

Supporting Families & Babies With Food Allergies

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About Me

- Registered Dietitian Nutritionist
- MS in Human Nutrition from the University of Illinois in Chicago
- International Board Certified Lactation Consultant
- Owner of The Lactation Dietitian
- Mom to two kids with food allergies



Disclosures

I have no relevant financial relationships with ineligible companies to disclose for this presentation.

Objectives

1. Recognize the different types of food allergies.
2. Understand the relationship of human milk in allergy risk and prevention.
3. Identify common allergy symptoms that may present in a human milk fed baby.
4. Address feeding issues that may mimic allergy symptoms.
5. Become familiar with care plans and referrals necessary for these families.

Introduction

- ❖ Recent increase in allergic disease among young children
- ❖ Lack of education, awareness and understanding on food allergies
- ❖ Lack of guidelines on how to manage
- ❖ Challenging and daunting experience for lactating parent
- ❖ Lactation consultants play a critical role

Allergies - What are we talking about?

Food Sensitivity

- Unpleasant reaction/ side effects after exposure to a substance
- Does not involve immune system response
- Not life threatening



Food Intolerance

- Unpleasant reaction/ side effects after exposure to a substance
- Does not involve immune system response
- Usually issue of digestion difficulty (i.e. lack of digestive enzyme)
- Not life threatening

Food Allergy

- Adverse reaction/ side effect after exposure to a substance, which is reproducible
- Involves an immune system response
- Three main types
- May be life threatening depending on type

IgE Mediated Food Allergies

- “Classic” food allergies
- Effects 5% of children under 5
- Very rare to develop during time of exclusive human milk feeds
- Immune system:
 - produces IgE antibodies
 - releases histamine

1. Microsoft Word - Dept Allergy Non IgE Food Allergy patient handout- KA edits. (n.d.). <https://www.rch.org.au/uploadedFiles/Main/Content/allergy/Non%20IgE%20Food%20Allergy.pdf> 2. Food Allergy. (n.d.). Retrieved September 4, 2022, from <https://www.worldallergy.org/education-and-programs/education/allergic-disease-resource-center/professionals/food-allergy> 3. Meyer, R., et al.. (2020). Diagnosis and management of Non-IgE gastrointestinal allergies in breastfed infants-An EAACI Position Paper. *Allergy*, 75(1), 14–32.

IgE Mediated Food Allergies

- Reactions happen very quickly after exposure
- Reactions can include:
 - Hives
 - Angioedema/swelling
 - Coughing
 - Wheezing
 - Runny nose/ itchy eyes
 - Vomiting
- Anaphylaxis
 - Two or more systems in reaction
 - Body goes into shock

Symptoms of IgE Mediated Food Allergies in Infants

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IgE Mediated Food Allergies

- **Diagnosis:**
 - History
 - Skin Test
 - Blood Test
 - Oral Food Challenge
- **Treatment**
 - Strict avoidance (typically only infant)
 - Antihistamines
 - Epinephrine

Non-IgE Mediated Food Allergies

- Also involves immune system
 - No IgE antibodies
 - Likely activation of T-cells or eosinophils
- Prevalence is not well defined (because the condition is not well defined)
- The two most common forms:
 - Food Protein Induced Allergic Proctocolitis (FPIAP) (allergic proctocolitis)
 - Food Protein Induced Enterocolitis Syndrome (FPIES)
- Typically, non-life threatening

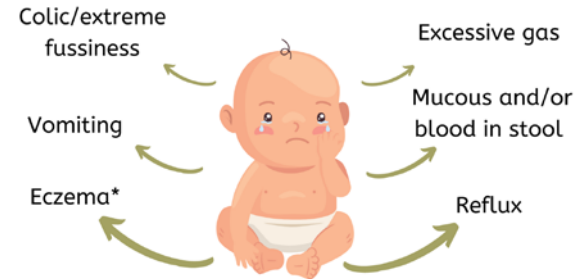
1. Microsoft Word - Dept Allergy Non IgE Food Allergy patient handout- KA edits. (n.d.). <https://www.rch.org.au/uploadedFiles/Main/Content/allergy/Non%20IgE%20Food%20Allergy.pdf> 2. Food Allergy. (n.d.). Retrieved September 4, 2022, from <https://www.worldallergy.org/education-and-programs/education/allergic-disease-resource-center/professionals/food-allergy> 3. Meyer, R., et al.. (2020). Diagnosis and management of Non-IgE gastrointestinal allergies in breastfed infants-An EAACI Position Paper. *Allergy*, 75(1), 14–32.

