

FOOD ALLERGIES

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Food allergies are common and on the increase, therefore representing a public health concern in many countries. Indeed, mounting evidence shows that few communities are spared this modern-day epidemic.

As a result, effective prevention strategies are required, particularly in geographic locations where the epidemic is of recent onset. The fact that the food-allergy epidemic has occurred over a short time period gives hope to those who seek to prevent it, as its triggers or driving factors may be modifiable. There is precedence for the reduction of specific allergies; for example, the rise in latex allergy was minimised by restricting the widespread use of powdered latex gloves. Similarly, the rise in peri-anaesthetic allergic reactions induced by the neuro-muscular blocking agent (NMBA) was prevented in select countries by restricting the widespread access to the sensitising agent, pholcodine, which was previously available over the counter.

Sensitisation to foods, and food allergy, can occur in infancy. Increasing evidence suggests that prevention strategies should ideally be targeted at these early-life periods of 'immunologic vulnerability', even before the milestone of independent sitting at six months of age and certainly before walking at approximately 12 months of age.

Dietary interventions have long represented an attractive modality for the prevention of food allergy. However, the evidence supporting the use of dietary interventions in high-risk pregnant and/or lactating women for the prevention of atopic eczema in their offspring remains weak and findings are inconsistent. More importantly, such interventions may compromise maternal and foetal nutrition. While breast-feeding holds many benefits for both mother and infant, it remains equivocal as to whether exclusive breastfeeding for any length of time offers protection against the development of food allergies. Similarly, a recent meta-analysis demonstrated that for high-risk, non-exclusively breastfed infants the use of hydrolysed formula offers no protection against the development of allergic disease.

Studies investigating the use of dietary interventions such as fatty acids, antioxidants, pre- and probiotics, and vitamin supplementation are also unconvincing, inconsistent or not adequately tested. It is important to note that there are safety concerns surrounding some of these interventions.

It is clear that the paradigm has shifted from avoidance of common food allergens to early consumption in an attempt

to induce tolerance. Previous cross-sectional studies aimed at the prevention of food allergy have now been superseded by interventional studies which herald a significant advance in our quest to contain this modern-day epidemic. Indeed, the learning early about peanut (LEAP) study findings have already influenced dietary recommendations across many allergy societies regarding the introduction of peanut in at-risk populations, with the recent enquiring about tolerance (EAT) study results further adding to the findings and strengthening the argument for a wider revision of infant-feeding recommendations. However, numerous questions still remain, such as what to do about the at-risk infants who have large skin tests to peanut and were not included in the LEAP study, with few such children also being captured in the general EAT study population. Furthermore, it needs to be determined how best to implement prevention strategies, as the uptake of food allergens in the EAT study was variable and efficacy was significant only for egg white and peanut among those children in the per-protocol analysis sample.

In light of all this information and the difficulties posed, it is reassuring that the LEAP and EAT interventions proved safe, nutritionally favourable and acceptable to most participants and their families. In addition, the allergenic foods are accessible and relatively affordable in many regions of the world. Therefore the adoption of early-life dietary allergen inclusion as a strategy for the prevention of food allergy lends itself to practice in a variety of settings.

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