

Factors resulting in deferral of diagnostic oral food challenges

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Clinical Implications

- Although oral food challenges are the criterion standard in diagnosing food allergies, they are often deferred by patients for concerns that can be addressed in anticipatory guidance such as interest in the food, fear of reactions, or doubts about tolerance.

TO THE EDITOR:

Food allergies affect up to 8% of children in the United States.¹ Given the limitations of current testing methods, a physician-supervised oral food challenge (OFC) is often required to determine whether a patient is clinically reactive or merely sensitized to a food. Furthermore, OFCs are crucial in clinical management because unnecessary food elimination diets can be detrimental to a child's nutritional status, growth, and emotional well-being.^{2,3} Although OFCs carry a risk of an allergic reaction during the procedure, they are generally considered safe.⁴ However, patients and their families may defer OFCs for reasons that are yet to be extensively explored. The present study was undertaken to determine factors that result in OFC deferral. Understanding these factors may enable allergists to address these issues during anticipatory guidance in a targeted manner.

We enrolled parents of children with a diagnosis of food allergy who had consecutively attended the Jaffe Food Allergy Institute (a food allergy referral center in the borough of Manhattan, New York, NY) for a routine follow-up visit and who had been offered an OFC at least 6 months previously but had not undertaken one within the last 24 months (thereby including persons who might have scheduled an OFC after it was offered but excluding persons who had pursued a recent OFC). Patients are typically offered an unblinded OFC visit (with an estimated visit length of 4 hours) within 6 months of an office evaluation. Subjects completed a written, self-administered questionnaire provided by study staff listing 27 possible reasons for OFC deferral, and the ability to write in responses. The list was developed by having 7 faculty, 5 fellows, a dietitian, a nurse practitioner, and 6 research and clinical nurses who schedule and conduct food challenges expand upon an initial list compiled by the senior author, with elimination of redundancies and addition of 1 additional reason—concerns for cross-contamination—after piloting the survey on subjects who filled in this issue under “other.” Participants selected all the factors that applied, with the option to indicate “other,” and were also instructed to pick the “most important” factor to identify the primary reason among multiple choices selected. The responses were divided among 6 general categories for ease of presentation: 1) not interested/not important/impractical for diet, 2) fear/emotional impact, 3) doubted passing, 4) tried food at home, 5) scheduling, and 6)

Categorical Responses Among Total OFC Invitations

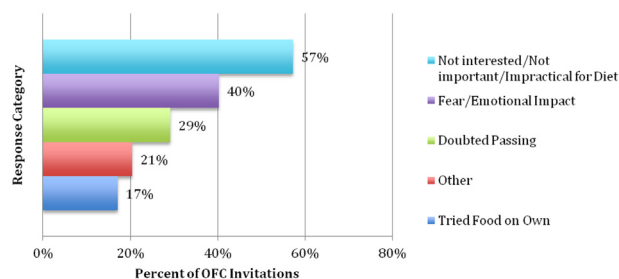


FIGURE 1. Reasons for deferring OFCs (by category, excluding problems scheduling). See text for individual questions within each category. *OFC*, Oral food challenge.

other. Participants provided answers for up to 3 foods for which OFCs had been offered. As a descriptive pilot study, we aimed for at least 100 responses. The study was approved by the Institution's Program for the Protection of Human Subjects.

A total of 102 surveys were completed (participation rate, 93%). The children had a median age of 8 years (range, 2-18 years) and 62% were males. The median number of food allergies was 3; 52 had a previous OFC. The respondents' demographic characteristics were as follows: 89% had previous food-allergic reactions, 51% presented to an emergency department for a food-allergic reaction, and 31% had received epinephrine for a food-allergic reaction. There were a total of 183 OFCs offered to the 102 participants (47 respondents answered queries for 1 food, 29 for 2, and 26 described 3). Among 30 different foods described on surveys, the most frequent were almond (15%), walnut/pecan (7%), and baked egg (6%).

The data were analyzed by each OFC offered, not by individual subject. Each survey question, its thematic category, and response rates are given in Table E1 in this article's Online Repository at www.jaci-inpractice.org. Overall, 57% (103 of 183) of the OFCs included scheduling issues as a reason for deferral, and 66 of 183 (36%) were deferred solely for this reason. Figure 1 shows the distribution of categorical responses for deferring OFCs, excluding the 66 with only scheduling issues. Overall, 57% (67 of 117) of the remaining OFCs were deferred for a reason in the general category of not interested/not important/food impractical for diet. Within this category, 26% (27 of 104 total reasons chosen in this category) indicated that their child would not eat the food (picky eater/no interest), 23% (24 of 104) did not think the food was important to their child's diet, 20% (21 of 104) thought the food was a lower priority than another food they had an OFC offered to, 15% (16 of 104) said that their child did not think the food was important to his or her diet, 13% (14 of 104) had cross-contamination concerns, making the food impractical to eat, and 2% (2 of 104) had another family member with the same food allergy and were thus unlikely to add the food to the child's diet.

