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High Family Compliance with Advice to Quickly Introduce "Safe" Foods at Home

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Food allergy can be prevented in at-risk individuals by early introduction of allergenic foods.[1] The role of allergy testing in primary allergy prevention is controversial. Our current practice is to encourage home introduction of allergens in low risk children without prior screening, as the likelihood of reaction is low. However parental hesitancy can be a barrier to home introduction of new foods[2,3], especially if parents have experienced their child reacting to a food tried already. When skin prick testing (SPT) is undertaken for a food not eaten before and is negative, we advise its introduction and regular consumption at home. Newly referred milk and egg allergic children, who have not eaten peanut, are tested for peanut[4], and peanut/tree nut allergic children are tested for 2-3 tree nuts not yet consumed. Focused SPT is also offered to families who do not wish to proceed with dietary introductions without it. We had noted at the next scheduled appointment that the advised introduction of such SPT-negative foods was often incomplete. We report here the results of decisions actively made with families of food allergic children to rapidly introduce other SPT-negative foods, one each day, in the week after clinic attendance. This study was approved as an audit and did not require IRB approval.

Newly referred children were followed between May 2018 to June 2019 in a national and regional paediatric food allergy clinic. Standard advice about introduction of SPT-negative foods *e.g.* peanut, tree-nuts, egg etc. were reinforced by arranging with families that clinic staff would call them in 7 days to assess if they had started or completed the advised introductions. Up to six different foods with negative or low skin prick test wheal size (3mm or less) could be recommended to be eaten at home in 7 days. Families were then followed by telephone at 6 weeks. If the foods had not been introduced after 6 weeks a supervised introduction in hospital was offered.

100 children were followed between May 2018 and June 2019. 84 children (84%) had started introduction within one week of the clinic visit. 69 of these children (69% of total group) had completed all introductions by 1 week. By 6 weeks 92/100 (92%) had started and 81(81% of total group) had completed the food introductions. The follow up at the end of the study showed that 88 children had completed introduction.

To our knowledge our report is the first to follow patients so soon after clinic to assess compliance with advised intensive introductions. 96 children have introduced 283 foods total, amounting to about 3 previously avoided "safe" foods per child. This approach was not resource intensive for clinic staff and could be adapted easily to local clinic practices. Future trials could offer more time between clinic and the phone call but the perceived urgency of the introductions may decrease.

This study was not controlled with either a contemporaneous placebo group (no advice, which we considered unacceptable) or a group with standard, not accelerated, follow up. The study was undertaken in one hospital centre with all patients being seen by a single consultant.

This study shows that rapid introduction of SPT negative foods is effective and acceptable to most families, when supported by telephone follow up from clinic.

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