

# INPLASY PROTOCOL

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**Conflicts of interest:**  
None.

## Efficacy of non-pharmacological interventions in females with overactive bladder: A Protocol for Systematic Review and Network Meta-analysis

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**Review question / Objective:** A variety of non-pharmacologic interventions have been applied in patients with overactive bladder, but it is still controversial which is the best.

**Condition being studied:** Overactive Bladder (OAB) is a common chronic urological disorder characterized by urinary urgency, frequency, nocturia, with or without urge urinary incontinence. The prevalence of OAB was 30% in women, which is not only impair for normal social activities, but also exacerbate the quality to life. Currently, a series of treatments have been developed for OAB, and non-pharmacologic treatments are recommended as the first- and third-line treatments. Some meta-analysis has proved the efficacy of non-pharmacologic treatments such as transcutaneous tibial nerve stimulation, pelvic floor muscle training and bladder training. However, it is still unclear which non-pharmacologic treatments is best. Therefore, we will conduct the problem by network meta-analysis.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 4 January 2021 and was last updated on 4 January 2021 (registration number INPLASY202110016).

### INTRODUCTION

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## METHODS

**Participant or population:** Females patients with overactive bladder.

**Intervention:** Non-pharmacological interventions of unlimited forms including lifestyle modification, nerve stimulation, acupuncture therapy, health education, pelvic floor muscle training, bladder training.

**Comparator:** Placebo or medicine.

**Study designs to be included:** Randomized control trials.

**Eligibility criteria:** Peer-reviewed randomized control trials will be eligible for inclusion.

**Information sources:** Eight electronic databases will be searched from set up to January 1, 2021 including PubMed, Cochrane library, Web of Science, Embase, China National Knowledge Infrastructure, Wanfang Database, VIP Database, and China Biology Medicine disc.

**Main outcome(s):** A 3-day diary will appropriate to assess the efficacy which are common made up of micturition, urgency and urinary incontinence.

**Additional outcome(s):** OAB-related questionnaires and quality of life questionnaires will be taken into account.

**Quality assessment / Risk of bias analysis:** We will use Cochrane risk-of-bias tool

(ROB 2.0) to evaluate the quality of included studies.

**Strategy of data synthesis:** Pair-wise meta-analysis will be performed by STATA. Network meta-analysis will be performed by OpenBUGS, R, and STATA. We will express continuous and binary outcomes in terms of mean differences and risk ratio, respectively, with corresponding 95 % confidence intervals. In pairwise meta-analysis, heterogeneity will be assessed by the I-square and a fixed model will be conducted if I-square < 50%. Global inconsistency and local inconsistency will be assessed by STATA. R will be used to perform the statistical heterogeneity. Finally, league figure and surface under the cumulative ranking curve will be conducted by OpenBUGS.

**Subgroup analysis:** Subgroup analysis and regression analysis will be conducted if heterogeneity is too great and interventions are similar.

**Sensibility analysis:** Before selecting model, sensitivity analysis will be accomplished if sufficient studies are available and necessary.

**Language:** Language will be restricted to English and Chinese.

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

**Keywords:** overactive bladder; non-pharmacological; female; network meta-analysis.

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