

STUDY POPULATION. Patients with egg allergy were recruited from consulting allergists for the purpose of being vaccinated against pandemic H1N1 influenza virus in the fall of 2009. A minority of them had previously been vaccinated for seasonal influenza without reaction. Egg allergy was defined as a minimum of 1 sign or symptom occurring within 60 minutes of ingesting egg, confirmed by either a positive skin-test result or an egg-specific immunoglobulin E (IgE) level of ≥ 0.35 kU/L. Also included in this group were persons who had no history of egg protein ingestion but who had both a positive egg skin-test result and positive serology results (specific IgE ≥ 2 kU/L if < 2 years of age and ≥ 7 kU/L if ≥ 2 years). A control group with egg tolerance was included.

METHODS. This study involved 2 stages, the first of which was conducted by allergists in the population described above. Because the results suggested minimal risk, an expanded program of vaccination was undertaken for patients who self-reported egg allergy. Vaccine was administered in the study population in a single dose to patients deemed at low risk (mild gastrointestinal/skin reactions) and in 2 doses (10% and 90%) at 30-minute intervals for those deemed at higher risk (asthma or cardiovascular reactions). Patients were observed for 60 minutes after vaccination. After the first stage revealed limited risk of anaphylaxis in the first 900 egg-allergic patients, special clinics began a rapid vaccination program with a mandatory surveillance protocol.

RESULTS. Among 830 patients with confirmed egg allergy, 9% had vaccine administered in divided doses. No patient had an anaphylactic reaction. Nine patients had minor allergic symptoms. The proportion of patients who presented with signs/symptoms compatible with an allergic reaction was similar (3.1%) in the control group and the group of patients with egg allergy. In the second stage of expanded vaccination of 3640 additional patients, 2 were treated with epinephrine, although neither of them fulfilled study criteria for anaphylaxis.

CONCLUSIONS. Vaccination of patients with egg allergy with adjuvanted pandemic H1N1 vaccine seems to be safe, and the results of this study are in line with those of previous studies performed with seasonal influenza vaccine. Vaccines in this study had low levels of ovalbumin. Further studies might assess the risk after administering vaccine with the higher ovalbumin levels found in seasonal vaccine.

REVIEWER COMMENTS. The authors pointed out that patients with the most severe egg-allergy histories might have avoided vaccination altogether. There is still no published study of this much smaller, highest-risk group. However, these results add to others that indicate that vaccination can safely proceed in most children with egg

allergy, particularly with vaccines that now have lower egg content.

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Variations in Quality of Life Among Caregivers of Food Allergic Children

Springston EE, Smith B, Shulruff J, et al. *Ann Allergy Asthma Immunol.* 2010;105(4):287-294

PURPOSE OF THE STUDY. To better understand the relationship between pediatric food allergy and caregiver quality of life.

STUDY POPULATION. Caregivers of food-allergic children were recruited through targeted Web pages on food-allergy resource and social media sites to complete an anonymous Web-based Food Allergy Quality of Life-Parental Burden (FAQL-PB) questionnaire.

METHODS. Caregivers completed the validated FAQL-PB questionnaire to measure the effect of food allergy on caregiver health-related quality of life. This focused on areas most affected including family/social activities, health, and emotional concerns. To assess caregiver knowledge and the child's history of food allergy, they also completed the validated Chicago Food Allergy Research Survey for Parents. Descriptive statistics were used to evaluate how troublesome different aspects of quality of life were for them (minimally, moderately, or extremely troubled).

RESULTS. Data were compiled from 1126 caregivers across the United States. Of these caregivers, 90.1% were white, 95.0% were female, and 75.3% had a 4-year college degree or more. There was wide variation in the impact of food allergy on caregiver quality of life with the exception of consistency of caregivers feeling troubled with regard to social limitations resulting from their child's food allergy. Poor quality of life was associated with caregivers being more knowledgeable about food allergies and being familiar with epinephrine administration and the child having had food-allergy-related emergency department visits in the previous year, having multiple food allergies, and having milk or wheat allergy (versus not).

CONCLUSIONS. Caregiver quality of life varies greatly; however, severity, the number of food allergies, and specific food allergies to milk or wheat were associated with lower caregiver quality of life.

REVIEWER COMMENTS. Although this study had limitations including the uniform, educated, upper-income population and the lack of information regarding the time since

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

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