

REVIEWER COMMENTS. Recent studies have demonstrated that sensitization and clinical reactions to eggs can occur early in susceptible individuals, often with reactions occurring at the first exposure to egg. Like the LEAP study for peanut, it would be helpful to be able to use early introduction of egg to promote the development of oral tolerance instead of food allergy. This is the first randomized controlled study to show that increasing amounts of egg in a maternal diet are associated with more egg in breast milk. Infant IgG4 levels also increase proportionally, possibly supporting the development of early oral tolerance.

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### Clinical Features of Food Allergy During the First Year of Life: The ADAPAR Birth Cohort Study

Doğruel D, Bingöl G, Altıntaş DU, Yılmaz M, Güneşer Kendirli S. *Int Arch Allergy Immunol*. 2016;169(3):171–180

PURPOSE OF THE STUDY. To assess the incidence of food allergies and identify risk factors for the development of food allergies in infants.

STUDY POPULATION. The study population was part of the Adana Pediatric Allergy and Risk Factor (ADAPAR) birth cohort study in Adana, Turkey. From February 2010 to February 2011, 1475 infants born at a single center were enrolled. Infants were followed from birth until 1 year of age.

METHODS. At birth, umbilical cord blood was collected, and infants were examined. The infants returned for study visits at 3, 6, and 12 months of age. The subjects' mothers completed questionnaires at birth, at each study visit, and over the phone at 9 months. Skin prick testing (SPT) and serum-specific IgE levels (SSiGE) (cow's milk, hen's egg, soy, wheat, fish, and peanuts) were measured at 6 and 12 months of age. Additional testing was done at 3 and 9 months when there was suspicion of allergic disease. Food allergy (based on clinical history, positive SPT, or positive SSiGE) was confirmed with standardized oral food challenge (OFC).

RESULTS. Of the 1475 study subjects recruited at birth, 1377 infants were enrolled, and 920 had available SSiGE and/or SPT results. While 90 infants (6.5%) were noted to have reactions suspicious for food allergy, a diagnosis of food allergy was confirmed in 33 of 1377 infants (2.4%). Thirty-two of the 33 infants had a positive OFC, and 1 infant had a clinical history consistent with anaphylaxis to milk. The most frequent symptoms reported during OFC were cutaneous (74%,  $n = 28$ ) and gastrointestinal (18%,  $n = 7$ ). The most common allergens confirmed by OFC were milk (51.3%,  $n = 20$ )

and egg (43.7%,  $n = 17$ ). Infants with confirmed food allergy were significantly more likely to have the following characteristics compared with infants without food allergies: male sex, atopic dermatitis, history of wheezing, and family history of atopy. Multivariate regression analysis showed that having a food-allergic sibling significantly increased the risk for food allergy (OR 18.9, 95% CI 1.59–224.05).

CONCLUSIONS. Food allergy was confirmed in 33 (2.4%) of these infants. The most common food allergy was milk followed by egg, and the most frequent symptom during a positive food challenge was cutaneous. A sibling with food allergy was a significant risk factor for the development of food allergies in infancy.

REVIEWER COMMENTS. This study adds further insight into the characteristics of food allergy in infants with milk and egg allergy being diagnosed as early as 3 to 4 months of age. Worsening eczema was included as an indicator of a positive food challenge; however, it is unclear if eczema was measured objectively, and thus, true IgE-mediated allergy to food may have been overestimated. The timing of food allergy onset is of interest in the setting of an increasing focus on food allergy prevention by intervening during infancy.

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### Food Allergy Sensitization and Presentation in Siblings of Food-Allergic Children

Gupta RS, Walkner MM, Greenhawt M, et al. *J Allergy Clin Immunol Pract*. 2016;4(5):956–962

PURPOSE OF THE STUDY. To determine the prevalence of food sensitization and clinical food allergy among siblings of food-allergic children.

STUDY POPULATION. Children were enrolled as part of the Chicago Family Cohort Food Allergy study. Eligible families had 1 index child with confirmed food allergy and at least 1 sibling participating in the study. There were 478 food-allergic children and 642 siblings. Of index children, 63.6% were male, and 50% were between the ages of 2 and 5 years. Of siblings, 66.5% were younger than the index child.

METHODS. A structured questionnaire-based interview was performed with each parent. Serum IgE (sIgE) values for 9 common food allergens (egg white, sesame, peanut, soy, cow milk, shrimp, walnut, codfish, and wheat) were measured for each subject. sIgE values  $\geq 0.35$  KU/L were considered positive. Serum prick tests (SPT) were performed for the same food allergens, with fish mix and shellfish mix used instead of codfish and shrimp. A mean wheal diameter 3 mm greater than the saline control was considered

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