Non-IgE Mediated Food Allergies

- Reactions are typically delayed by hours or days
- Reactions can include:
 - Vomiting
 - Mucus or blood in stools
 - Colic/ excessive crying
 - Reflux
 - Rashes
 - Poor growth

Symptoms of Non-IgE Mediated Food Allergies in Infants

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Non-IgE Mediated Food Allergies

- **Diagnosis:**
 - **History**
 - **Review of symptoms**
 - **Oral challenges**
- **Treatment:**
 - **Avoidance (maternal and infant)**

Mixed IgE & Non-IgE Mediated Food Allergies

- Involve both IgE and non-IgE mediated mechanisms
- Examples include:
 - Contact dermatitis (eczema)
 - Eosinophilic esophagitis (EoE)

1. Microsoft Word - Dept Allergy Non IgE Food Allergy patient handout- KA edits. (n.d.). <https://www.rch.org.au/uploadedFiles/Main/Content/allergy/Non%20IgE%20Food%20Allergy.pdf> 2. Food Allergy. (n.d.). Retrieved September 4, 2022, from <https://www.worldallergy.org/education-and-programs/education/allergic-disease-resource-center/professionals/food-allergy> 3. Meyer, R., et al.. (2020). Diagnosis and management of Non-IgE gastrointestinal allergies in breastfed infants-An EAACI Position Paper. *Allergy*, 75(1), 14–32.

80%



Of the babies I work with have allergic proctocolitis, a non-IgE mediated food allergy

Lactation, Human Milk, & Food Allergies

What Causes Food Allergies?

Hygiene Hypothesis	Diet Diversity Hypothesis	Milk Hypothesis
<ul style="list-style-type: none">● Proposes that childhood exposure to germs and certain infections helps the immune system develop.● May start antenatally	<ul style="list-style-type: none">● Proposes that favoring the diversity of gut microbiome may prevent allergies● May start antenatally	<ul style="list-style-type: none">● Proposes that early exposure to cow's milk leads to inflammation and gut dysbiosis● May start antenatally

1. Gupta, R. S., et al. (2016). Hygiene factors associated with childhood food allergy and asthma. *Allergy and Asthma Proceedings: The Official Journal of Regional and State Allergy Societies*, 37(6), e140–e146. 2. *Milk-Hypothesis-A4-Document.pdf*. (n.d.). <https://infantfeedingmatters.com/wp-content/uploads/2018/12/Milk-Hypothesis-A4-Document.pdf> 3. Spolidoro, G. C. J., et al. (2021). Diet Diversity Through the Life-Course as an Opportunity Toward Food Allergy Prevention. *Frontiers in Allergy*, 2, 711945.

Who Is at Increased Risk?

Proposed Risk Factors:

- Cesarean birth
- Formula use early on
- Antibiotics in labor or early on in life
- Family history
- Diagnosis of moderate-severe eczema or asthma
- Delayed introduction of solids

Human Milk & Immunity

- **Oligosaccharides**
 - Inhibit binding of pathogens
- **Lactoferrin**
 - Sequesters iron away from bacteria
- **Lysozyme**
 - Disrupts cell walls of bacteria
- **Secretory IgA**
 - Inhibits binding of pathogens
- **Mucin**
 - Inhibits bindings of pathogens
- **Prostaglandins**
 - Protect stomach mucosa
- **Interleukin- 1B**
 - Activates T-cells
- **Interleukin- 6**
 - Stimulates antibody production
- **Tumor necrosis factor-a**
 - Stimulates interleukin 1B and 6
- **Butyrate**
 - Protects stomach mucosa

1. Goldman, A. S., & Goldblum, R. M. (1995). Defense Agents in Milk: A. Defense Agents in Human Milk. *Handbook of Milk Composition*, 727.

2. Panaro, L., et al(2021). Butyrate as a bioactive human milk protective component against food allergy. *Allergy*, 76(5), 1398–1415.

Does Lactation Duration Matter?

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A Clinical Report from the AAP published in 2019 concluded:

- ***Eczema***: exclusive breastfeeding for first 3-4 months decreases incidence in first 2 years of life
- ***Asthma***: longer duration of any breastfeeding, compared to less, protects against in first 5 years of life
- ***Food allergies***: no conclusions can be made on duration of breastfeeding and impact on specific food allergies

Assessment of the Dyad

History & Objective Assessment

- Feeding modes
- Feeding concerns
- Infant oral structure/function
- Infant growth
- Mode of delivery
- Antibiotic use
- Lab results
- Family history of allergic or autoimmune disease
- Maternal diet review
- Full review of systems

Skin

- Rashes
- Eczema
- Hives
- Cradle cap
- Diaper rash





Respiratory

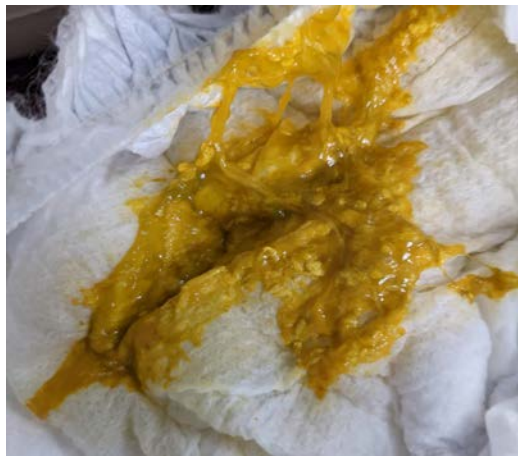
- Congestion
- Sneezing
- Wheezing
- Coughing



Digestive

- Spit up/ reflux
- Vomiting
- Gas
- Stooling frequency
- Stool color
- Mucus in stool
- Blood in stool





What Else Could it Be?

