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Comparative efficacy of nutraceuticals in the treatment of irritable bowel syndrome：a systematic review and network meta-analysis

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ADMINISTRATIVE INFORMATION

Support - NA.

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

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202560069

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 June 2025 and was last updated on 17 June 2025.

INTRODUCTION

Review question / Objective The efficacy of different nutraceuticals for the treatment of irritable bowel syndrome is controversial, and it is unclear which therapy is the mosteffective.

Condition being studied Irritable bowel syndrome (IBS) is a common clinical functional bowel disease, with defecation dysfunction and abdominal pain as the main clinical features. There are various nutritional supplement therapies for this disease, and it is difficult for current clinical studies to determine which therapy can provide the best therapeutic effect, so we need to solve the problem by integrating it through network meta-analysis.

METHODS

Participant or population Patients diagnosed with IBS.

Intervention The eligible interventions include the use of single or combination Dietary Supplements.

Comparator Sham-control or active control.

Study designs to be included Randomized control trails.

Eligibility criteria Peer-reviewed randomized control trails will be eligible for inclusion. And language will be restricted to English.

Information sources Four electronic databases will be searched from set up to July 20, 2025 including PubMed, Cochrane library, Web of Science, Embase.

Main outcome(s) IBS-Symptom Severity Score (SSS) or IBS-QOL.

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 Network meta-analysis will be performed by STATA. We will express continuous and binary outcomes in terms of mean differences and risk ratio, respectively, with corresponding 95 % confidence intervals. Global inconsistency and local inconsistency will be assessed by STATA.

Subgroup analysis Subgroup analysis will be conducted if heterogeneity is too great.

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

Country(ies) involved China.

Keywords irritable bowel syndrome, dietary supplements, Network Meta-analysis.

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