




Nutrition First
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Food Allergy Updates

Kevin Dooms, MD, FAAAAI
Allergy and Asthma Associates, Bellevue, WA
(Swedish, starting early 2018)
UW Clinical Associate Professor of Pediatrics




Disclosures

- No financial relationships to disclose
- Community physician
- Participate in regional and national allergy organizations
- Volunteer clinical faculty at UW
- Try to keep up with new developments!

Background

- Food allergies have been on the rise in recent years, though it's unclear why.
- There has been a sharp upswing in food allergy awareness, anxiety, and testing.
- Food allergy guidelines have been in flux, sometimes with contradictory information.
- Currently there are no official means of preventing or treating food allergy.

Today's objectives

- Review common food allergies and epidemiology
- Diagnosis, testing, and management
- Early food introduction
- Can we *prevent* or *treat* food allergies?
- When to refer to an allergist
- Case
- Time for questions

Definitions

Adverse food reaction: any untoward reaction to ingesting food or a food additive

- **Food allergy/hypersensitivity**: adverse food reaction due to an *immunologic* mechanism
 - e.g. IgE "allergic" antibodies
 - symptoms can include: immediate hives, swelling, difficulty breathing, vomiting/diarrhea, loss of consciousness
 - reaction occurs with every exposure

Definitions

Adverse food reaction: any untoward reaction to ingesting food or a food additive

- **Food intolerance**: adverse reaction due to a physiologic or non-immunologic mechanism
 - lactose intolerance
- **Food sensitivity**: highly subjective
 - variable symptoms: fatigue, headache, behavior change, "inflammation"
 - no validated testing to rule in or rule out
 - empiric food elimination may be the best approach

Immunologic (Allergic) Adverse Food Reactions



- IgE-Mediated**
 - Systemic (Anaphylaxis)
 - Oral Allergy Syndrome
 - Immediate gastrointestinal allergy
 - Asthma/rhinitis
 - Urticaria
 - Morbilliform rashes and flushing
- Mixed IgE/Non IgE**
 - Eosinophilic esophagitis (EoE)
 - Eosinophilic gastritis
 - Eosinophilic gastroenteritis
 - Atopic dermatitis
- Non-IgE Mediated Cell-Mediated**
 - Food Protein-Induced Enterocolitis
 - Food Protein-Induced Enteropathy
 - Food Protein-Induced Proctocolitis
 - Dermatitis herpetiformis
 - Contact dermatitis

Sampson HA. J Allergy Clin Immunol 2004;113:805-9.
Chapman J, et al. Ann Allergy Asthma Immunol 2006;96:S51-68.

Non-Immunologic Adverse Food Reactions

Toxic / Pharmacologic

- Bacterial food poisoning
- Heavy metal poisoning
- Scombroid fish poisoning
- Caffeine
- Alcohol
- Histamine

Non-Toxic / Intolerance

- Lactase deficiency
- Galactosemia
- Pancreatic insufficiency
- Gallbladder / liver disease
- Hiatal hernia
- Gustatory rhinitis
- Anorexia nervosa
- Idiosyncratic
- Carbohydrate malabsorption

Sicherer SH, Sampson HA. J Allergy Clin Immunol 2006;117:S470-475.

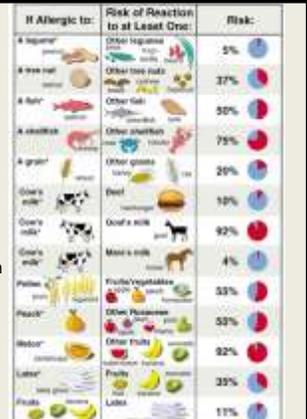
Estimated Prevalence of Food Allergy

Food	Children (%)	Adults (%)
Cow's milk	2.5	0.3
Egg	1.5	0.2
Wheat, Soy	0.4	0.3
Peanut	2.0	0.6
Sesame	0.1	0.1
Tree nut	0.5	0.6
Crustacean	0.1	2.0
<u>Fish</u>	<u>0.1</u>	<u>0.4</u>
Overall	6.0%	2-3.5%

Sicherer SH, Sampson HA. J Allergy Clin Immunol 2010;125:S116-125.

