

# INPLASY PROTOCOL

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## Clinical acupuncture therapy for children with allergic rhinitis protocol of a systematic review and meta-analyses

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

### Conflicts of interest:

There is no conflict of interest.

**Review question / Objective:** This systematic review aims to explore the safety and feasibility of acupuncture in the treatment of allergic rhinitis in children.

**Condition being studied:** Allergic rhinitis(AR) in children has become a common clinical allergic disease, the incidence of which is increasing in pediatric children. The side effects of the drug cause parents to worry about the health of the child. However, a large number of current clinical studies have shown that acupuncture therapy are effective in treating children with AR. Therefore, this systematic review aims to explore the safety and feasibility of acupuncture in the treatment of allergic rhinitis in children.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 13 November 2020 and was last updated on 13 November 2020 (registration number INPLASY2020110053).

## INTRODUCTION

**Review question / Objective:** This systematic review aims to explore the safety and feasibility of acupuncture in the treatment of allergic rhinitis in children.

**Condition being studied:** Allergic rhinitis(AR) in children has become a

common clinical allergic disease, the incidence of which is increasing in pediatric children. the side effects of the drug cause parents to worry about the health of the child. However, a large number of current clinical studies have shown that acupuncture therapy are effective in treating children with AR. Therefore, this systematic review aims to

explore the safety and feasibility of acupuncture in the treatment of allergic rhinitis in children.

## METHODS

**Participant or population:** In this analysis of children with AR in children that the age must be less than 18 years old. Children who meet the internationally recognized diagnostic standard ARIA will be included, but the subject's gender, case, and ethnic origin are not limited. Children with AR combined with other diseases (allergic asthma in children, allergic conjunctivitis in children) were excluded.

**Intervention:** Children with AR in the examination group must be treated with acupuncture as the main regimen (either in combination with other treatments or alone), and the control group must be treated with non-acupuncture therapy.

**Comparator:** In the control group, the intervention means may include massage, medicine (Traditional Chinese medicine, western medicine), routine symptomatic treatment, immunotherapy, etc., which acupuncture shouldn't be used for the only requirement.

**Study designs to be included:** The RCT of acupuncture in the treatment of allergic rhinitis in children in Chinese and English literature must have been published, and non-randomized controlled trials must be excluded.

**Eligibility criteria:** 2.2.1. Type of studies. The RCT of acupuncture in the treatment of allergic rhinitis in children in Chinese and English literature must have been published, and non-randomized controlled trials must be excluded. 2.2.2. Types of participants. In this analysis of children with AR in children that the age must be less than 18 years old. Children who meet the internationally recognized diagnostic standard ARIA will be included, but the subject's gender, case, and ethnic origin are not limited. Children with AR combined with other diseases (allergic asthma in children, allergic conjunctivitis in children)

were excluded. 2.2.3. Types of interventions. Children with AR in the examination group must be treated with acupuncture as the main regimen (either in combination with other treatments or alone), and the control group must be treated with non-acupuncture therapy. 2.2.4. Type of comparators In the control group, the intervention means may include massage, medicine (Traditional Chinese medicine, western medicine), routine symptomatic treatment, immunotherapy, etc., which acupuncture shouldn't be used for the only requirement. 2.2.5. Types of outcome measures 2.2.5.1. Primary outcomes Both the total effective rate and the total nasal symptom score (TNSS) were the main outcomes. The total nasal symptom score was based on the symptoms (nasal congestion, watery nose, paroxysmal sneezing, nasal itching,) the patient presented. 2.2.5.1. Secondary outcomes. (1) Rhinitis quality of life questionnaire (RQLQ) [34]; (2) Visual Analog Scale (VAS); (3) Laboratory inspection indicators: the level of IgE, IL6, IL10 or TNF- $\alpha$ ; (4) recurrence rate; (5) Adverse events.

**Information sources:** We will search the following databases: PubMed, Cochrane Database of Systematic Reviews, Embase, Chinese Biomedical Literatures Database, China National Knowledge Infrastructure, WangFang Database, Chinese Scientific Journal Database from their inception to November 2020. The main subject terms searched: "acupuncture", "children", "allergic rhinitis" Pubmed's search strategy is shown in Table 1; Other database search strategies will be adjusted according to each database.

**Main outcome(s):** Both the total effective rate and the total nasal symptom score (TNSS) were the main outcomes. The total nasal symptom score was based on the symptoms (nasal congestion, watery nose, paroxysmal sneezing, nasal itching,) the patient presented.

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**Quality assessment / Risk of bias analysis:**

If the number of remaining articles is more than 10, you can use Review Manager 5.3 line inverted funnel chart to qualitatively analyze the publication bias. The graph shows the approximate shape which represents the publication bias.

**Strategy of data synthesis: 2.6.1.**

Quantitative data analysis enumeration data were represented by odds ratio (OR) and 95% confidence interval (CI), measurement data were represented by weighted mean difference (WMD) and 95% confidence interval (CI), or standardized mean difference (SMD) was used when the units were not unified. 2.6.2. Heterogeneity analysis When performing heterogeneity test, use I<sup>2</sup> test. When P>0.1 and I<sup>2</sup><50%, use fixed effects model; otherwise, use random effects model. Sensitivity analysis was used if the heterogeneity was large. If there is substantial heterogeneity, it can be analyzed descriptively. Use Review Manager 5.3 line inverted funnel chart to qualitatively analyze publication bias. 2.6.3. The publication bias If the number of remaining articles is more than 10, you can use Review Manager 5.3 line inverted funnel chart to qualitatively analyze the publication bias. The graph shows the approximate shape which represents the publication bias. 2.6.4. subgroup analyses If there is large heterogeneity, we will conduct subgroup analysis based on different control measures. 2.6.5 sensitivity analysis. The sensitivity analysis was performed to assess the reliability of the meta-analysis; The high-quality literature is retained, while the low-quality literature is eliminated. Analysis software uses STATA 14.0 software for sensitivity analysis.

**Subgroup analysis:** If there is large heterogeneity, we will conduct subgroup analysis based on different control measures.

**Sensibility analysis:** The sensitivity analysis was performed to assess the reliability of the meta-analysis; The high-quality literature is retained, while the low-quality literature is eliminated. Analysis software

uses STATA 14.0 software for sensitivity analysis.

**Country(ies) involved:** China.

**Keywords:** acupuncture, allergic rhinitis, children, protocol, systematic review and meta-analysis.

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