





- I'm a consultant for National Peanut Board
- Southern Fried Nutrition Services is my nutrition communications and consulting firm, and I also see some private clients
- I'm a podcaster (Southern Fried Girlfriends podcast), writer, and speaker

Disclosures

Learning Objectives

1

Direct parents and patients using the latest guidelines for nutrition intervention to prevent food allergies, obtain an accurate food allergy diagnosis, and successfully manage food allergies.

2

Implement an evidence-based approach as RDs educate patients in order to reduce the risk of food allergy reactions while protecting quality of life.

3

Understand and use the appropriate educational approaches and techniques to teach families, pediatric patients, or adult patients about successful food allergy management.



What is a Food Allergy? (FA)

Immunoglobulin E, or IgE, -mediated reaction

Typically to protein, but can be to other substances (e.g. alpha-gal)

Very quickly results in a reaction – usually within minutes, up to 2 hours

Reactions can be life-threatening

Reactions are unpredictable

Reproducible every time the food is eaten

Treatment is avoidance, emergency medications

Signs and Symptoms of Food Allergies

SIGNS AND SYMPTOMS OF ANAPHYLAXIS

Anaphylaxis signs and symptoms that may occur alone () or in any combination after exposure to an allergen include:*

- ROUST:** Itching, tingling, swelling of the lips, tongue, palate (roof of the mouth)
- THROAT:** Swallowing, tightening of throat, difficulty breathing, hoarseness, cough, wheezing (in kids, but not always heard when breathing in)
- HEAD:** Absence of breath, dizziness, fainting, chest pain, tightness
- SKIN:** Redness, pain, nausea, vomiting, diarrhea
- HEART:** Chest pain, low blood pressure, weak pulse, shock, pale blue color, decrease or loss of consciousness
- RESPIRATORY:** Itching, sneezing, runny nose, watery and itchy, red eyes, swollen eyes
- SOB:** Hives or other rash, redness/itching, itching, swelling

IMMEDIATE & POTENTIAL LIFE-THREATENING SYMPTOMS

Consult with a board-certified allergist for an accurate diagnosis and management plan.

Although the severity of individuals experiencing anaphylaxis may vary, some of the most serious cases have no rash, hives, swelling.

EPINEPHRINE is the first-line of treatment for anaphylaxis.

Antihistamines, steroids, & other treatments should only be used as supportive treatment.

ALWAYS CARRY TWO (2) epinephrine auto-injectors at all times.

When you, or someone you know, begin to experience symptoms, CALL 911 & 800(4AALLERGY)

FAACT
FOOD ALLERGY ACTION AND AWARENESS CENTER
1015 36th Street
PO Box 610
910 36-610
www.FAACT.org
info@foodallergyaction.org

<https://www.foodallergyawareness.org/education/education-resource-center/>

Food Allergy Prevalence



“There is no known food allergy prevalence.”
The National Academies of Sciences, Engineering, and Medicine expert, ad hoc committee



Estimated at up to 8% of children¹




Prevalence varies widely based on age (and the study)

1. <https://pediatrics.aappublications.org/content/123/1/e9>

Most Common Food Allergens in the US

- Milk
- Egg
- Peanut
- Tree nut
- Crustacean shellfish
- Fish
- Soy
- Wheat
- Sesame (emerging)
- Beef/red meat (emerging)





What MAY Influence the Risk for FA?

- Method of birth delivery
- Pets in the home
- Number of siblings in the home
- Urban vs. rural
- Eczema – severity/duration
- Existing food allergy (e.g. egg)
- First degree relative with food allergies
- First degree relative with atopy
- Delayed introduction of food allergens
- Level of education of mother
- Maternal consumption of olive oil






Z: 26.65%
L: 150
W: 250

Good Nutrition Starts BEFORE Birth

- Even before a baby takes his first foods, he is “tasting” via amniotic fluid
- Baby gets all of her nutrients from mom
- MANY things cross the placenta and support or inhibit healthy growth

Avoidance vs. Consumption in Pregnancy

- Avoidance is not recommended during pregnancy (AAP)
- In one study, consumption of peanuts and tree nuts during pregnancy is associated with lower risk of allergy
- Other studies have found no difference
- Bottom line: the evidence does not support avoiding allergens in pregnancy to prevent food allergies.








Diet Diversity, Fats, Mediterranean Diet?

- Nutrient-rich diet
- Fiber
- Healthy fats
- Diverse foods

Specific Nutrients During Pregnancy

-  Probiotics in last trimester of pregnancy may be protective against eczema
-  Fish oil supplements may be protective against sensitization
-  Zinc and Vitamin D support the immune system



Breastfeeding & Formula

Baby's First Food

What Does the Evidence say About Breastfeeding & Food Allergies?