Cross-reactivity

- Cow/goat milk (92%)
- Peanut
 - tree nut, sesame
- Among tree nuts (37%)
 - cashew/pistachio together
 - walnut/pecan together
 - almond allergy less common
- Among shellfish (75%)



Sicherer SH JACI 2001;108:881-90

Natural History of Food Allergy

- ~ 80% of **milk, soy, egg,** and **wheat** allergy remit by teenage years
 - declining/low levels of specific-IgE may help predict resolution
 - >70% of children tolerate extensively heated egg, prior to tolerating partially-cooked versions
- Allergies to **peanut, tree nuts, seeds, seafood** are typically lifelong
 - more often associated with severe reactions
 - epinephrine autoinjector for all nut, seed, and seafood allergies
 - ~150 food allergy deaths/yr (especially peanut and tree nut anaphylaxis)

Natural history of Food Allergy

Food	Typical Onset/Resolution of IgE mediated allergy
Milk	Develops: usually first 6-12 months of life Resolves: 37% by age 12 yrs, 79% by 16 yrs
Egg	Develops: first 6-24 months Resolves: 48% by age 12 yrs, 68% by 16 yrs
Wheat	Resolves: 65% by age 12 years
Peanut	Develops: most before age 2 yrs 75% of reactions at 1 st exposure Resolution: 20% overall , ~9% relapse rate
Tree Nuts	Develop: ages 1-7 yrs, or as adults Resolution: in ~10% overall
Fish/Shellfish	Develop: fish in late childhood or adulthood shellfish (shrimp) often adulthood (60%) Resolution: uncommon or rare

Common food reactions: **Infants/Toddlers**

- **Food Protein-Induced Allergic Proctitis/Proctocolitis**
 - often cow's milk/soy protein
 - blood in stool ± other symptoms, usually well-appearing infant
 - usually negative skin/blood testing
 - dairy/soy avoidance until 1-2 years of age
- **Atopic Dermatitis** (aka eczema)
 - discuss later
- **Classic food allergy** (IgE-mediated)
 - egg, dairy, nuts, seeds, seafood, wheat, soy
 - rapid-onset hives, swelling +/- respiratory (cough, wheeze) or GI (vomiting, diarrhea) symptoms
 - allergy testing can be helpful

Food Protein-Induced Enterocolitis Syndrome (FPIES)

- Repeated vomiting 2-4 hours after eating certain solids for the first time
 - **cow's milk, soy, rice, oat, poultry, sweet potato...**
 - often more than 1 food (e.g. milk + soy)
- Can be severe, but usually self-limited
 - may see watery/bloody diarrhea several hours later
 - severe cases: hypovolemia, leukocytosis, thrombocytosis, metabolic acidosis, methemoglobinemia
- Differential is broad:
 - infectious gastroenteritis, sepsis, NEC, anaphylaxis, inborn errors of metabolism, lactose intolerance, GER, Hirschsprung disease, eosinophilic esophagitis/enteritis, celiac, malrotation/volvulus

Nowak-Węgrzyn JACI, Jan 2017

Food Protein-Induced Enterocolitis Syndrome (FPIES)

- Avoid trigger foods, watch for others
- Testing (sIgE) is usually negative
- Spontaneous resolution in 1-4 years
 - 80% outgrow by 4 years
 - rare in teens, adults?
- When to oral food challenge??
- Also consider **chronic FPIES**
 - intermittent vomiting/diarrhea, poor weight gain, FTT
 - resembles many other conditions (GE reflux?)
 - resolves upon elimination of trigger food(s)

