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Probiotics for treating eczema (Review)

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[Intervention Review]

Probiotics for treating eczema

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ABSTRACT

Background

Probiotics have been proposed as an effective treatment for eczema, and recently a number of clinical trials have been undertaken.

Objectives

To assess the effects of probiotics for the treatment of eczema

Search methods

We searched the Cochrane Skin Group Specialised Register (to April 2008), the Cochrane Central Register of Controlled Trials (*The Cochrane Library* Issue 2,2008) MEDLINE (from 2003 to April 2008), EMBASE (from 2005 to April 2008), PsycINFO, AMED and LILACS (from inception to April 2008) and ISI Web of Science (to December 2006) and reference lists of articles. We also searched registries of ongoing clinical trials, conference proceedings and searched for adverse events.

Selection criteria

Randomised controlled trials of live orally ingested microorganisms for the treatment of eczema.

Data collection and analysis

Two authors independently applied eligibility criteria, assessed the quality of trials and extracted data. We contacted study authors for more information where necessary. We recorded adverse events from the included studies, and from the separate adverse events search.

Main results

Twelve randomised controlled trials involving 781 participants met the inclusion criteria. All trial participants were children. There was no significant difference in participant or parent-rated symptom scores in favour of probiotic treatment (5 trials, 313 participants). Symptom severity on a scale from 0 to 20 was 0.90 points lower after probiotic treatment than after placebo (95%CI -1.04, 2.84; $p = 0.36$). There was also no significant difference in participant or parent-rated overall eczema severity in favour of probiotic treatment (3 trials, 150 participants). There was no significant difference in investigator rated eczema severity between probiotic and placebo treatments (7 trials, 588 participants). On a scale from 0 to 102 investigator rated eczema severity was 2.46 points lower after probiotic treatment than after placebo treatment (95%CI -2.53, 7.45 $p = 0.33$). Significant heterogeneity was noted between the results of individual studies, which may be explained by the use of different probiotic strains. Subgroup analysis by age of participant, severity of eczema, presence of atopy or presence of food allergy did not identify a population with different treatment outcomes to the population as a whole. The adverse events search identified some case reports of infections and bowel ischaemia caused by probiotics.

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Authors' conclusions

The evidence suggests that probiotics are not an effective treatment for eczema, and probiotic treatment carries a small risk of adverse events.

PLAIN LANGUAGE SUMMARY**Probiotics for treating eczema**

There is not enough evidence to recommend using probiotics for the treatment of eczema.

Eczema is a skin condition characterised by an itchy red rash, which affects between 5 and 20% of people at some time in their life. People with eczema have different bacteria in their gut to people without eczema, and sometimes they have inflammation in their gut. It may be possible to treat eczema symptoms by changing the mix of gut bacteria or by reducing inflammation in the gut. One type of treatment that might achieve this is probiotics - these are live micro-organisms taken by mouth such as the *Lactobacillus* bacteria found in unpasteurised milk and yoghurt. This review of twelve trials found that probiotics do not reduce eczema symptoms such as itching, nor do they change the overall severity of eczema judged by patients or their doctors. The results varied between different trials but overall do not suggest that probiotics are an effective treatment for eczema. Further studies of new probiotics are needed, because it is possible that different types of probiotics which haven't yet been studied in eczema treatment could be more effective. Probiotics can rarely cause infections and gut problems.