## Introducing Peanuts to the Infant

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#### **Introducing Solid Foods**

- Most solid foods should be introduced between four and six months of age
- Initially, solid foods are complementary, meaning that formula or breastmilk remains the primary source of nutrients and micronutrients
- Delay introduction of solid food until the infant is able to sit with support and has good head and neck control, needing to meet the following development milestones:
  - Adequate truncal control (indicated by the ability to push up from the prone position with straight elbows)
  - The ability to propel puréed foods to the posterior pharynx for swallowing.
  - Extinction of the extrusion reflex (usually between four and five months of age).
  - Preparation for the varying textures of supplemental foods by putting their hands in their mouths, bringing their toys to their mouths, and exploring different ways of mouthing these objects
  - The ability to indicate a desire for food (by opening the mouth and leaning forward) and satiety (by leaning back or turning away). This is usually achieved by five to six months of age.
- Single-ingredient foods should be introduced one at a time at intervals of three to five days to permit the identification of food intolerance

# But how about highly allergenic foods?<sup>1</sup>

### And high-risk infants?<sup>2</sup>

<sup>1</sup>In the United States, most common food allergens include: cow's milk, hen's egg, soy, wheat, peanut, tree nuts, and seafood (shellfish and fish)

<sup>2</sup>Infants with family history of atopy are at high risk for developing allergic disease, and those with a personal history of atopy, particularly those with moderate-to-severe eczema

#### The Traditional Teaching...

- The AAP as late as 2000 recommended delaying highly allergenic foods in high-risk infants:
  - Delay cow's milk until age one year; eggs until age two years; and peanuts, tree nuts, and fish until age three years
  - Based upon some early studies that suggested delayed introduction of solid foods might help prevent diseases such as atopic dermatitis
- But this all changed with the LEAP study

### Learning Early About Peanut Allergy (LEAP) Study

- First randomized trial to show benefit of early introduction of a major food allergen, with earlier introduction of peanut at 4 to 11 months of age associated with a decreased risk of developing peanut allergy
- Changed guidelines for introduction of highly allergenic foods for high-risk infants

#### **LEAP Study - Methods**

- Study conducted in Great Britain
- Children 4-11 months of age with risk factors for food allergy (severe eczema, egg allergy, or both)
- Then children had skin prick test to stratify children into two cohorts: 1) no reaction, 2) 1 mm to 4 mm reaction. Those with larger reactions were excluded from the study.
- Children were then given an oral challenge to ensure no anaphylaxis to peanuts prior to randomization (only 0.3% with negative skin prick and 10% of those with positive skin prick testing had reactions)
- Total of 640 children were randomized, 542 in the skin test negative and 98 in the skin test positive
- Patients in each cohort were randomized to either consume at least 6 g of peanut protein per week over at least 3 meals until 5 years of age, or to not take any peanut products
- At 5 years of age, children were then tested with a food challenge to assess for peanut allergy



#### **LEAP Study - Findings**

- Among the 530 infants in the intention-to-treat population who initially had negative results on the skin-prick test, the prevalence of peanut allergy at 60 months of age was 13.7% in the avoidance group and 1.9% in the consumption group (P<0.001).
- Among the 98 participants in the intention-to-treat population who initially had positive test results, the prevalence of peanut allergy was 35.3% in the avoidance group and 10.6% in the consumption group (P=0.004).
- There was no significant between-group difference in the incidence of serious adverse events.







# How does this impact our practice?

#### The need to revise the guidelines...

Addendum guideline	Infant criteria	Recommendations	Earliest age of peanut introduction
1	Severe eczema, egg allergy, or both	Strongly consider evaluation by sIgE measurement and/or SPT and, if necessary, an OFC. Based on test results, introduce peanut-containing foods.	4-6 months
2	Mild-to-moderate eczema	Introduce peanut-containing foods	Around 6 months
3	No eczema or any food allergy	Introduce peanut-containing foods	Age appropriate and in accordance with family preferences and cultural practices

#### TABLE I. Summary of addendum guidelines 1, 2, and 3



#### References

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- Fleischer DM. Introducing highly allergenic foods to infants and children. UpToDate. 2019 Apr.
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