

INPLASY PROTOCOL

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Lifestyle interventions for weight loss in children and adolescents with severe obesity: a meta analysis

Kang, YR¹; Li, M²; Liu, LJ³; Liu, YS⁴; Zhou, J⁵; Ying, CY⁶.

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Corresponding author:
Yanfeng Xiao

1533941374@qq.com

Author Affiliation:
The second affiliated Hospital
of Xi'an Jiaotong University

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Review Stage at time of this submission: Data analysis.

Conflicts of interest:
None.

Review question / Objective: Is the lifestyle interventions effect on children and adolescents with severe obesity?

Condition being studied: The number of severely obese children is increasing markedly. Severe obesity is associated with complications such as type II diabetes, cardiovascular disease, asthma, and certain types of cancer. Lifestyle interventions include diet, exercise, behavior, and other comprehensive interventions. For children and adolescents with simple severe obesity, firstly, they through changing their diet and physical activities and behaviors loss weight.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 21 August 2020 and was last updated on 21 August 2020 (registration number INPLASY202080088).

INTRODUCTION

Review question / Objective: Is the lifestyle interventions effect on children and adolescents with severe obesity?

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complications such as type II diabetes, cardiovascular disease, asthma, and certain types of cancer. Lifestyle interventions include diet, exercise, behavior, and other comprehensive interventions. For children and adolescents with simple severe obesity, firstly, they through changing their diet and physical activities and behaviors loss weight.

METHODS

Search strategy: Including all spellings of "severe obesity", "morbid obesity", "children", "adolescents", "intervention", "weight loss", "lifestyle".

Participant or population: Children and adolescents, aged less than or equal to 18 years old.

Intervention: The study include at least one intervention (health education, exercise, diet or comprehensive interventions).

Comparator: No current.

Study designs to be included: Randomized controlled trials (RCTs).

Eligibility criteria: The study only selects clinical randomized controlled trails of lifestyle interventions for children and adolescents.

Information sources: The computer searched the articles published in four databases, Embase, The Cochrane Library, Web Of Science and Pubmed, from the establishment of the database to March 2020.

Main outcome(s): Decreased body mass index (BMI), body mass index z score (BMI-z-score), body weight.

Additional outcome(s): Percentage of body fat, waist circumference, blood pressure.

Quality assessment / Risk of bias analysis: The included study was evaluated by Cochrane risk bias assessment tool.methodology: random method, allocation hidden method, blind method, loss of follow-up or withdrawal, whether it is intentional analysis.

Strategy of data synthesis: Review manager5.3 software was used for statistical analysis. Select the appropriate effect model according to the heterogeneity test results. Select the random effect model when the heterogeneity test $I \geq 50\%$, and select the

fixed effect model when $I < 50\%$. And carries on the weighted combination to the statistics, carries on the statistical test and statistical judgment to the statistics of the comprehensive estimation. And calculates the 95% confidence interval of the combined weighted mean difference (Mean Difference MD).

Subgroup analysis: No.

Sensibility analysis: No.

Language: English.

Country(ies) involved: China.

Keywords: children with severe obesity; lifestyle interventions; meta-analysis.

Contributions of each author:

Author 1 - Yurong Kang.

Author 2 - Min Li.

Author 3 - Lujie Liu.

Author 4 - Yusheng Liu.

Author 5 - Jing Zhou.

Author 6 - Chunyan Ying.