

the food-allergy diagnosis, there are clear lessons to be learned. As physicians, we need to support families, address their concerns, and discuss ways to minimize risk while allowing social interactions.

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Bullying Among Pediatric Patients With Food Allergy

Lieberman JA, Weiss C, Furlong TJ, Sicherer M, Sicherer SH. *Ann Allergy Asthma Immunol.* 2010;105(4):282-286

PURPOSE OF THE STUDY. To determine the scope and characteristics of bullying, teasing, or harassment of food-allergic patients because of their food allergies.

STUDY POPULATION. A specialized questionnaire developed by experts in food allergy and bullying was administered to teenagers and adults with food allergies and parents/caregivers of children with food allergies at conferences of the Food Allergy & Anaphylaxis Network in 2009.

METHODS. The anonymous questionnaire included 11 demographic questions and 16 questions about bullying, teasing, and harassment.

RESULTS. Most of the 353 completed surveys were taken by parents of food-allergic children. Of the food-allergic children, 61% were male, 95% were white, and 55% were 4 to 11 years old. Overall, 24% were reported to have been bullied, teased, or harassed about their food allergies, and 86% reported multiple episodes. Most (82%) of the episodes occurred at school (80% by classmates and 21% by teachers/staff). A total of 57% reported physical events, and 66% reported sadness or depression related to the events.

CONCLUSIONS. Food-allergic children experience bullying that is common, frequent, and repetitive, and there are resultant physical and emotional risks.

REVIEWER COMMENTS. This study was limited by a possibly biased and homogenous sample. Because bullying and food allergy are increasing in society, it becomes even more important to understand the burden of bullying in people with food allergy and to work to develop educational programs and strategies for preventing this from occurring. As clinicians, we need to screen our food-allergic patients for maltreatment so that we can identify and support them.

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ATOPIC DERMATITIS

Trends in Eczema in the First 18 Years of Life: Results From the Isle of Wight 1989 Birth Cohort

Ziyab AH, Raza A, Karmaus W, et al. *Clin Exp Allergy.* 2010;40(12):1776-1784

PURPOSE OF THE STUDY. To prospectively describe the changes in eczema prevalence and the influence of gender and atopy from birth to 18 years of age within a single cohort of children.

STUDY POPULATION. All children enrolled in the 1989 Isle of Wight, United Kingdom, birth cohort ($N = 1536$) were recruited, and 1456 children consented to participate in the study. Ninety-nine percent of the population was white and lived in a semirural region with no heavy industry.

METHODS. Subjects were assessed for eczema at 1, 2, 4, 10, and 18 years of age with a detailed questionnaire and physical examination. Atopy was evaluated through skin testing to select indoor and outdoor aeroallergens and to foods commonly implicated in allergy. Only 1- and 2-year-old subjects who were symptomatic with their eczema were skin-tested, whereas all 4-, 10-, and 18-year-old subjects were skin-tested. χ^2 tests were performed to estimate the difference in eczema occurrence and resolution rates during the observation periods.

RESULTS. Eczema data were obtained from >80% of the subjects at all times points. No differences in the prevalence of eczema were found in boys compared with girls between 1 and 10 years of age. However, at 18 years of age, the prevalence of eczema was significantly higher in girls compared with boys ($P < .001$). This shift after puberty was driven both by an increase in the development of nonatopic eczema in girls ($P = .012$) and by an increase in the resolution of atopic eczema in boys ($P = .044$). Focusing on a subset of 160 subjects with onset of eczema at ages 1 or 2 years, 16.9% had persistent eczema at 18 years of age. Recurrence was documented in 17.5% of those who had remission at 4 years of age and 10.9% of those who had remission at 10 years of age. Finally, 41.9% of this subset had complete resolution through 18 years of age.

CONCLUSIONS. Although the prevalence of eczema seems to be independent of gender and atopic status in childhood, the prevalence of eczema in girls after puberty becomes greater than that of boys as a result of an increase in nonatopic eczema in girls and a decrease in atopic eczema in boys. Overall, the prevalence of eczema decreased with age; only 16.9% had persistent eczema at 18 years of age.

REVIEWER COMMENTS. Because of the homogeneity of the study population, one should be cautious in extrapolating the

data to mixed populations such as in the United States. However, the large cohort size and long observation period are key strengths of this longitudinal study, the results of which provide insight into the natural history of this chronically relapsing and remitting disease.

