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Early introduction of small amounts of food prevents food allergies

OPINIONS

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Guidelines for infant nutrition should include, in addition to breastfeeding, small quantities of foods containing the most common allergens from 3–4 months of age.

Norwegian guidelines for infant nutrition recommend exclusive breastfeeding until six months of age, as long as the baby is growing and thriving, in line with global guidelines from the World Health Organization (1). Delayed introduction

of solid foods likely increases the risk of food allergies, and recent research confirms that introducing foods, particularly peanuts and eggs, before six months of age reduces this risk (2). Tolerance development entails the immune system recognising an allergen without developing an allergy to it (3). Without tolerance development, allergic sensitisation occurs, which is the production of IgE against the allergen (3).

Natural tolerance development

In 2015, the groundbreaking British study 'Learning about Peanut Allergy (LEAP)' demonstrated that regular consumption of peanut products until the age of five years (4) reduced the risk of peanut allergy by 60 % compared to avoiding peanut products (5). The study involved over 620 infants from 4 months of age with severe eczema and/or an egg allergy, who thus had a high risk of developing a peanut allergy. The findings documented for the first time the significance of natural tolerance development through exposure and sparked changes in several infant nutrition guidelines.

Two large population-based studies have examined whether food allergens introduced from three months of age can prevent food allergies (6, 7); the British study 'Enquiring about Tolerance' (EAT), which included over 1300 children (6), and the Scandinavian study 'Preventing Atopic Dermatitis and ALLergies (PreventADALL), with around 2400 children (7). In the EAT study, infants were randomised to receive specific amounts of peanut products, boiled egg, cow's milk, sesame, wheat and white fish weekly, and these children were compared to a control group that followed standard advice on exclusive breastfeeding until six months. Among the roughly 30 % who adhered to the protocol, the risk of developing an allergy was significantly lower (2.4 % vs 5.5 %) (6). In the PreventADALL study, the children were randomised to receive a taste of finely ground peanut butter, cow's milk, wheat and soft scrambled eggs at least four days per week from three months of age until at least six months, in addition to breastfeeding, while the control group was advised to follow national guidelines (7). Children randomised to early introduction of solid foods had a 60 % lower risk of an allergy to at least one of the foods at the age of three years compared to the control group (1.1 % vs 2.6 %) (7).

A large meta-analysis, which included data from PreventADALL and EAT, documented that food allergies can be prevented through early introduction of foods (2). This analysis found strong evidence that the risk of egg and peanut allergies was significantly reduced by introducing these foods before six months of age (2). Furthermore, it found moderate evidence that introducing multiple foodstuffs reduces the risk of an allergy to at least one of these, while no preventive effect was associated with cow's milk.

Regular tasting is sufficient

Early introduction of foods appears to be safe, with no increased risk of adverse events (6, 7). In addition to breastfeeding as the primary source of nutrition in early infancy, it is now well-documented that natural tolerance to foods is promoted by early exposure to small amounts of allergenic foods from 3 - 4 months of age (2). This introduction can involve allowing the child to taste a fingertip dipped in the food at least four times a week (8). This should be adapted to the child's ability to suck on food without pieces or lumps and then expanded in line with normal dietary expansion. With the knowledge we have now, it would be ethically challenging to conduct a new large-scale, costly study where a control group would face a significantly increased risk of allergies due to the delayed introduction of allergenic foods.

> ***«The introduction can involve allowing the child to taste a fingertip dipped in the food at least four times a week»***

New infant feeding guidelines, based on well-documented evidence, are now needed. These should emphasise breastfeeding as the primary source of nutrition, in addition to regularly tasting small amounts of food from three months of age to ensure proper growth, development and allergy prevention.

REFERENCES

1. WHO. WHO & UNICEF Global Strategy for Infant and Young Child Feeding 2003. https://www.who.int/publications/i/item/9241562218 Accessed 3.4.2025.

2. Scarpone R, Kimkool P, Ierodiakonou D et al. Timing of Allergenic Food Introduction and Risk of Immunoglobulin E-Mediated Food Allergy: A Systematic Review and Meta-analysis. JAMA Pediatr 2023; 177: 489–97. [PubMed][CrossRef]

3. Brough HA, Lanser BJ, Sindher SB et al. Early intervention and prevention of allergic diseases. Allergy 2022; 77: 416–41. [PubMed][CrossRef]

4. Immune Tolerance Network LEAP-Trio Trial Team. Follow-up to Adolescence after Early Peanut Introduction for Allergy Prevention. NEJM Evid 2024; 3. doi: 10.1056/EVIDoa2300311. [PubMed][CrossRef]

5. LEAP Study Team. Randomized trial of peanut consumption in infants at risk for peanut allergy. N Engl J Med 2015; 372: 803–13. [PubMed] [CrossRef]

6. EAT Study Team. Randomized Trial of Introduction of Allergenic Foods in Breast-Fed Infants. N Engl J Med 2016; 374: 1733–43. [PubMed][CrossRef]

7. Skjerven HO, Lie A, Vettukattil R et al. Early food intervention and skin emollients to prevent food allergy in young children (PreventADALL): a factorial, multicentre, cluster-randomised trial. Lancet 2022; 399: 2398–411. [PubMed][CrossRef]

8. Oslo universitetssykehus. PreventADALL. https://www.oslo-universitetssykehus.no/avdelinger/barne-og-ungdomsklinikken/preventadall Accessed 3.4.2025

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