For 40% (47 of 117) of the OFCs excluding scheduling, respondents indicated deferral in the general category of fear/emotional

impact. Within this category, 47% (33 of 71 total reasons chosen in this category) indicated that their child feared having an allergic reaction, 31% (22 of 71) feared that their child would have an allergic reaction, 21% (15 of 71) worried that a reaction to the food could have a negative psychological effect, and 1% (1 of 71) said that their child feared losing their identity as a person with a food allergy.

Regarding other categories of responses, 29% (34 of 117) of the subjects indicated the category of doubted passing, 21% (24 of 117) chose "other" (including economic/insurance concerns, child too young, child had a bad experience at a previous OFC), and 17% (20 of 117) tried the food at home.

In addition, respondents were asked to indicate the most important reason for deferring an OFC. A total of 82 most important reasons were indicated (excluding scheduling) distributed as follows: 39% not interested/not important/food impractical to diet, 27% fear/emotional impact, 15% "other," 11% tried food at home, and 9% doubted passing.

Limitations of the study include the referral population, the issue of convenience of scheduling OFCs, and the foods offered. However, the key findings are likely generalizable because it is unlikely that a category of concern was not identified. As a small pilot study, issues such as reasons for deferral according to demographic features or foods offered, or previous OFC or reaction experiences could not be analyzed. Another limitation was the proxy response of parents regarding their child's preferences for 5 queries; a future study including children's responses may be warranted.

In summary, although OFCs are critical in the management of food allergies, we found that they are often deferred by patients either for scheduling problems or for reasons of lack of interest in the food or fear of reactions. The most commonly selected category of deferral regarded disinterest in the food, which demonstrates the necessity of discussing the child's food preferences and the practicality of the food for the diet with the family. Interestingly, a sizeable percentage of families tried the food at home, which can be dangerous.⁵ OFCs can improve quality of life⁶; therefore, providers need to be aware of these common barriers to deliver targeted and effective counseling addressing parents' and patients' specific concerns. Providers can also emphasize the safety measures in place during OFCs and the nutritional and social importance of foods to encourage these procedures. In summary, education about the safety, risks/benefits, nutritional, social, and emotional aspects of the

procedure and the potential for positive changes in diet and quality of life as a result of an OFC should be emphasized. Further research is needed to determine how allergists can best identify and address these identified issues related to OFC deferrals.

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TABLE E1. Survey questions with general categories and number of responses

Reason	General category	Number of responses
Food was tried at home and a reaction happened	Tried food on own	11
Food was tried at home and was tolerated and is now eaten	Tried food on own	10
Child will not eat the food (picky eater, no interest)	Not interested/not important/impractical for diet	27
I do not think the food is important to my child's diet	Not interested/not important/impractical for diet	24
Food was lower priority than another food that we had a feeding test for	Not interested/not important/impractical for diet	21
Child does not think the food is important to his or her diet	Not interested/not important/impractical for diet	16
Cross-contamination concerns make the food impractical to eat	Not interested/not important/impractical for diet	14
Another family member has the same food allergy so we are not likely to add this food	Not interested/not important/impractical for diet	2
Thought the blood or skin test results were not favorable	Doubted passing	18
Child personally thinks he or she is still allergic	Doubted passing	13
I personally think my child is still allergic	Doubted passing	8
Child fears having an allergic reaction	Fear/emotional impact	33
I fear my child having an allergic reaction	Fear/emotional impact	22
I am worried a reaction to the food may have a negative psychological effect	Fear/emotional Impact	15
Child fears losing his or her identity as a person with a food allergy	Fear/emotional impact	1
I fear losing my identity as a parent of a child with a food allergy	Fear/emotional impact	0
Not contacted to have the test scheduled	Scheduling	46
Child was on the list but was not called	Scheduling	34
Did not realize the test was offered	Scheduling	23
Had trouble arranging a time for the test	Scheduling	17
Did not have time to schedule it	Scheduling	15
I scheduled it but then canceled because of illness or conflict	Scheduling	14
Unable to contact someone to schedule it	Scheduling	6
Too far to travel	Scheduling	4
Had the test at another facility	Scheduling	2
Child had a bad experience at a prior food challenge	Other	10
I am worried that a reaction could cause a worse allergy	Other	5
Child is too young	Other	5
Other without specification	Other	4
Economic/insurance concerns prevented us from scheduling	Other	3

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