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Correlation Between Serum 25-Hydroxyvitamin D Levels and Severity of Atopic Dermatitis in Children

Peroni DG, Piacentini GL, Cametti E, Chinellato I, Boner AL. *Br J Dermatol*. 2011;164(5):1078-1082

PURPOSE OF THE STUDY. To determine if low levels of vitamin D correlate with the severity of atopic dermatitis (AD).

STUDY POPULATION. Thirty-seven children (20 boys and 17 girls) with AD, between the ages of 8 months and 12 years, were evaluated in an outpatient clinic in Verona, Italy.

METHODS. The Severity Scoring of Atopic Dermatitis (SCORAD) index was used to determine the severity of AD in these children. Serum 25-hydroxyvitamin D (25[OH]D) levels were determined by using a chemiluminescent method. Values were used as a continuous variable, and vitamin D amounts were also categorized, in a descriptive analysis, as sufficient (≥ 30 -40 ng/mL), insufficient (20-30 ng/mL), or deficient (< 20 ng/mL). The ImmunoCAP test (Phadia, Uppsala, Sweden) was used to assay for specific immunoglobulin E (sIgE) to *Staphylococcus aureus* enterotoxins and to *Malassezia furfur*. Skin-prick testing was performed for common environmental and food allergens, and mean diameters were added together to create a total allergy score.

RESULTS. Using the SCORAD index, subjects were classified as having severe (9 of 37), moderate (13 of 37), or mild (15 of 37) AD. Mean serum 25(OH)D levels were found to be significantly higher in patients with mild AD (36.9 ± 15.7 ng/mL) compared with those with moderate (27.5 ± 8.3 ng/mL) or severe AD (20.5 ± 5.9 ng/mL). Although not statistically significant, the prevalence of patients with sIgE to microbial antigens increased with the severity of AD and the presence of vitamin D deficiency. There was no significant difference in the total allergy scores between those with mild, moderate, and severe AD.

CONCLUSIONS. Vitamin D deficiency might be related to the severity of AD.

REVIEWER COMMENTS. These results support the idea that vitamin D deficiency might be related to the severity of

AD and adds to the current body of epidemiologic studies. The study also reinforces that studies that evaluate treatment of vitamin D deficiency and treatment with vitamin D for the management of AD are needed.

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Infant Eczema, Infant Sleeping Problems, and Mental Health at 10 Years of Age: The Prospective Birth Cohort Study LISApplus

Schmitt J, Chen CM, Apfelbacher C, et al; LISA-plus Study Group. *Allergy*. 2011;66(3):404-411

PURPOSE OF THE STUDY. This study investigated the relationship between infant eczema, infant sleeping problems, and the risk of mental health problems at 10 years of age.

STUDY POPULATION. Included were newborns ($N = 1578$) recruited as a birth cohort between 1997 and 1999 from 4 German maternity hospitals.

METHODS. Participants were followed regularly from birth until 10 years of age. Parental questionnaires were used to gather information regarding physician-diagnosed eczema, parent-reported sleeping problems secondary to pruritus, and known environmental risk factors for atopy. Mental health at 10 years of age was measured by using the validated German Strengths and Difficulties Questionnaire to determine possible/probable versus unlikely mental health problems. Multivariate logistic regression analyses adjusted for environmental and lifestyle factors (exclusive breastfeeding, single parents, and day care attendance), allergic comorbidity, and family history of eczema. Participants with infant eczema with sleep problems or sleep problems caused by pruritus were compared to children with no reported sleep problems and no eczema (reference group).

RESULTS. Of the 1578 participants eligible for analysis at the age of 10 years, 266 had infant eczema (first 2 years of life), 92 had parent-reported sleep problems caused by pruritus, 54 had infant eczema with sleep problems, 385 had ever been diagnosed with eczema, and 1162 never had eczema or sleeping problems (reference group). Children with eczema and/or sleeping problems did not differ significantly in regards to gender, study site, or breastfeeding status compared with those in the reference group. When adjusted for environmental exposures, demographic confounders, and comorbid atopic airway disease, children with infant eczema were at increased risk of hyperactivity/inattention at 10 years of age (odds ratio [OR]: 1.78 [95% confidence interval (95% CI): 1.02-3.09]). Infant eczema with concurrent sleeping problems was related to emotional problems (OR: 2.63 [95% CI: 1.20-5.76]) and conduct problems (OR: 3.03

**Trends in Eczema in the First 18 Years of Life: Results From the Isle of Wight
1989 Birth Cohort**

Edwin Kim and A. Wesley Burks

Pediatrics 2011;128;S113

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