

# Early unselected emollient bathing is associated with subsequent atopic dermatitis in an observational cohort study

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## Abstract

**Background:** Skin barrier dysfunction is a key component of the pathogenesis of atopic dermatitis (AD). Recent research on barrier optimization to prevent AD has shown mixed results. The aim of this study was to assess the relationship between emollient bathing at two months and the trajectory of AD in the first two years of life in a large unselected observational birth cohort study. **Methods:** The Babies After SCOPE: Evaluating the Longitudinal Impact Using Neurological and Nutritional Endpoints Birth Cohort study enrolled 2183 infants. Variables extracted from the database related to early skincare, skin barrier function, parental history of atopy, and AD outcomes. Statistical analysis was performed to adjust for potential confounding variables. **Results:** 1,505 children had data on AD status available at six, 12, and 24 months. Prevalence of AD was 18.6% at six months, 15.2% at 12 months, and 16.5% at 24 months. Adjusted for potential confounding variables, the odds of AD at any point were higher among infants who had emollient baths at two months (OR (95% CI): 2.41 (1.56 to 3.72),  $p < 0.001$ ). Following multivariable analysis, the odds of AD were higher among infants who had both emollient baths and frequent emollient application at two months, compared to infants who had neither (OR (95% CI) at six months 1.74 (1.18-2.58),  $p = 0.038$ ), (OR (95% CI) at 12 months 2.59 (1.69-3.94),  $p < 0.001$ ), (OR (95% CI) at 24 months 1.87 (1.21-2.90),  $p = 0.009$ ). **Conclusion:** Early emollient bathing was associated with greater development of AD by two years of age in this unselected birth cohort study.

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