (Grading of Recommendations, Assessment, Development, and Evaluation) was used to evaluate the quality of evidence for outcome indicators. It is believed that this study will provide more reliable reference and evidence-based support for the clinical practice and related research of acupuncture treatment of PD.

### METHODS

**Search strategy** We searched the PubMed, Embase, Web of Science, The Cochrane Library, China National Knowledge Infrastructure (CNKI), Wanfang Database, and Chongqing VIP database from their inception until March 1, 2024. We used a combination of subject words and free words, including "Parkinson Disease", "Parkinson's Disease", "primary parkinsonism", "Parkinsonism",

“Meta-Analysis”, “meta analysis”, “systematic review”, “acupuncture”, “electroacupuncture”, “scalp acupuncture”. In addition, we manually searched the list of references in the included SRs. Gray literature was excluded due to resource limitations.

**Participant or population** We included SRs based on RCT of acupuncture for patients who were diagnosed with PD according to any internationally recognized clinical guidelines, regardless of symptoms or stage of PD.

**Intervention** The experimental group interventions included manual acupuncture, electroacupuncture, scalp acupuncture, ear acupuncture, or acupuncture combined with PD conventional treatment (e.g., Madopar, levodopa, medication, repetitive transcranial magnetic stimulation).

**Comparator** The control group interventions was treated with any other methods except acupuncture, such as sham acupuncture, placebo, PD conventional treatment, traditional Chinese medicine, and repetitive transcranial magnetic stimulation (rTMS).

**Study designs to be included** Systematic review and meta-analysis based on randomized controlled trials.

**Eligibility criteria** We included SRs based on RCT of acupuncture for patients who were diagnosed with PD according to any internationally recognized clinical guidelines, regardless of symptoms or stage of PD. The experimental group interventions included manual acupuncture, electroacupuncture, scalp acupuncture, ear acupuncture, or acupuncture combined with PD conventional treatment (e.g., Madopar, levodopa, medication, repetitive transcranial magnetic stimulation). The control group interventions was treated with any other methods except acupuncture, such as sham acupuncture, placebo, PD conventional treatment, traditional Chinese medicine, and repetitive transcranial magnetic stimulation (rTMS). Assess motor and non-motor symptoms of PD as primary outcome measures in SRs: such as efficacy rate, Unified Parkinson’s disease rating scale (UPDRS), Parkinson’s disease sleep scale (PDSS), Pittsburgh sleep quality index (PSQI), Hamilton Depression Scale (HAMD), Hamilton Anxiety Scale (HAMA), Standardized Swallowing Assessment (SSA), Parkinson’s disease questionnaire (PDQ-39), et al.

**Information sources** PubMed, Embase, Web of Science, The Cochrane Library, China National

Knowledge Infrastructure (CNKI), Wanfang Database, and Chongqing VIPdatabase.

**Main outcome(s)** Assess motor and non-motor symptoms of PD as primary outcome measures in SRs: such as efficacy rate, Unified Parkinson’s disease rating scale (UPDRS), Parkinson’s disease sleep scale (PDSS).

**Quality assessment / Risk of bias analysis** Risk of Bias in Systematic Reviews (ROBIS) is a tool used to evaluate the risk of bias in systematic review. It is divided into three phases. The first phase is optional, and the second phase consists of four key areas: “study eligibility criteria,” “identification and selection of studies,” “data collection and study appraisal,” and “synthesis and findings.” The third phase is based on the evaluation of the four areas in the second stage for comprehensive evaluation, and the SRs are evaluated as “low risk,” “high risk,” and “unclear risk.”

**Strategy of data synthesis** In addition to the descriptive analysis of existing data, we re-analyzed the main outcome to observe the efficacy of acupuncture therapy PD. Stata15.1 was used in the data analysis, and dichotomous variables are represented by the risk ratio (RR) and 95 confidence interval (CI), if P 50%, the random-effects model should be used and to explore the source of heterogeneity.

**Subgroup analysis** We plan to conduct subgroup analysis based on patient age, acupuncture course, and disease type.

**Sensitivity analysis** Not applicable.

**Country(ies) involved** Department of Neurology, Sichuan Taikang Hospital, Chengdu, Sichuan, China.

**Keywords** Parkinson’s disease, acupuncture, systematic review, GRADE,AMSTAR-2.

#### **Contributions of each author**

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