

Correspondence and Replies

Intense allergic reactions to personalized oral immunotherapy treatments for food allergies at home



To the Editor:

We examined the study by Nachshon et al,¹ which analyzed the rate and risk factors for allergic reactions, specifically anaphylaxis, in patients treated at home with food allergy (FA) oral immunotherapy (OIT). To further enhance the quality of this study, it might be beneficial to take into account the following suggestions.

First, Nachshon et al¹ conducted their study with a predetermined minimal maintenance dose to achieve desensitization via OIT, and for some participants, potentially free consumption of the allergens without anaphylaxis. This study did not specify the basis for determining the threshold dosage for free consumption. It is essential to personalize both the minimal maintenance dose and the threshold dosage for each participant. This is underscored by Mori et al's study, which suggests that individual antigen tolerance is key for optimal patient outcomes. Applying a universal minimal maintenance dose may pose a risk, especially for those with heightened IgE binding to allergens.² In subsequent research, it might be beneficial to gauge each participant's minimal maintenance dose through IgE binding tests, ensuring a treatment plan suited to their immune responses.²

Second, this study spanning from April 2010 to January 2020 includes some variability in the approach to data collection over this period. In the initial 2 years, data were obtained through free-text email feedback from patients. However, in the 8 years that followed, a more structured electronic web-reporting system was employed. Such variation in data collection techniques could potentially result in discrepancies in how patient feedback is understood by researchers. It is also important for the authors to acknowledge that there is no universally accepted grading system for acute allergic reactions, even though they used structured questions grounded in the Delphi study grading system.³

Third, both total IgE and specific IgE are of paramount significance in allergic diseases.⁴ Introducing quantitative IgE metrics to the HETR (high-grade home epinephrine-treated reaction) assessment framework would mitigate potential confounders, such as coexisting medical conditions that could influence SpO₂, blood pressure, and central nervous system activity, thus refining the accuracy of HETR categorization.⁵ It is also pertinent to note that there is an observed escalation in IgE levels during the course of oral immunotherapy, preceding either full or partial desensitization, which can precipitate augmented or unpredictable allergic reactions.⁶

In summary, the study by Nachshon et al¹ reveals major risk factors that individuals and their physicians should consider before OIT treatment at home and indicates the necessary steps to desensitize patients. To improve this study, we suggest further

elaboration on free consumption desensitization thresholds identified in this study, consistent analysis of data received in a structured format from the web-reporting system, and additional quantitative data via IgE blood testing.

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Reply to "Intense allergic reactions to personalized oral immunotherapy treatments for food allergies at home"



To the Editor:

In their correspondence to our article "Severe anaphylactic reactions to home doses during oral immunotherapy for food allergy,"¹ Van Loon et al² made several comments. First, they suggest to determine a minimal maintenance dose for each patient using IgE binding to allergens. We would first like to emphasize that our study was not a clinical trial but rather a retrospective analysis of the course and outcome of a real-world clinical oral immunotherapy (OIT) treatment program for multiple foods.³⁻⁷ Second, the minimal maintenance dose in our OIT program is aimed to be a dose that would significantly reduce the risk for reactions on accidental exposure based on previous publications.^{8,9} Most severe home anaphylactic reactions in our patients were