

# INPLASY PROTOCOL

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

**Conflicts of interest:**  
None declared.

## The effects of different feeding patterns on intestinal microbiota of infants

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**Review question / Objective:** The goal of this study is to systematically evaluate the effects of different feeding patterns on intestinal microbiota of infants.

**Eligibility criteria:** Does not include other serious diseases, such as other heart, kidney, blood system diseases, severe hereditary diseases, etc. Studies where the full-text version was not available. Studies that did not provide clear efficacy evaluation criteria. Comments, brief investigations, case reports, and letters to the editor.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 28 February 2022 and was last updated on 28 February 2022 (registration number INPLASY202220122).

### INTRODUCTION

**Review question / Objective:** The goal of this study is to systematically evaluate the effects of different feeding patterns on intestinal microbiota of infants.

**Condition being studied:** The author's unit has purchased databases such as PubMed, Cochrane Library, web of science, CNKI, WanFang, CBM, CQVIP, China HowNet and has the research conditions for this retrieval.

### METHODS

**Participant or population:** This review includes patients with infants, regardless of race, region, sex.

**Intervention:** The intervention group was breast milk feeding.

**Comparator:** The control group was formula milk feeding.

**Study designs to be included:** This study will only include randomized controlled trials (RCTs), non-RCTs, quasi-RCTs, reviews, case reports, and other types of studies will be excluded.

**Eligibility criteria:** Does not include other serious diseases, such as other heart, kidney, blood system diseases, severe hereditary diseases, etc. Studies where the full-text version was not available. Studies that did not provide clear efficacy evaluation criteria. Comments, brief investigations, case reports, and letters to the editor.

**Information sources:** Databases, including PubMed, Cochrane Library, web of science, CNKI, WanFang, CBM, CQVIP, were searched. Databases were searched from inception to december 31, 2021.

**Main outcome(s):** To compare the composition of intestinal microbiota, intestinal microbiota diversity and intestinal microbiota abundance between two groups.

**Quality assessment / Risk of bias analysis:** The process of this study will be based on the deviation risk(ROB) assessment tool provided by the Cochrane manual to assess the quality of the included randomized controlled trials. The process will be assessed by two reviewers (WY and LF). Evaluation quality items include inclusion criteria, sample size estimates, baselines, randomization, allocation sequence hiding, binding, selective reporting, missing data management, and other deviations. According to the risk judgment criteria, we classify the quality of the above contents into three grades: "low deviation risk," "high deviation risk," and "unclear deviation risk." If there are any other differences, we will discuss and reach an agreement with the third-party reviewer (LR).

**Strategy of data synthesis:** Assessment of heterogeneity. The choice of whether to conduct a meta-analysis and which model to use (fixed or random effects) will depend on the level of statistical heterogeneity

assessed by the I2 index. A fixed-effects model was used for meta-analysis in the absence of significant heterogeneity ( $P \geq 0.1$ ,  $I^2 \leq 0.5$ ). If significant heterogeneity ( $P > 0.5$ ) was present, the source of heterogeneity was first analyzed to exclude the effects of clinical or methodological heterogeneity, and a meta-analysis was performed using a random-effects model. When the meta-analysis could not analyze the data provided by clinical trials, a descriptive analysis was performed. If high heterogeneity was present, sensitivity analysis or subgroup analysis was conducted.

**Subgroup analysis:** No.

**Sensitivity analysis:** Report deviation assessment. According to Cochrane Handbook, if analysis of >10 studies was conducted, RevMan was used to analyze potential publication bias and generate a funnel plot. If the shape of the plot was a symmetrical inverted funnel, it indicated a small possibility of publication bias. If the funnel plot was asymmetric or incomplete, it indicated that the possibility of publication bias was large.

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

**Keywords:** intestinal microbiota;feeding; infant.

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