

Does probiotic supplementation in the neonatal period result in longterm gut colonisation? A systematic review of Randomised Controlled Trials.

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Introduction

Regular probiotic supplementation in the neonatal period results in improved gut colonisation with probiotic bacteria. There is limited information on the duration of this colonisation after the cessation of supplementation.

Methods

Aims: Whether oral probiotic supplementation in the neonatal period result in sustained colonisation of probiotic bacteria 6 months after its cessation.

Methods: A systematic review of trials on probiotic usage reporting on stool microbiome during post discharge follow up in infants was carried out using the review methodology described by the Cochrane neonatal group. Literature search carried was out in Feb 2022 using various databases including Medline. Only randomised controlled trials were selected for inclusion

Results

Initial search identified 127 studies.

3 studies (n=213) infants were included in the review.

The studies were heterogeneous in case selection, choice of probiotics, duration of supplementation and the timing of stool analysis during the follow up period.

At 6 months post cessation of supplementation, Panigrahi et al identified probiotic bacteria in 32% of subjects and O'Brien et al identified 3.3 log higher numbers compared with unsupplemented group.

No side effects were reported.

References: Panigrahi et al. O'Brien et al. Soreckles et al.

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Conclusions

Oral supplementation with probiotic bacteria resulted in detectable colonisation at 6 months post cessation. There is paucity of data on long term colonisation with orally administered probiotic bacteria.

Acknowledgments and funding- None.