Nowak-Węgrzyn JACI, Jan 2017

Common food reactions: **all ages**

- **Classic food allergy** (IgE-mediated)
- **Oral Allergy Syndrome**
 - pollen/food cross-reactivity
 - e.g. birch pollen ↔ celery, carrot, pitted fruit
 - primarily oral symptoms (itch, tingle), resolve with cooking
 - can improve with allergy shots
- **Eosinophilic Esophagitis (EoE)**
 - infants: vomiting, FTT, food refusal, "reflux"
 - adults: food impaction, painful swallowing, "bad reflux"
 - food often a trigger (e.g. **dairy**)
 - food allergy testing has limited benefit

Current Food Allergy Management

1. **Make an accurate diagnosis**
2. **Eliminate trigger foods**
3. **Be prepared for food allergy reactions**
4. **Consider oral food challenge**

Food Allergy Evaluation and Diagnosis

- History, History, History!
 - food, timing, symptoms, reproducibility
- Skin or blood testing *if* indicated
 - detect food-specific IgE antibodies
 - skin and blood testing are roughly equivalent
 - high false-positive rate ("cries wolf")
 - "sensitized" vs. true clinical allergic reactions
 - experienced **interpretation** is critical to making an accurate diagnosis

Food allergy tests

- Skin prick tests
 - looks for pre-formed allergic **IgE antibodies**
 - same day, takes 15-20 minutes to complete
 - reliability:
 - helpful for ruling **IN** a food allergy (specific)
 - excellent at ruling **OUT** a food allergy (sensitive)
 - may test at 4-6 months of age
- Blood tests
 - **IgE antibody** levels in the blood ("RAST", "ImmunoCAP")
 - requires a needle stick, days to weeks for results
 - similar reliability, not as sensitive as prick testing
 - may test at 4-6 months of age

Skin prick testing



Other food allergy tests

- Skin patch tests
 - takes 3-5 days
 - questionable utility in food allergy diagnosis/management
- Intradermal food skin tests
 - injection under skin, look for food-specific IgE antibodies
 - *NOT recommended for food allergy testing*
- Unproven/Experimental tests to avoid
 - food-specific IgG/IgG4 levels
 - provocation/neutralization
 - cytotoxic tests
 - applied kinesiology (muscle response testing)
 - hair analysis
 - electrodermal testing

Food Avoidance

Food allergy at school



Dietary Elimination

- **Complete avoidance** (e.g. peanut) vs. **partial avoidance** (e.g. avoid whole egg but eat baked egg products if tolerant)
- **FALPCA**¹ (effective 1/1/06) requires labeling for the 8 major food allergens.
- **Advisory warning labels** (May contain..., Processed in a facility...). For peanut, <10% of products had peanut.²
- **Cross contact issues**: share equipment, fried foods
- **Dietary counseling**

¹Food Allergen Labeling and Consumer Protection Act of 2004 (P.L. 108-282) (FALCPA)
²Allen KI, et al WAQ Journal 2014;7:10

Hypoallergenic Infant Formulas for Cow's Milk Allergy (CMA)

- **Soy based formulas** For IgE-CMA, soy co-allergy is 0-14%¹. For non-IgE CMA, soy co-allergy 0%² to 60%³.
- Partial hydrolysates (e.g. Good Start, Peptamin Jr, Pediasure Peptide) are not recommended for CMA
- **Extensively hydrolyzed formulas (EHF)** Alimentum, Nutramigen: >90% tolerance in IgE-CMA
- **Elemental amino acid based formulas** (Neocate, Elecare): CMA, FPIES intolerant of EHF, EoE

¹Katz Y, et al. JACI 2010;126:77-82.
²Katz Y, et al. JACI 2011;127:647-53.
³Sicherer SH, et al. J Pediatr 1998; 133: 214-219

Anticipating food allergy reactions

- Food allergic reactions can sometimes develop into life-threatening reaction
 - variable triggers: quantity, route, state of health
 - *reaction severity cannot be predicted using test results or previous reaction history*
- Treatment
 - antihistamines for “minor” reactions
 - self-injectable epinephrine (adrenaline) for “severe” or “systemic” reactions (aka anaphylaxis)

