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The effect of probiotics on the prevention of the common cold: A meta-analysis of randomized controlled trial studies

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Background: Probiotics are currently focused on their immune improvement function. Many studies have been assessed the potential efficacy of probiotics in allergic disease, viral disease, respiratory disease, as well as gastrointestinal disease. This study performed a systematic review to determine the effects of probiotics on the prevention of the common cold.

Method: MEDLINE, EMBASE, CINAHL, and Cochrane CENTRAL were searched for studies released through June 2011. Two authors independently extracted the data. To assess the risk of bias of included literatures, Cochrane Collaboration's Risk of bias tool was used.

Result: 10 studies in 7 articles were identified. A total 2894 participants, 1588 in the probiotics group and 1306 in the control group, were included. The effect of probiotics on the prevention of the common cold has a relative risk (RR) 0.92 (95% CI, 0.85-1.00, I²=26%). In the subgroup analysis, the RR of administration of probiotics for 3 months or less was 0.82 (95% CI, 0.70-0.97). The RR of administration of probiotics over 3 months was 1.00 (95% CI, 0.92-1.09). The RR of administration of probiotics without any active intervention (vitamin and mineral) was 0.87 (95% CI, 0.78-0.97).

Conclusion: In this meta-analysis, there was marginal effect of probiotics on the prevention of the common cold. The result implied that probiotics had a modest effect in common cold reduction. The balance of benefit and harms needs to be considered when using probiotics for common colds prevention.

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