

# INPLASY PROTOCOL

To cite: Zhou et al. Intervention effects of four exercise modalities in nonalcoholic fatty liver disease: systematic review and Bayesian network meta-analysis. Inplasy protocol 202180062. doi: 10.37766/inplasy2021.8.0062

Received: 15 August 2021

Published: 15 August 2021

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**Support:** QHCGSTDFP.

**Review Stage at time of this submission:** Data extraction.

**Conflicts of interest:**  
None declared.

## Intervention effects of four exercise modalities in nonalcoholic fatty liver disease: systematic review and Bayesian network meta-analysis

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**Review question / Objective:** Intervention effects of four exercise modalities in nonalcoholic fatty liver disease: systematic review and Bayesian network meta-analysis.

**Condition being studied:** Effect of different exercise modes on nonalcoholic fatty liver disease.

**Information sources:** The information sources were the Web of Science (from 2010 to 2021), PubMed, and SPORTDiscus electronic databases. The reference lists of the selected articles were also analyzed.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 15 August 2021 and was last updated on 15 August 2021 (registration number INPLASY202180062).

### INTRODUCTION

**Review question / Objective:** Intervention effects of four exercise modalities in nonalcoholic fatty liver disease: systematic review and Bayesian network meta-analysis.

**Condition being studied:** Effect of different exercise modes on nonalcoholic fatty liver disease.

### METHODS

**Search strategy:** Take the Cochran Library for example.“(Non alcoholic Fatty Liver Disease):ti, ab, kw OR (NAFLD):ti, ab, kw OR (Nonalcoholic Fatty Liver Disease):ti, ab, kw OR (Nonalcoholic Fatty Liver):ti, ab, kw OR (Nonalcoholic Fatty Livers):ti, ab, kw OR (Nonalcoholic Steatohepatitis):ti, ab, kw OR

(Nonalcoholic Steatohepatitides):ti, ab, kw"AND"(Exercises):ti, ab, kw OR (Physical Activity):ti, ab, kw OR (Physical Activities):ti, ab, kw OR (Physical Exercise):ti, ab, kw OR (Physical Exercises):ti, ab, kw OR (Isometric Exercises):ti, ab, kw OR (Isometric Exercise):ti, ab, kw OR (Aerobic Exercise):ti, ab, kw OR (Aerobic Exercises):ti, ab, kw OR (Exercise Training):ti, ab, kw OR (Exercise Trainings):ti, ab, kw OR (Resistance Training):ti, ab, kw OR (Strength Training):ti, ab, kw".

**Participant or population:** Nonalcoholic fatty liver disease BojunZhou.

**Intervention:** Aerobic exercise; Resistance Training; High Intensity Interval Training; Aerobic exercise AND Resistance Training.

**Comparator:** After the exercise intervention conditions.

**Study designs to be included:** No restrictions with regard to study design.

**Eligibility criteria:** 1) articles published in international peer-reviewed journals; 2) validity and reliability of the instruments used in studies established and published in scientific journal ; 3) research conducted with human beings; 4) articles related only to Nonalcoholic fatty liver disease; 5) published in English or Chinese.

**Information sources:** The information sources were the Web of Science (from 2010 to 2021), PubMed, and SPORTDiscus electronic databases. The reference lists of the selected articles were also analyzed.

**Main outcome(s):** In this review the Exercise intensity and exercise time will be directed in order to understand each session of the selected articles from a look at the topics: studies focus; sample description; analysis of instruments and

procedures; analysis of results; and guidance for future work.

**Additional outcome(s):** The articles identified in the present systematic review were classified as presenting high methodological quality (90.80%). In general, the quality analysis suggested that the aims of the studies were clearly stated, the scientific literature of the area was revised, and the ethical procedures required for studies with human beings were respected. The main methodological deficiencies identified by the quality assessment were the lack of justification for the sample size, the lack of information regarding voluntary dropouts, and the non-inclusion or superficial presentation of the studies' practical implications.

**Quality assessment / Risk of bias analysis:** The studies' quality was assessed using a risk-of-bias quality form (16 items) adapted from Law and colleagues (1998).

**Strategy of data synthesis:** The initial screening was based on the analysis of the articles' title and summary. Duplicated articles between databases were excluded. Next, some articles were selected for full-text analysis in order to verify if they meet all the inclusion criteria described by the PICOS strategy.

**Subgroup analysis:** Not applicable. A meta-analysis will not be performed.

**Sensitivity analysis:** Not applicable. A meta-analysis will not be performed.

**Language:** English.

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

**Keywords:** Exercise intervention;non-alcoholic fatty liver; rehabilitation; Network meta-analysis.

**Contributions of each author:**

Author 1 - Bojun Zhou.

Author 2 - Gang Huang.

Author 3 - Fuhai Ma.