

Diet Diversity and Rising Food Prices: An Allergy Conundrum



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Mounting evidence supports that early introduction of allergenic foods^{1,2} and increased overall diet diversity³ may play an important role in the primary prevention of food allergy (FA). Although the biological mechanisms that increase risk of FA, and which confer protection, are incompletely understood, they are likely to be multi-factorial.³ The common exposure in all of these studies, however, remains early oral ingestion of food.¹⁻³ Recent guidelines from global organizations universally support early introduction of food allergens for all infants. Maternal and infant diet diversity, or the consumption of a wide range of nutritious foods, including those considered common allergens, such as eggs and peanuts, may also minimize the development of FA in infants⁴ while increasing intake of important nutrients and reducing the risk of developing food allergies.

The benefit of early introduction of a diverse range of solid foods is juxtaposed against the cost of the foods. Indeed, food prices are increasing globally, for reasons including, but not limited to, climate change, oil prices and war,⁵ thereby increasing the financial challenge of maintaining diet diversity.⁶ Indeed, American data from January 2023 support that food inflation was 10.1% compared with 1 year prior, which exceeds the overall inflation rate of 6.4% over the same period.⁷ Further increases of up to 10% annually are forecasted for first 6 to -12 months of 2023, until food prices are expected to shift downward.⁸ Whereas there is little doubt that the increase in food prices has been felt by all families, we purport that those families managing conditions that require medical dietary restrictions, such as FA, are disproportionately affected. Indeed, families managing pediatric FA are faced with higher food costs than nonallergic families.⁸

In this light, families in low-income settings managing FA may be particularly vulnerable to food insecurity.⁶ Nearly all emergency food programs (including food banks) do not offer FA-friendly foods.⁶ Whereas food costs are largely considered as direct or out-of-pocket costs, the indirect or time and opportunity costs cannot be ignored. Indeed, indirect costs, including time and energy dedicated to food shopping and preparation, contribute substantially to the FA-related household costs.⁸ Therefore, we offer 8 factors for health care professionals (HCPs) to consider when working with families with concerns about the development of or managing FA. These factors, summarized in Figure 1, center around the theory of shared decision making in promoting early introduction and diet diversity balanced against the high cost of food, while acknowledging the broader roles that food plays in families' lives.

1. Acknowledge that food has many roles. In addition to physical nourishment, food connects people to family, community, tradition, culture, and faith, and feeding is a way in which they express emotion. In our experience, families rarely medicalize food. In a narrative review of qualitative literature, Le Moal et al⁹ described multiple reasons for family meal times, which collectively support that "eating together is still practiced and remains valued by family members." In this light, HCPs are encouraged to promote meal times that align with a family's eating practices, which will include some food allergens, rather than prescribing early allergen introduction unrelated to family or cultural food practices as a distinct event that disrupts these practices and creates additional stress for families.

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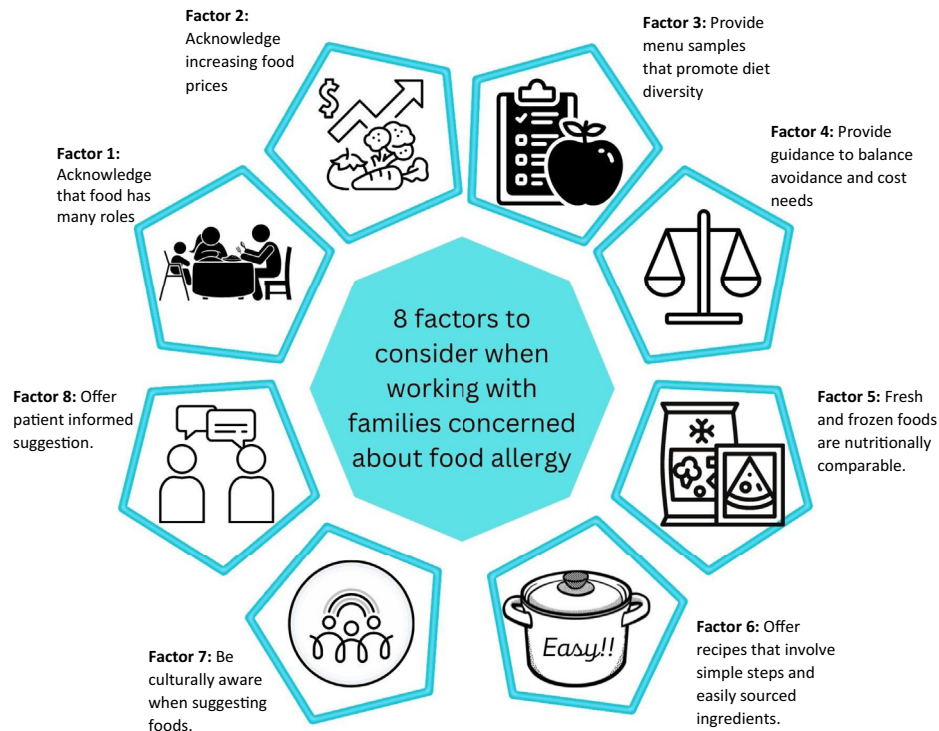


