

Friendly bacteria helps prevent eczema

A groundbreaking study has found that adding simple bacterial cultures used in yoghurt to a baby's milk can half the chances of them developing eczema.

Researchers from the University of Otago, in Wellington, in collaboration with researchers at the University of Auckland carried out a double-blind randomised controlled trial involving 420 newborn babies.

They compared the effect of supplementing the baby's diets with one of two different probiotics and a placebo.

The aim was to track the development of eczema and allergic sensitization in young children at high risk for allergic disease. Probiotics are thought to help protect babies from eczema because they influence the developing immune system.

The researchers gave pregnant women a supplement of either *L. rhamnosus* or *B. lactis* during the last five weeks of their pregnancies and for six months after birth, if they were breastfeeding.

Their newborns received the same probiotics from birth to two years of age.

The study found that children who received *L. rhamnosus* had a 50 percent reduction in eczema at age two compared with placebo, but the preventive effect was not seen for those who took *B. lactis*.

When the two-year-olds were skin-tested for allergic reactions to common allergens, the results showed that neither *L. rhamnosus* or *B. lactis* supplementation had had a significant effect in preventing allergic sensitization.

Professor Julian Crane, who led the research, said: "During the past two decades, there has been much interest shown in the idea that the decrease in exposure to infections could explain the increasing prevalence of allergic diseases in Western countries.

"This idea, known as the hygiene hypothesis, has spawned many studies that have examined the way children are exposed to microbes and how this exposure affects the development of allergic diseases.

"One approach to studying the relationship of bacterial exposure and allergies has been to include special bacterial cultures in the diet to guide infant intestinal systems in building healthy immune responses.

"The findings suggest that *L. rhamnosus* may be a safe and effective intervention in the prevention of eczema in children."

He said further study was now needed to determine how *L. rhamnosus* acts to reduce eczema.

The full study was published in the *Journal of Allergy and Clinical Immunology* in the US this month.

This research was funded jointly by the Health Research Council and Fonterra Cooperative Group Ltd.



Professor Julian Crane

Key words:

- Eczema, babies, allergic sensitization, *L. rhamnosus*, *B. lactis*

Key facts:

- Probiotics are naturally occurring microbes often found in the intestines of infants, but in recent years their natural occurrence has decreased, which may explain why there has been an increase in the prevalence of eczema.
- The skin disease eczema affects 30% of infants in New Zealand by the age of two. Severity varies from a small patch of scaly dry skin to large weeping areas covering much of a child's body. There is no way to prevent it, and treatment relies on skin moisturising and corticosteroid creams. Currently the prevalence of eczema is increasing in New Zealand and around the world, although the reasons are not clear.

Findings:

- Children who received *L. rhamnosus* had a 50 percent reduction in eczema at age two compared with placebo, but the preventive effect was not seen for those who took *B. lactis*. The researchers are currently following up these children to see if the benefits are sustained. They also plan to see whether there has been any effect on asthma or hay fever as the children grow up.

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