

# INPLASY PROTOCOL

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**Corresponding author:**  
Ying Sun

202072724@yangtzeu.edu.cn

**Author Affiliation:**  
School of Traditional Chinese Medicine, Shandong University of Traditional Chinese Medicine; Tai'an Hospital of Chinese Medicine.

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

**Conflicts of interest:**  
None declared.

## The efficacy and safety of acupuncture for diabetic gastrointestinal motility disorders : A protocol for systematic review and meta analysis

Wang, Y<sup>1</sup>; Sun, Y<sup>2</sup>; Mu, H<sup>3</sup>; Wei, CZ<sup>4</sup>; Chang, TT<sup>5</sup>.

**Review question / Objective:** Systematic review and meta-analysis of the efficacy and safety of acupuncture for diabetic gastrointestinal motility disorders.

**Condition being studied:** Diabetic gastrointestinal motility disorders is a common autonomic neuropathy which affects more than 5% diabetic patients . The prevalence of diabetic gastrointestinal motility disorders is growing with the number of diabetic patients continues to increase. It not only affects nutritional state but also adversely impacts on quality of life in diabetes. It has been demonstrated that traditional Chinese medicine and acupuncture can improve gastrointestinal motility and facilitate gastric emptying in human. During the last 20-30 years, Chinese acupuncturists performed many clinical studies to evaluate the effectiveness of acupuncture for diabetic gastrointestinal motility disorders. A meta-analysis of acupuncture for relieving non-organic dyspeptic symptoms suggestive of diabetic gastroparesis had been published in 2013, Since 2013, a number of new clinical RCT studies have been produced, and the effectiveness of acupuncture in treating diabetic gastrointestinal motility disorders needs to be systematically reevaluated. The present study was therefore conducted to assess the quality of trials and the effect of acupuncture on treating diabetic gastrointestinal motility disorders.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 July 2022 and was last updated on 09 August 2022 (registration number INPLASY202270092).

### INTRODUCTION

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and safety of acupuncture for diabetic gastrointestinal motility disorders.

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common autonomic neuropathy which affects more than 5% diabetic patients . The prevalence of diabetic gastrointestinal motility disorders is growing with the number of diabetic patients continues to increase. It not only affects nutritional state but also adversely impacts on quality of life in diabetes. It has been demonstrated that traditional Chinese medicine and acupuncture can improve gastrointestinal motility and facilitate gastric emptying in human. During the last 20-30 years, Chinese acupuncturists performed many clinical studies to evaluate the effectiveness of acupuncture for diabetic gastrointestinal motility disorders. A meta-analysis of acupuncture for relieving non-organic dyspeptic symptoms suggestive of diabetic gastroparesis had been published in 2013, Since 2013, a number of new clinical RCT studies have been produced, and the effectiveness of acupuncture in treating diabetic gastrointestinal motility disorders needs to be systematically reevaluated. The present study was therefore conducted to assess the quality of trials and the effect of acupuncture on treating diabetic gastrointestinal motility disorders.

## METHODS

**Search strategy:** We will search the following databases: PubMed, China National Knowledge Infrastructure (CNKI), Web of Science, and so on.

**Participant or population:** Diabetes patients with gastrointestinal function disorder.

**Intervention:** Acupuncture-related methods.

**Comparator:** western medication, placebo, or no treatment.

**Study designs to be included:** RCTs.

**Eligibility criteria:** Randomized controlled trials of acupuncture treating gastrointestinal function of patients with diabetes. Non-randomized controlled trials will be excluded.

**Information sources:** We will search databases including PubMed, China National Knowledge Infrastructure (CNKI), Web of Science, and so on.

**Main outcome(s):** As of June 2022, our initial searches identified 293 relevant clinical studies concerning acupuncture and acupuncture-related treatment for diabetes with diabetic gastrointestinal motility disorders. The relevant meta-analysis studies are presented below: The effectiveness of acupuncture in postoperative gastroparesis syndrome--a systematic review and meta-analysis (2014) The efficacy and safety of Tuina for diabetic gastroparesis: A protocol for systematic review and meta-analysis (2021) Efficacy and safety of complementary and alternative medicine therapy for gastroparesis: A protocol for systematic review and meta-analysis (2021) The efficacy and safety of acupoint injection for diabetic gastroparesis: A protocol for systematic review and meta-analysis (2020) Acupoint catgut embedding for diabetic gastroparesis: A protocol of systematic review (2019) Meta-analysis of acupuncture for relieving non-organic dyspeptic symptoms suggestive of diabetic gastroparesis (2013) Most of the meta-analysis was conducted for the efficacy of acupuncture in the treatment of gastroparesis. The meta-analysis in 2013 was conducted for the symptoms of gastrointestinal dyspepsia. However, since 2013, a number of new clinical RCT studies have been produced, so it is necessary to conduct a new meta-analysis for evaluation.

**Quality assessment / Risk of bias analysis:** The reviewer will independently assess the risk of bias according to the Cochrane handbook, consider the following items: allocation concealment, blinding, data integrity, etc.

**Strategy of data synthesis:** Analysis was performed using Revman software. Efficacy analysis was performed using odds ratio (OR) and Mean difference (MD).

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**Subgroup analysis:** Subgroup analysis was conducted in term of symptoms.

**Sensitivity analysis:** We performed sensitivity analysis by excluding some studies with low quality or abnormal results.

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

**Keywords:** Acupuncture, Diabetic gastrointestinal motility disorders, Systematic review, meta-analysis, Intestinal motility disorders, Gastric motility disorder.

**Contributions of each author:**

Author 1 - Yong Wang.

Author 2 - Ying Sun.

Author 3 - Hong Mu.

Author 4 - Canzheng Wei.

Author 5 - Tengteng Chang.