

Study: Green living environment in early childhood does not protect against eczema

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According to a new Finnish study, greenness around the home in early childhood does not seem protect children from atopic eczema. Instead, the proximity of coniferous, mixed forests and agricultural areas was

associated with elevated risk of eczema. The effect was seen especially in children who were born in the spring.

"General greenness around the home did not protect children against eczema, which was contrary to our expectations and to the hypothesized allergy protective effect of nature contacts. Eczema is, however, only one of the [allergic diseases](#) in children albeit generally the first to emerge," says MD Minna Lukkarinen, a pediatric specialist from the FinnBrain Birth Cohort Study at the University of Turku.

Atopic eczema occurs in 20%–30% of children. It breaks out most frequently in the [early childhood](#) and is often associated with food allergies and the development of asthma and [allergic rhinitis](#) at a later age. It is thought that urbanization and reduced biodiversity increase the risk of allergic diseases, but previous research findings on the topic are contradictory.

The present study utilized material from six Finnish birth cohorts, involving a total of 5,085 children. In a [birth cohort](#), the same children are followed-up from birth, which allows studying associations between environmental early-life exposures and the disease development prior to its onset. This study examined the associations between the season of birth, the greenness and land cover types, surrounding the early-life home, and the development of eczema by the age of two years.

The research article, titled "Early-life environment and the risk of eczema at two years—Meta-analyses of six Finnish birth cohorts," has been published in the journal *Pediatric Allergy and Immunology*.

Allergic diseases are among the most common chronic diseases in children with significant public health and economic impact. Finding preventive means are thus urgently called for.

"Although greenness around the home did not protect against eczema, surrounding vegetation can have other beneficial effects. We also must note that greenness is a rather rough measure of nature presence and relatively poor indicator of biodiversity. The observed predisposing association of coniferous forest may indicate that the effects of nature on child's immunological development vary depending on the type of nature and the biodiversity and the exact timing of the exposures. Further studies are needed to confirm the result and to reveal the possible mechanisms," says Anne Karvonen Chief Researcher at Finnish Institute for Health and Welfare (THL).

More information: Minna Lukkarinen et al, Early-life environment and the risk of eczema at 2 years—Meta-analyses of six Finnish birth cohorts, *Pediatric Allergy and Immunology* (2023). [DOI: 10.1111/pai.13945](https://doi.org/10.1111/pai.13945)

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