Managing Anaphylaxis

- Written Anaphylaxis Emergency Action Plan
- Emergency identification bracelet
- Epinephrine: drug of choice for systemic reactions
 - 2 doses of self-injectable epinephrine available on hand at all times (in case of biphasic reaction)
- Antihistamines: WILL NOT STOP ANAPHYLAXIS



Simons FE, JACI 2010;125(2 Suppl 2):S161-81. Kim JS, et al. JACI 2005; Jul;116(1):164-8.
 Rudders S, et al. Pediatrics 2010;125:e711-8. Rudders S et al. Allergy Asthma Proc. 2010;31:308-16

Common questions

- **Can we prevent food allergy?**
- **What should I feed my baby?**
- **Is food allergy causing my baby's eczema?**

Can we prevent food allergy?

- No official means of preventing food allergy¹
- Early food introduction may be protective
 - prior observation: 1/10 prevalence of PN allergy in Israel
- **LEAP study: early peanut exposure may reduce the risk of developing peanut allergy...**

1. Fleischer DM et al. J Allergy Clin Immunol: In Practice. 2013;1:29-36

Learning Early About Peanut (LEAP 2015)



- Landmark RCT, 640 infants, 4-11 months of age at high risk for developing PN allergy
 - High risk = **severe eczema, egg allergy, or both**
 - skin tested, placed into 3 group, +/- peanut, and later assessed at 5 years of age
- **Group 1:**
 - skin test: >4 mm wheal = “peanut allergic”
 - excluded from study
- **Group 2:**
 - skin test: negative
 - ate peanut ~6 grams per week (3 rounded teaspoons peanut butter)
 - avoided peanut
- **Group 3:**
 - skin test: 1-4 mm wheal
 - ate peanut: ~6 grams per week
 - avoided peanut

DuToit G et al. N Engl J Med 2015;372:803-13

2 grams of peanut protein, 3x per week

	Formula	Peanut butter	Peasants	Peanut flour or ground nutmeg powder
Amount containing approximately 2 g of peanut protein	11 g or 1/4 of a 28 g (1-oz) can or 21 whole	16-17 g or 2 tablespoons	3 g or 1/4 whole peanuts (1/8 teaspoon of ground peanuts)	4 g or 2 teaspoons
Typical serving size	1 bag (28 g)	Spread on a slice of bread or toast (1/4 g)	2/3 teaspoon of ground peanuts (1/2 g)	No typical serving size
Peasants per typical serving	3.2 g	3.4 g	3.3 g	No typical serving size
Feeding tips	For a smooth texture, mix with water under pressure (such as in a blender) or use a food processor and mesh veil. Purined or crushed flat or vegetable can be added. Cook children's cereals offered along with formula.	For a smooth texture, mix with water under pressure (such as in a blender) or use a food processor. For older children, mix with peanut or almond milk or vegetable or soy nut-based family foods, such as yogurt or roasted potatoes.	Use blender to create a paste or puree. 1/2 to 1 teaspoon of ground peanuts can be added to a portion of yogurt or peanut fruit or berry milk.	Mix with yogurt or apple sauce.

Togias et al., JACI January 2017 (NIAID-sponsored expert panel)

What should I feed my baby?

Evolving food introduction guidelines 2000 (AAP)

- All mothers: consider restricting peanut during pregnancy
- For "high risk" infants (= parent or sibling with allergies)
 - breast feeding moms eliminate peanut, tree nuts
 - also consider avoiding eggs, cow's milk, and fish
 - "delay introduction of dairy until 12 months, eggs until 2 years, and peanut/tree nuts/fish until 3 years
- Based on expert consensus, and not intended for all infants

AAP Committee on Nutrition, Hypoallergenic Formulas (2000)

Evolving food introduction guidelines 2008 (AAP), 2010 (NIAID)

- No convincing evidence to delay introduction of highly allergenic foods like dairy, egg, nuts, or seafood
- Did not specifically encourage introducing complementary foods (e.g. cow's, egg, soy, wheat, peanut, tree nuts, fish, shellfish) or when

Greer FR et al. Pediatrics 2008
Fleischer DM et al. JACI: In Practice 2013;1:29-36
Boyce JA, et al. J Allergy Clin Immunol 2010;126:51-58

What should I feed my baby?

