adverse events. Although adverse events were noted in 95% of subjects, all were of mild to moderate severity and only required an antihistamine for treatment.

CONCLUSION. Early oral immunotherapy with peanut protein at both high- and low-maintenance dosing is very effective for inducing sustained unresponsiveness and accelerating the introduction of peanut in the diet of preschool, peanut-allergic children when compared with a natural history control cohort of peanut-allergic children. Furthermore, this study demonstrated that E-OIT is relatively safe, with no serious adverse events noted in this young age group.

REVIEWER COMMENTS. This is the first study to demonstrate effectiveness and safety of OIT in young children, suggesting an advantageous window of time to induce immunomodulation and impact allergic status in young children. Results from ongoing and future studies with placebo-controlled treatment in young children will provide additional information about the potential benefit of early intervention for peanut allergy using oral immunotherapy.

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Novel Baseline Predictors of Adverse Events During Oral Immunotherapy in Children With Peanut Allergy

Virkud YV, Burks AW, Steele PH, et al. *J Allergy Clin Immunol*. 2017;139(3):882.e5–888.e5

PURPOSE OF THE STUDY. To characterize the frequency of adverse events (AEs) associated with peanut oral immunotherapy (OIT) and to identify baseline characteristics that predict higher risk of AEs.

STUDY POPULATION. This retrospective cohort analysis included 104 pediatric subjects enrolled in 3 peanut OIT trials. All participants had a positive peanut skin test (SPT); the majority had an elevated peanut-specific IgE level and other allergic diseases.

METHODS. Safety data were collected from symptom records during dose escalation at the research unit, symptom diaries of home AEs, and parental report of home AEs. All events considered likely related to OIT by study investigators at the time of occurrence were studied. Statistical models were used to identify baseline predictors of AEs.

RESULTS. Eighty percent of subjects experienced at least 1 AE. Eighty-five percent of AEs were mild, and 15% were moderate. Ten percent of AEs were classified as systemic. The AE rate was higher in the buildup phase than the maintenance phase. More than 90% of AEs occurred at home. AEs involved the skin, respiratory system, and GI tract. Almost half of the subjects experienced GI symptoms. Nearly 13% withdrew from OIT because of AEs, most commonly because of new-onset GI symptoms. Adjusting for confounding variables, allergic rhinitis (AR) and peanut SPT size were significant predictors of the overall rate of AEs. AR was the only predictor of systemic AEs and was associated with the seasonality of AEs. Peanut SPT size was the only predictor of GI AEs. Asthma was associated with increased AEs during the maintenance phase only. Sixty-one percent of subjects received treatment with antihistamines, steroids, albuterol, or epinephrine; 12% received epinephrine. Eighty-five percent of systemic AEs were not treated with epinephrine.

CONCLUSIONS. Peanut OIT is associated with frequent, though usually mild, AEs. Persistent GI symptoms are the most common cause of OIT dropout. AR and peanut SPT size are significant predictors of systemic and GI AEs, respectively. Knowledge gaps surrounding epinephrine use exist, even in highly motivated research populations.

REVIEWER COMMENTS. This is the largest safety analysis to date of peanut OIT in a controlled research setting. The study confirms a high rate of typically mild AEs and identifies peanut SPT size as a useful predictor of GI AEs, which are confirmed as the most common reason for dropout. The novel finding of AR as a risk factor for AEs will inform future investigation. While OIT is a promising therapy, this study highlights the need for further examination of its risk-to-benefit ratio before widespread clinical use.

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Extended Boiling of Peanut Progressively Reduces IgE Allergenicity While Retaining T Cell Reactivity

Tao B, Bernardo K, Eldi P, et al. *Clin Exp Allergy*. 2016; 46(7):1004–1014

PURPOSE OF THE STUDY. To evaluate the impact of extended boiling on peanut allergenicity and T cell reactivity.

STUDY POPULATION. Blood samples were collected from 10 peanut-allergic children ages 8 to 14 years with peanut-specific IgE ranging from 91.8 to >100 kU/L. Skin prick tests using boiled peanut extracts were performed on 20 known peanut-allergic children ages 2 to 16 years. Blood samples were collected for peanut antigen-specific T cell assays from 3 peanut-allergic patients and 3 nonallergic volunteer controls.

METHODS. Raw peanuts were boiled for 30 minutes, 1 hour, 2 hours, 4 hours, and 12 hours in deionized water. After

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