



# A META ANALYSIS : PROBIOTICS IN TREATING ATOPIC DERMATITIS AMONG INFANTS AND CHILDREN

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## BACKGROUND

Living in sanitized living conditions has contributed to the dysregulation of the gut microbiome thereby leading to inadequate immune priming predisposing to the development of atopic dermatitis. Novel therapies have been underway in the management of its chronic symptoms, and one of them is the use of probiotics.

## OBJECTIVES

To assess the efficacy of probiotics in alleviating the symptoms of atopic dermatitis as shown by a significant decrease in the SCORAD index and to determine the probiotic strains which effectively improve symptoms of atopic dermatitis.

## METHODS

This is a systematic review and a meta-analysis of randomized control trials reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) check list. Risk of bias for each study was assessed using the Cochrane risk-of-bias assessment tool for randomized trials. Random effects models were used in the analysis. Review Manager 5.3 was used for meta-analysis.

## RESULTS

Of the 193 studies identified, 15 studies were included in the systematic review. Due to lacking data on some of the studies, only nine studies were included in the meta-analysis. Meta-analysis showed that there was a mean difference in the SCORAD index at week 4 (mean difference -3.37, 95% CI -6.22 to -0.52,  $p=0.02$ ,  $I^2=0$ ,  $n=250$ ) and at week 8 post-intervention (mean difference -3.71, 95% CI -6.30 to -1.11,  $n=517$ ).

## CONCLUSION

Specific strains of probiotics can effectively improve the symptoms of atopic dermatitis. Significant improvement in AD symptoms are noted at 4 weeks and 8 weeks post treatment.