- Exclusive breastfeeding is recommended until 4-6 months of age
 - may reduce risk of milk allergy, eczema, wheezing
- For infants at high-risk who cannot be exclusively breastfed for first 4-6 months
 - hydrolyzed formula may prevent eczema
- Maternal avoidance diets during pregnancy and lactation are not recommended based on current data

Fleischer DM et al. J Allergy Clin Immunol: In Practice. 2013;1:29-36

Is food allergy causing my baby's eczema?

Atopic Dermatitis (aka Eczema)

- Atopic Dermatitis is common
 - non-allergic and allergic (food, environmental) triggers
 - **managing allergic triggers will not “cure” AD**
 - diligent skin care: frequent bathing, non-soap cleansers, emollients, as-needed topical steroids, +/- bleach baths, wet wraps
 - AD often resolves before school age
- Common allergic triggers in AD
 - foods: **egg**, milk, peanut, tree nuts, wheat, soy, seeds, **seafood**
 - (indoor) environmental triggers often overlooked: **dust mites, cat, dog**

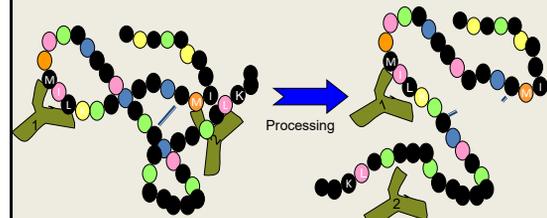
Eczema and food sensitization/allergy

- General population (no eczema):
 - 28% of US children are *sensitized* to foods (i.e. positive skin or blood test, but no clinical reaction)
 - 8% have a positive peanut test (sensitized)
- Infants/children with eczema
 - elevated total IgE is common
 - **50-80% test positive** (sensitized) to at least one food¹
 - e.g. milk, egg, and peanut; often wheat or soy
 - 84-93% of food were being avoided unnecessarily²
 - eczema referral center
 - “food allergy” diagnosed primarily by specific IgE (“RAST”) testing

1. Boyce JA, et al. *J Allergy Clin Immunol* 2010;126:S1-S8
2. Fleischer DM et al. *J Pediatrics* 2011;158:578-583

Food Allergy “Treatments”

Effect of Cooking & Digestion on Food Proteins



Children who “outgrow” milk (or egg) allergy will often tolerate baked-milk products first

BAKED GOODS

Changing from Avoidance to Limited Diet

- 70% of children with egg allergy tolerate in baked goods
- 75% of children with milk allergy tolerate in baked goods
- Regular ingestion of these proteins is associated with less positive test results
- Regular ingestion may result in more rapid resolution of milk/egg allergy

Food Desensitization

- **Desensitization:** change in the threshold dose of food needed to cause an allergic reaction while therapy is continued
- **Sustained Unresponsiveness:** allergy has resolved
- **Oral immunotherapy (OIT)**
 - consume (eat) increasing amounts of allergenic food daily
 - drops or tiny pieces of food
- **Epicutaneous immunotherapy (EIT)**
 - patch/sticker with small amount of allergenic food
 - daily application

OIT/EIT Progress

- **Oral immunotherapy**
 - most patients on OIT achieve desensitization, but very few achieve "sustained unresponsiveness"
 - may see more success in infants and young children
 - chronic GI side effects lead to poor adherence
 - occasional/unpredictable systemic reactions
- **Epicutaneous immunotherapy**
 - well tolerated, relatively safe
 - skin rash, itching are common
 - currently in FDA phase III study, approval in 1-2 years?