- Evidence **does not support** avoidance to prevent food allergies
- **Food proteins** may be expressed in breast milk
- Breastfeeding + early introduction = **may reduce risk**



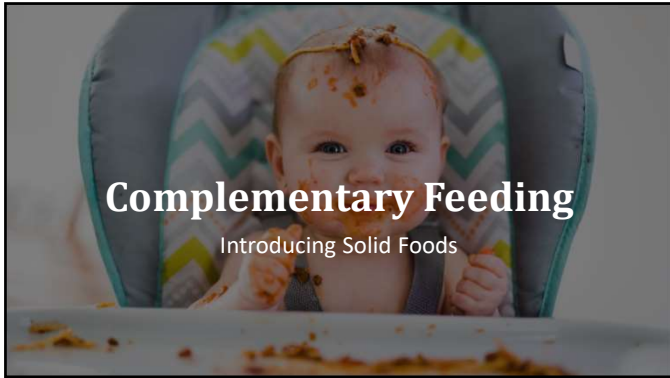
Pre and Probiotics in Breastmilk

- Human Milk Oligosaccharides (HMOs)
- Probiotics in breast milk and on mom's skin
- Unidentified/uncategorized beneficial components?

What About Hydrolyzed Infant Formula?

Current evidence **does not support** the use of hydrolyzed infant formula to prevent food allergies







Starting Solids

- Solid foods should start by 6 months
- Look for these cues that baby is developmentally ready:
 - Can hold up head and trunk (mostly) without support
 - Expresses an interest in eating
 - Is AT LEAST 4 months old
- Remember: solids in the beginning are about teaching baby to eat, developing palate, preventing allergies...and having fun!

2000 AAP recommended avoiding the top allergens for 1, 2 or 3 years

2008 Rescinded guidance on avoidance, stating that the research doesn't support avoidance as a way to prevent allergies, "more research is needed"

2010 NIAID Guidelines for the Diagnosis and Management of Food Allergies

2015 Consensus Report

2017 NIAID Addendum to the Guidelines

Early Feeding Guidelines:
A History



LEAP Study *(Learning Early About Peanut Allergy)*

- 540 infants **at high risk** for developing peanut allergy
 - Severe eczema AND/OR
 - Egg allergy
- Randomized to **eat** or avoid (aged 4-11 months) **peanuts** for 5 years
- Received **significant support** from registered dietitians
- **Oral food challenges** at start and finish
- Up to an **86% reduction** in risk for developing peanut allergy



LEAP On Study

- **Extension** of LEAP study followed "eaters"
- ½ avoided and ½ continued to eat for **12 months**
- Oral food **challenge**
- Protection **maintained**



BEAT/HEAP Studies

- **BEAT Study - Beating Egg Allergy Trial**
 - Infants with **first degree** atopic relative
 - Randomized to **avoid or consume** egg white protein at 4 months
 - **Significantly reduced** sensitization
- **HEAP Study - Hens Egg Allergy Prevention**
 - **Non-high risk** infants
 - **Randomized** to placebo or consumption
 - **Increased** sensitization
- Both groups described **frequent reactions**



EAT Study
(Enquiring About Tolerance)

- Breastfed infants with **no known risk**
- Introduced **6 common allergens** - milk, egg, peanut, sesame, fish, wheat - at 6 months
- **Difficult** to adhere to the protocol
- Results were **convincing** for peanut, egg, and milk
- **Less or not significant** for other allergens
- Introduction was **safe**

NIAID Addendum Guidelines

National Institute of Allergy and Infectious Diseases, or NIAID, Addendum says:

- Group 1 (high-risk) – infants with **egg allergy** or severe to moderate **eczema** or **both**:
 - Discuss with pediatrician or allergist **before introducing** peanut foods
 - **Skin prick testing (SPT)** may be recommended
 - Depending on SPT results, **first oral intro** may happen at doc's office
 - Intro recommended at **4-6 months**
 - Children should eat **2g peanut protein** three times per week thereafter

NIAID Addendum Guidelines

- Group 2 (moderate-risk) – **mild eczema**:
 - **Not necessary** to discuss with pediatrician first, but may
 - Should introduce **at home**
 - At or after **6 months**
- Group 3 (low-risk):
 - **Introduce at home** at or after 6 months
 - **Age-appropriate** and in accordance with family preferences and cultural practices

How to Introduce Peanut Foods Safely

Four Recipe Options, Each Containing Approximately 2g of Peanut Protein

How: Preparation and Introduction are at 19 months; 2 and 3 are for a baby diagnosed or suspected to have an allergy.

