

Update on Timing and Source of 'Allergenic' Foods

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With increasing incidence, severity and persistence of food allergies in many communities, effective prevention strategies are needed. The question of when in infancy to introduce any solid food, or specific 'more allergenic' foods (including peanuts and eggs), has been the focus of several randomized controlled trials (RCTs) over recent years. The Enquiring About Tolerance (EAT) RCT compared the commencement of solid foods in exclusively breastfed infants from 3 months of age to solid food avoidance with continued exclusive breastfeeding until around 6 months of age [1]. No differences between the groups were found, with 7.1% of infants developing food allergies in the group avoiding solids until 6 months compared to 5.6% of infants in the group receiving solids from 3 months (relative risk 0.80; 95% CI 0.51–1.25; $p = 0.32$). Thus the EAT trial results do not support the need to change the existing current consensus in allergy prevention guidelines [2], based on evidence from previous observational studies, that recommend the introduction of any solid food into infant diets should commence after 4 months of age.

In the year 2000, the American Academy of Pediatrics Committee on Nutrition recommended that for infants at higher risk of allergy (based on family history) the introduction of 'more allergenic' foods should be delayed in their diet, including that eggs be avoided until 2 years and nuts until 3 years of age. Then, in contrast, over the next decade, observational studies found delayed introduction, beyond 6–10 months of age, of some specific foods (including oats, wheat, dairy foods, fish and egg) to be associated with an increased risk of allergic disease. At least six RCTs have been conducted in recent years to investigate whether the timing of introduction of specific food allergens into the infant diet reduces the risk of developing a food allergy. To date, the results from the EAT, Learning Early About Peanut Allergy (LEAP) and Solids Timing for Allergy Reduction (STAR) RCTs have been published, and these trials are summarized in figure 1.

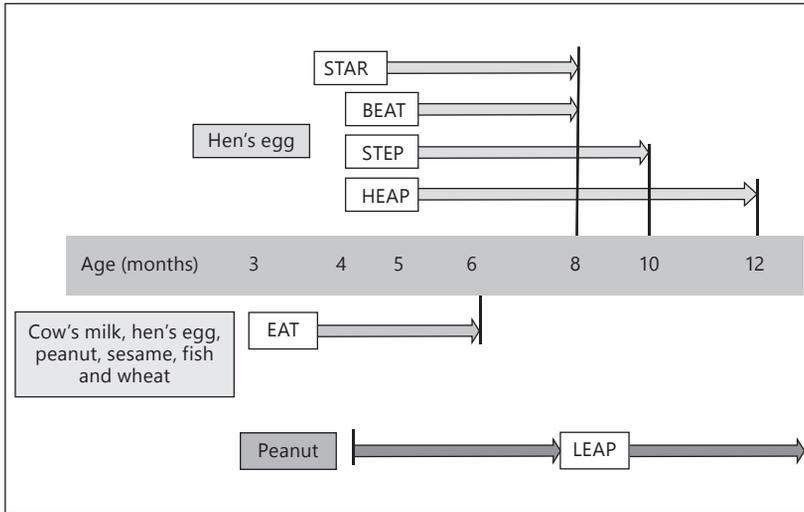


Fig. 1. Timing of intervention and type of food allergens introduced during infancy.

The EAT RCT investigated the sequential introduction of cow's milk protein, egg, peanut, fish, sesame and wheat from 3 months compared to exclusive breastfeeding until around 6 months of age, and no differences in food allergy outcomes were found between the groups [1]. The LEAP RCT found that the introduction and regular dietary intake of peanuts commencing between 4 and 11 months of age significantly reduced the incidence of peanut allergy when compared to the avoidance of peanuts in the child's diet until 5 years of age (1.9 vs 13.7%; $p < 0.001$) [3]. It is important to note that 9% of infants initially screened were excluded due to peanut sensitization and were recommended to continue to avoid peanut. Hence, both the safety, as well as the effect, of the introduction of peanuts during infancy for previously peanut-sensitized infants remains unknown.

The STAR RCT [4], investigating regular egg ingestion compared to egg avoidance from 4 to 8 months of age, found 33% of infants introduced to eggs from 4 months developed an egg allergy compared to 51% of infants who avoided eggs until 8 months of age (relative risk 0.65; 95% CI 0.38–1.11; $p = 0.11$). Thus, to date, the results from three RCTs have determined that there is no reason to delay the introduction of the 'more allergenic' foods into the infant's diet after solid foods have commenced. The results from three other RCTs evaluating egg introduction timing are anticipated within the next year, and the availability of these results will

add greater clarity and contribute additional dimensions to the composite picture of available evidence to this area of food allergy prevention research.

References

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