Gernez et al. JACI In Practice 2017

Other news

Influenza

- Fever, cough, body aches
- 294,128 influenza hospitalizations per year in US¹⁻²
 - 21,156 are children under 5 years old
- 23,607 deaths per year
 - 124 children
- Vaccines
 - IIV (inactivated influenza vaccine, trivalent or tetravalent)
 - LAIV (live attenuated intranasal influenza vaccine)
 - **FluMist® nasal spray NOT approved for 2017/2018 season³.**

1. Grohskopf et al. Prevention and Control of Seasonal Influenza with Vaccines. MMWR Recomm Rep 2016;65:1-54.
2. Thompson et al. Influenza-Associated Hospitalizations in the United States. JAMA 2004;292:1333-40.
3. <https://www.cdc.gov/flu/protect/keyfacts.htm>, accessed 10/18/17

Influenza vaccination and egg allergy

- Most influenza vaccines grown in fertilized chicken eggs
 - trace amounts of egg protein (ovalbumin)
- Egg-containing influenza vaccines were contraindicated in patients with egg allergy
 - used to defer vaccination, split dosing, or arcane skin testing

Growing evidence egg allergy may not be a problem..

Influenza vaccination and egg allergy

- CDC guidance for 2017-2018 season¹ (unchanged from last year)
 - if mild egg allergy (e.g. hives only), then may receive any licensed, age-appropriate flu vaccine
 - if history of **severe reaction to egg**, patients should receive influenza vaccine in a **supervised medical setting**
- 2018 and beyond
 - **give influenza vaccine to all egg-allergic patients** (no matter their reaction history)
 - inactivated or live attenuated vaccines
 - no need for testing, split dosing, or supervised administration
 - "Vaccine providers should not ask about the egg allergy status of recipients of influenza vaccine."

1. <https://www.cdc.gov/flu/about/season/flu-season-2017-2018.htm>, accessed 10/18/17
2. Greenhawt M, et al. Administration of Influenza Vaccines to Egg-Allergic Recipients: A Practice Parameter Update – 2017, draft.



New FDA peanut labeling



"For most infants with severe eczema and/or egg allergy who are already eating solid foods, introducing foods containing ground peanuts between 4 and 10 months of age and continuing consumption may reduce the risk of developing peanut allergy by 5 years of age. FDA has determined, however, that the evidence supporting this claim is limited to one study.

If your infant has severe eczema and/or egg allergy, check with your infant's healthcare provider before feeding foods containing ground peanuts."

- A "Qualified Health Claim", supported by *credible* scientific evidence
- vs. "Authorized Health Claim", supported by *significant* scientific agreement

<https://www.fda.gov/Food/NewsEvents/ConstituentUpdates/ucm575001.htm>, accessed 10/18/17

When to refer to Allergy

- Known or suspected food allergy reaction
- Infants with moderate/severe eczema refractory to management
- "Allergic" families (with infants, or expecting)
 - counseling about maternal and infant diets
 - testing, if indicated
- Child with older food-allergic sibling
 - 7% increased risk of peanut allergy
 - vs. avoiding testing?

Young MC, et al. JACI 2009;124:175-82.

The Allergist's Role

- Use focused, evidence-based testing to confirm a known or suspected food allergy
- Assist in food allergy test interpretation
- Patient education:
 - identification of causative food, elimination diet
 - education on the signs and symptoms of allergic reactions and anaphylaxis, and appropriate treatment including correct epinephrine autoinjector technique
- Assist in formulation of individual health plans, particularly for child-care and educational settings
- Evaluate for and conduct food challenges
 - may rule-out food allergy

Fleischer DM, et al. J Allergy Clin Immunol. In Practice 2013;1:29-36.
Boyce JA, et al. J Allergy Clin Immunol 2010;126:S1-S58.

Case: eczema & food allergy in 1975



- 7 month old boy with mild eczema on cheeks, inner elbows
 - responds to moisturizer and occasional topical steroid
- Breastfed for first 6 weeks, then cow's milk formula
- Around 6 months, tried scrambled egg on 2 occasions:
 - hives and worse eczema both times
- How to proceed?
 - Need allergy testing?
 - Avoid other foods?
 - Will egg allergy go away?