Recipe 1: Smoothie
1/4 cup water
1/2 cup of pureed product

Recipe 2: Thinned smoothie
1/2 cup of pureed product
1/2 cup of water

Recipe 3: Smoothie with powdered product
1/2 cup of pureed product
1/2 cup of water
1/2 cup of powdered product

Recipe 4: Smoothie with powdered product
1/2 cup of pureed product
1/2 cup of water
1/2 cup of powdered product

Courtesy: National Institute of Allergy and Infectious Diseases. https://www.niaid.nih.gov/sites/default/files/addendum_peanut_allergy_prevention_guidelines.pdf

5 EASY WAYS TO INTRODUCE PEANUT FOODS TO YOUR INFANT

- 1. MIX WITH WATER, FORMULA OR BREAST MILK**
Thin 2 tsp. of peanut butter with 2-3 tsp. hot water, formula or breast milk. Allow to cool before serving.
- 2. MIX WITH FOOD**
Blend 2 tsp. of peanut butter into 2-3 Tbsp. of foods like infant cereal, yogurt (if already tolerating dairy), pureed chicken or tofu.
- 3. MIX WITH PRODUCE**
Stir 2 tsp. of powdered peanut butter into 2 Tbsp. of previously tolerated pureed fruits or vegetables.
- 4. PEANUT SNACKS**
Give your baby a peanut-containing teething food, such as peanut puffs.
- 5. TEETHING BISCUITS**
Teething infants who are older and salt-feeding may enjoy homemade peanut butter teething biscuits. Find a recipe for teething biscuits at nationalpeanutboard.org.

<https://www.nationalpeanutboard.org>



Easy Products for Peanut Introduction

- Peanut-corn snack puffs
- Thinned peanut butter
- Powdered peanut butter
- Pureed products

Other Example Products & Dietary Supplements

Hello Peanut! – Powdered peanut butter in sachets with “build up and maintenance” doses

Ready, Set, Food – Peanut, egg, and milk sachets (powder) recommended to give via bottle for 6+ months

Spoonful One – 16 potential allergens in powder, puff, or cracker form recommended to be given daily for 12 months (or more)

Overcoming Barriers to Early Introduction

For Parents and Professionals

Parental Concerns

- Is my baby ready for solid foods?
- What if my baby has a reaction?!
- Will my baby stop breastfeeding?
- But my baby is at risk for food allergies!
- What about choking hazards?



Pediatrician/Health Professional Concerns

- What if the baby has a reaction?!
- What about choking hazards?
- I've always practiced avoidance with my patients
- It's (LEAP Trial) only one study
- Parents are not going to be receptive
- I don't have time to explain it all to my patients
- We don't have access to an allergist



Particulars for High-Risk Infants

- Food allergy skin and blood testing have high rates of false positives
- Infants with severe eczema are at high risk and skin/blood tests are particularly inaccurate
- Long waits from pediatric screening to allergist to office visit
- The longer we wait, the higher the chance the child will become food allergic



Diet into Early Childhood

12 Months and Beyond



What is Diet Diversity?

- Variety between food groups
- Variety within food groups
- How do we know?
 - Colorful
 - Macro- and micronutrient-diverse
 - Fiber



Limited on Allergy, But...

A recent study presented at the European Academy of Allergy and Clinical Immunology (EAACI) showed a **reduction in food allergy** proportionally related to diet diversity over a 10 year period.

Reinforce Parental Efforts

-  It can take many introductions before children will eat new food
-  It is developmentally normal for children to be "picky" in toddlerhood
-  Food comes in many different shapes, sizes, textures, temperatures, and we should try them all
-  Division of Responsibility (Ellyn Satter Institute)
-  Raising a healthy eater takes time



Practice Pearls

- Maternal diet that is plant-based, such as the Mediterranean Diet, may be protective against atopic conditions.
- Avoidance of potential allergens in pregnancy and during breastfeeding is not recommended.
- The evidence does not support avoiding allergens in infant feeding to prevent food allergies.
- Early introduction of peanut foods, starting as early as 4-6 months, can reduce the risk of peanut allergy in high-risk infants.
- Diet diversity in infancy and early childhood appears to be protective.

Introducing Peanuts to Your Infant Early Can Help Prevent a Peanut Allergy



**NIP ALLERGIES
IN THE *Bub***

TO HELP PREVENT
FOOD ALLERGY,
GIVE YOUR BABY
THE COMMON
ALLERGY-CAUSING
FOODS

*before they
turn one*



**What's
Next in
Prevention?**

- Probiotics or other manipulation of the microbiome?
- Guidance for other allergens (beyond peanut)?
- "Perfecting" mother's diet?
- Skin barrier protection guidelines?



QUESTIONS?

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