— — —

Gas/ Spit up	Green Poops	Mucus Poops	Bloody Poops
<ul style="list-style-type: none">● Oral ties● Oversupply● Overactive letdown● Unpaced bottles	<ul style="list-style-type: none">● Illness● Oversupply● High intake greens● Vaccinations	<ul style="list-style-type: none">● Illness● Teething	<ul style="list-style-type: none">● Hemorrhoids● Anal fissure● Bleeding nipples● Intussusception

1. Martin, V. M., et al.. (2020). Prospective Assessment of Pediatrician-Diagnosed Food Protein-Induced Allergic Proctocolitis by Gross or Occult Blood. *The Journal of Allergy and Clinical Immunology in Practice*, 8(5), 1692–1699.e1. 2. Mohrbacher, N. (2014, May 21). *Green Poop: When Should You Worry?* —. Nancy Mohrbacher. <http://www.nancymohrbacher.com/articles/2014/5/21/green-poop-when-should-you-worry.html> 3. *My baby is gassy. Is this caused by something in my diet?* (2011, July 26). KellyMom.com. <https://kellymom.com/parenting/parenting-faq/gassybaby/>

“Symptoms” Not Indicative of Allergies

- Common baby behavior?
- Sleep
- Fussiness/temperament
- Any of the previously mentioned symptoms when seen individually*

What do we do?

Listen, Believe,
Support!

Confused

Dismissed

Guilty

Ignored



Going crazy

Patronized

— — —

"Everything is fine.
You're just an
anxious first time
mom."

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"Babies this young
can't have
allergies."

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"If this is
bothering you so
much just stop
breastfeeding."

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"Have more
patience and just
wait it out."

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"Fussiness has
nothing to do with
what you're
eating."

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"Maybe your baby
just doesn't like
your milk."

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Acknowledge Lactation Goals

- Formula as a 1st line solution?
- Many come to me because they want to continue to provide milk
- Acknowledge their goals and importance of lactation to them
- Assure them it can be done!



Care Plans

1. Feed the baby & protect supply
2. Address any feeding issues or other potential causes
3. Treat



Elimination Diets

- If food allergy or sensitivity is suspected, then elimination diet is warranted.
- Determine which food is the trigger
 - Most common culprits:
 - Primary: cow's milk, soy, wheat, egg, corn
 - Secondary: beef, corn, avocado, rice, oats
 - Review food journals
 - Parent's insight

Elimination Diets cont.

- How long?
 - Until allergens are out of human milk
 - Current research suggests <24 hours
 - Until symptoms improve
 - Some improvement within one week
 - Full resolution may take longer
 - Until reintroduction
 - Months

Total Elimination Diet (TED)

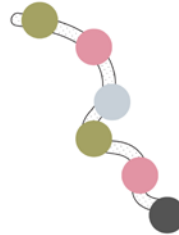
- Most restrictive form of elimination diet
- Recommended by Dr. Bill and Martha Sears
- Consists of eating only:
 - Range-fed turkey or lamb
 - Plain white or sweet potatoes
 - Rice or millet
 - Green or yellow squash
 - Pears
 - Rice Milk
- Gradual reintroduction after two weeks

Use of Infant Formula

Standard	Hydrolyzed	Amino Acid Based
<ul style="list-style-type: none">● Typically cow's milk protein● Protein is intact (large)	<ul style="list-style-type: none">● Break down cow's milk proteins● Partially (medium)● Extensively (small)	<ul style="list-style-type: none">● Protein is not intact at all● Only contains amino acids



Protein



Peptide



Amino Acids

Risk-Benefit Factor

Of elimination diets

Potential Risks:

- Parental nutritional status
- Infant nutritional status
- Mental health

Potential Benefits:

- Continued/ prolonged lactation
- Feeling of “control”



Referrals & Collabs

1. Dietitian
2. Pediatrician
3. Allergist
4. GI doctor
5. Speech therapist
6. CST/osteopath
7. Psychologist/counselor



Thank You!

Email: meghan@thelactationdietitian.com

IG: [@the.lactation.dietitian](https://www.instagram.com/the.lactation.dietitian)