

# INPLASY PROTOCOL

To cite: Su et al. Meta-analysis of the effect of sling exercise training on lower limb motor function of children with cerebral palsy. Inplasy protocol 2020120018. doi: 10.37766/inplasy2020.12.0018

## Meta-analysis of the effect of sling exercise training on lower limb motor function of children with cerebral palsy

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Received: 02 December 2020

Published: 03 December 2020

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**Support:** Self financing.

**Review Stage at time of this submission:** Preliminary searches.

**Conflicts of interest:**  
There is no conflict of interest.

**Review question / Objective:** P:Cerebral palsy patients (1-18 year old) I:Treatment of cerebral palsy with sling exercise training C:Routine rehabilitation therapy O:Motor Function Measurement (GMFM) D zone、 Motor Function Measurement (GMFM) E zone、 maximum walking speed、 Adductor muscles RMS 、 Gastrocnemius muscle RMS C:Randomized controlled trials.

**Condition being studied:** Randomized controlled trials of sling exercise training for the treatment of cerebral palsy were included. The literature was screened according to a strict screening process, the outcome indicators were summarized, and the data were extracted for meta-analysis.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 03 December 2020 and was last updated on 03 December 2020 (registration number INPLASY2020120018).

### INTRODUCTION

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## METHODS

**Participant or population:** Cerebral palsy patients (age:1-18 year old).

**Intervention:** Treatment of cerebral palsy with sling exercise training.

**Comparator:** Routine rehabilitation therapy.

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

**Eligibility criteria:** Patients meeting the diagnostic criteria of cerebral palsy (age:1-18 year old).

**Information sources:** Through searching databases such as CNKI, Chongqing Weipu, Wanfang Data, Chinese Biological Literature, Pubmed, Web of Science, The cochrane library, Embase, etc. The search period is from built to December 2020.

**Main outcome(s):** The first step is to search the relevant database according to the retrieval strategy. In the second step, two authors independently screened the retrieved literatures and screened out the literatures that met the research requirements. The third step is to extract the data from the final literature, including age, gender, course of disease, intervention measures, intervention duration, outcome indicators, etc.

**Quality assessment / Risk of bias analysis:** The "bias risk assessment tool" recommended by Cochrane website was used to analyze the literature quality and bias risk.

**Strategy of data synthesis:** Revman 5.1 software was used to analyze the data. The outcome indicators of this study were continuous variables, and were evaluated by the same assessment tool, so the effect value was expressed by weighted mean difference (WMD) and its 95% confidence interval (CI). Firstly, we use the chi square test to judge whether there is heterogeneity between studies. If  $P > 0.1$  and  $I^2 < 50\%$ , we think that there is homogeneity between studies, and use

fixed effect model for meta analysis; if  $P < 0.1$ ,  $I^2 \geq 50\%$ , we consider that there is heterogeneity among studies, and select random effect model for merger analysis, and analyze the sources of heterogeneity. When more than 10 studies were included, publication bias was assessed by funnel plot.

**Subgroup analysis:** We will consider subgroups such as clinic type and location.

**Sensibility analysis:** Revman 5.1 software was used to analyze the data. The outcome indicators of this study were continuous variables, and were evaluated by the same assessment tool, so the effect value was expressed by weighted mean difference (WMD) and its 95% confidence interval (CI). Firstly, we use the chi square test to judge whether there is heterogeneity between studies. If  $P > 0.1$  and  $I^2 < 50\%$ , we think that there is homogeneity between studies, and use fixed effect model for meta analysis; if  $P < 0.1$ ,  $I^2 \geq 50\%$ , we consider that there is heterogeneity among studies, and select random effect model for merger analysis, and analyze the sources of heterogeneity. When more than 10 studies were included, publication bias was assessed by funnel plot.

**Language:** Chinese, English.

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

**Keywords:** sling exercise training; cerebral palsy; lower limbs; meta-analysis

### Contributions of each author:

Author 1 - Su Peng - Author 1 drafted the manuscript.

Author 2 - Li Yong-jie - The author provided statistical expertise.

Author 3 - Hu Shi-jing - The author contributed to the development of the selection criteria, and the risk of bias assessment strategy.

Author 4 - Meng Si-jin - The author read, provided feedback and approved the final manuscript.