FIGURE 1. Factors for HCPs to consider when working with families with concerns about the development of or managing FA.

- Acknowledge increasing food prices. Although food prices have fallen in recent months, they remain substantially higher in 2022 than in 2021.¹⁰ Some foods, such as milk products and cereal, have increased by more than 11% and 20%, respectively, than a year ago.¹⁰ Luxury items, such as meat, are nearly 9% greater than the previous year.¹⁰ Inflation across other sectors, including heating, housing, and gasoline,¹¹ further limit consumers' food purchasing power.
- Provide menu samples that promote diet diversity. Menus should ideally reflect seasonal availability, cultural preferences, easily and locally sourced foods, and that do not require specialized food preparation skills. Whereas the provision of such menus mandates that HCPs invest time to understand the dietary requirements of the patients and families they serve, this investment may enhance patient-provider communication and, in turn, the willingness and ability for families to promote early allergen introduction and diet diversity.
- Provide guidance to balance avoidance and cost needs. Although bulk foods are often more cost effective, the open-packaging and self-service nature of bulk foods increases the risk of cross-contact with potential allergens. Rather, families may be encouraged to purchase packaged foods, which can be appropriately stored when not included in a daily menu. Similarly, whereas foods labelled free from a given allergen(s) have a place in FA management, these products are often more expensive than traditional retail products. If the latter meet the specific allergen avoidance needs, this may be a more cost-effective option for families.
- Fresh and frozen foods are nutritionally comparable. Fresh and frozen fruits and vegetables often have similar nutritional profiles. In comparison, canned fruits and vegetables may be of varying quality; contain added sugar, salt, and preservatives; and may be less palatable than fresh or frozen options.
- Offer recipes that involve simple steps and easily sourced ingredients. Recipes that are easy to follow, including step-by-step instructions with visual aids and common ingredients, and that are written for moderate literacy levels may be better received by patients.
- Be culturally aware when suggesting foods. Recognizing that food serves multiple purposes (Factor 1), HCPs are encouraged to gain a high-level understanding of dietary guidance for the cultural groups they serve. This factor is rooted in the principles of equity, diversity, and inclusion and will decrease the likelihood that HCPs will make dietary recommendations that fall outside what a given cultural group will find acceptable.
- Offer patient-informed suggestions. Families may be more receptive to introducing foods to the infant's diet if the family themselves regularly eat these foods already. Emphasis should, however, include introduction of foods with textures appropriate for an infant's developmental stage. In contrast, if families are unlikely to introduce a food and continue feeding that food, it may be inappropriate to recommend introducing the food to their infant. Summarized by Brough et al,³ repeated exposure may be as important for the prevention of FA as early introduction itself. The consequences of a single-time introduction, with no subsequent exposure, warrants further investigation.

In conclusion, early introduction and diet diversity play important roles in FA prevention. But, it behooves HCPs to make recommendations that align with the broader meaning of food to families and that can be sustainably incorporated into the sociocultural position of the family. This shared decision-making process, informed by the best available current evidence, may help prevent the risk of FA in infants. Those HCPs who are unsure about translating diet diversity and early introduction in an appropriate fashion to families may want to enlist the help of a registered dietitian or regulated nutritionist.

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