Case: eczema & food allergy in 1975



- Pediatrician: "Avoid egg, take care of eczema".
 - no routine allergy testing
 - no other food elimination
- Egg tolerated starting at 18-24 months
 - no other food sensitization (e.g. peanut)
- Eczema resolved at age 2-3 years
- Dr. Mom
 - "What's the big deal these days?"

Case: Eczema in 2000-2007

- 7 month old with mild eczema on cheeks, inner elbows
 - breastfed for first 6 months
 - has tried fruit, veg, grains, but no "high-risk" foods
- Parents: "tell us which foods are causing eczema"
 - testing revealed multiple positives: egg, milk, wheat, soy, peanut, tree nuts
 - anxiety, numerous food eliminations
 - resolution of egg, milk, wheat, soy allergy by school age
 - **lifelong nut allergy**

Case: Eczema in the future

- 7 month old with mild eczema on cheeks, inner elbows
 - breast feed for first year, watch for food triggers in breast milk
 - extensively hydrolyzed formula if CM allergy or CMPI
 - if CMPI, may consider soy formula if tolerated
 - elemental formula if completely dairy intolerant
- around 6 months
 - offer **baked egg/milk proteins** (bread, muffins, cakes) before uncooked/partially-cooked (pancakes, waffles; fried, scrambled, or boiled egg)
 - if no eczema or mild/moderate eczema, try peanut at home
 - see an allergist if moderate/severe eczema, known egg allergy, or both
 - otherwise, may introduce other foods

Summary: food allergy



- Food allergies have been on the rise
- More allergy testing, diagnosis, and anxiety
- Evolving food introduction recommendations from experts
- No official means to prevent or treat food allergies
- **History** is key in making an accurate food allergy diagnosis
- Food allergy testing can be unreliable (especially if there's eczema) and result in incorrect diagnosis

Summary: food allergy

- No evidence for maternal food avoidance during pregnancy/lactation
- At 6 months, encourage introduction to a wide range of foods -- may help *prevent* food allergies
- Most infants should try peanut protein for the first time at home
- If severe eczema, egg allergy, or other suspected food allergy, then refer to an allergist for evaluation
- If eczema, consider restricting egg first, then dairy (mom + infant's diets) before referral or testing
- Later consider maternal restriction of nuts, seafood, wheat, soy
- Younger sibling of food-allergic child: consider prophylactic testing

Summary: food allergy

- If there is milk or egg allergy, exposure to baked milk/egg proteins (when tolerated) probably speeds up resolution of milk/egg allergy
- Future treatments (OIT, EIT) may have limited benefits and probably will not cure food allergy
- If egg allergy, may receive flu vaccine without special testing or precautions.
- May refer for supervised administration if family wants reassurance

Food Allergy: Future Goals

- Manage children and adults with a known food allergy
- More responsible food allergy testing
- With early food introduction, hope to see a drop in food allergy prevalence
- Create a less fearful, and healthier relationship with food



Thank you for listening

Questions???

Kevin Dooks, MD, FAAAAI
Board certified in Pediatrics and Allergy/Immunology
Allergy and Asthma Associates, Bellevue, WA
(Swedish, starting early 2018)
UW Clinical Associate Professor of Pediatrics

Food allergy prevalence

- 20-25% of American claims to have a food allergy (actual ~2-3%)
- Increasing prevalence
 - Increased peanut
- Studies question the increased prevalence

studies from p223 of In Practice
n=7896, 6-13 yo 1998-1994 (11.2% sensitized, sIgE >0.35 to milk, egg, peanut, and shrimp) vs 2005-2006 (8.1% sensitized) National Health and Nutrition Examination Surveys. No change in prevalence of sensitization. Improved diagnosis/recognition? Delayed introduction converts from sensitized to clinical reactions?
Another study: "treating" AD with food elimination may lead to more clinical food allergies. 30% included anaphylaxis.
Younger siblings of food-allergic children. 66.6% were sensitized, but only 13.6% were clinically reactive/allergic. Discourage screening of younger siblings (due to high false-positive rate?) Compared to other children, maybe these kids only have a modestly increased rate of allergy.