Complementary Food Introduction Practices

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Introduction: The AAP Section on Breastfeeding and the Committee on Nutrition recommends introduction of solid foods between the ages of 4-6 months when the infant is able to sit with support and has good neuromuscular control of the head and neck. As part of these recommendations, the AAP also recommends introducing only one new food at a time and waiting several days before adding another new food. (Yu, 2011). Additional recommendations from the CDC reinforce this approach stating caregivers should wait 3-5 days between each new food (cite CDC website). The primary reason cited for waiting several days by both these organizations is to monitor for food allergies and identify reactions. However, IgE-mediated food allergies typically occur within 2 hours of ingestion and over 90% are caused by the top eight allergens (peanut, tree nut, egg, milk, soy, wheat, fish, shellfish), while reactions to cereal, fruits, and veggies are rare. Furthermore, a growing body of literature suggested that a diverse diet in the first year of life decreases the risk of atopy (Roduit, 2012). The landmark Learning Early About Peanut trial has further focused our attention the importance of food introduction in early infancy, finding an 86% relative risk reduction in peanut allergy development if peanut containing foods were introduced in infancy (Du Toit 2015). Until recently, another common recommendation was to delay the introduction of highly allergenic foods as it was thought to decrease the risk of developing eczema and food allergy (Zeiger 2003, 2000 AAP guidelines). After the publication of the LEAP study, however, the National Institute of Allergy and Infectious Diseases published guidelines, also endorsed by the AAP, recommending the introduction of infant safe peanut products for high risk infants between 4-6 months (Togias 2017). This early feeding window encourages infants to have gastric exposure prior to sensitization through their skin which is believed to lead to food allergy development. In light of these new recommendations and the importance of introducing a wide variety of foods in infancy, it becomes necessary to re-examine previous recommendations of waiting period of multiple days between introducing new foods.

Objective:The objective of this study was to describe current pediatric practice recommendations regarding food introduction and rates of reactions amongst infants through a national survey of pediatricians.

Methods: This study was approved by the institutional review board of Ann & Robert H. Lurie Children's Hospital of Chicago. (IRB #2018-1514). Surveys were developed by a team of pediatricians and health researchers. Pre-tests were administered to local pediatricians in Chicago (n=4).Upon receiving feedback from pre-testing, the survey was refined and resulted in an online survey consisting of 23 items. Survey results were anonymous, however, participants were able to enter their email at the end of the survey for a five dollar Starbucks gift card. Members of the AAP's Council on Early Childhood and local health professionals providing pediatric care to infants ≤12 months of age were invited to complete the online survey via email. Participants included physicians, residents, nurse practitioners, and physicians' assistants in pediatrics and family medicine.Surveys were administered on REDCap and data was collected between February – April 2019.After excluding incomplete/partial responses, a final sample of 563 was analyzed. Descriptive statistics and chi-squared tests were calculated using Stata SE Version 15.1 (StataCorp LP, 2013, College Station, TX).

Results: To our knowledge, this is the first paper to explore how pediatricians counsel families on the introduction of complementary foods. Despite the importance of the transition from deriving nutrition from breast milk and or formula to a varied diet of solid foods, there has been little research done to investigate how providers discuss this transition. Interestingly, there is significant variability in the recommendations of time to wait between the introduction of a new solid food ranging from 9.9% recommend to introduce multiple foods in one day, 27.4% to introduce one food a day, 19.9% waiting two days, 30.4% wait three days. There is also a difference in the age at which pediatricians recommend complementary food between exclusively breastfed infants and non exclusively breastfed infants, where 42.5% recommend introduction at 4 months of age for non exclusively breastfed infants while only 31.8% recommended introduction at 4 months for exclusively breastfed infants. Though over 75% of pediatricians reported a food allergy prevalence of less than 5%, 58% of pediatricians recommended that families wait at least two days between food introduction due to concern for a reaction. Additionally, over 50% of pediatricians believe they need more training on solid food introduction.

Conclusion: Despite 60% of pediatricians surveyed believe that it is safe to introduce multiple new foods at once, 58% of pediatricians recommend that families wait at least two days prior to the introduction of a new food in order to monitor for an allergic reaction. We believe this study will help shed light on how pediatricians currently discuss complementary food introduction and lead to further discussion and research.