

Food Allergy and Your Kiddo's

Foundations Guide for Parents

**What all food allergy parents
need to know to live life with
less stress and more joy**

BY ALICE HOYT, MD

Food Allergist - Advocate - Mom



Food Allergy And Your Kiddo

A note from Dr. Hoyt

Hello!

Like you, I love someone with a food allergy. I'm also an allergist, wife, and mother. My clinical practice focuses on food allergy as does much of my community outreach. I've spent most of my career simply talking (mostly listening!) to families of kiddos with food allergy. I've learned that what most parents want is accurate food allergy information so they can be informed to make lifestyle and treatment decisions that are best for their children.



The goal of *Food Allergy and Your Kiddo* is to provide you with evidence-based, practice-proven information. Each article and podcast episode is an amalgam of science and strategy, developed in a way that is easy to understand and directly applicable to parents.

Remember: Death from food-induced anaphylaxis is rare, but the anxiety that such a tragedy could possibly occur is what fuels much of food allergy-associated anxiety. Another underlying cause is the fear of your child being alienated and bullied based on a medical condition. These concerns are real, and they are valid. It is knowledge, strategies, and skills, that can help you navigate these situations so that you and your family can live that “normal,” happy life you so desire.

A critical component of learning about food allergy is applying information appropriately. That can only be done in collaboration with your allergist. The information you find here is for educational purposes only and should in no way be considered medical advice or replace what your allergist advises you. Use the information here to fuel deeper discussions with your allergist.

My prayer is that *Food Allergy and Your Kiddo* is a blessing to you and your family, and I look forward to walking with you on your journey! Be sure you've subscribed to the newsletter, and let me know where you are on your path and on which topics you would like more information.

Now, keep reading this *Guide*! Whether your kiddo is newly diagnosed or you're a pro, this *Guide* will provide you with the solid foundation of food allergy including what it is, how it is evaluated and managed in this quickly advancing landscape, and why your kiddo needs to see the allergist at least once per year!

So grab a cup of coffee, and keep on reading. When you have a question, drop me a line!

Warmly,

Dr. Hoyt

Allergy is my profession, family is my heart, Christianity is my soul.



Hello and welcome!

Being a parent is such a blessing, and you dedicate your life to keeping your kiddo healthy and happy. So when your kiddo has a food allergy, the safety precautions you thought you'd put in place are exponentially increased.

You probably have wondered:

- What all can I do to prevent my child from having a reaction?
- How can I navigate social situations without my kiddo feeling alienated?
- And how do I interpret the overwhelming amount of food allergy information available online – what's accurate and what's not?

If this sounds like you, then you are in the right place. This guide will help answer questions just like these. As your understanding of food allergy grows, those fears of “what if...” will diminish!

FOOD ALLERGY is a Journey



Perhaps Little Sweetpea has had food allergy for years.

You have dealt with food allergy for years though every year seems to come with new challenges. And now there are therapies for food allergy. You may be wondering what treatment really may look like.

Or maybe you have a proactive allergist who recommends re-evaluating the food allergy with repeat testing. This may also mean an ingestion challenge, and you may be wondering about the safety of that type of procedure.

Or maybe you are hesitant to stay plugged in with other food allergy family groups, especially on social media, because of the stories you hear that you simply just don't want filling your mind.

Or perhaps food allergy is a new diagnosis to you and your family.

For example, it may have been recently that your doctor told you, “Sweetpea is allergic to peanut so needs to avoid all peanut products, and I’ve sent a prescription for an EpiPen to your pharmacy.” While there probably was more to this conversation, it’s to be expected that this news may send your thoughts in many directions and very quickly.

You may have thought:

- *But it’s just a food... how can a food be so dangerous?*
- *But my child is healthy...*
- *Does this mean my child is allergic to other foods?*
- *Does this mean my child may develop other allergy conditions?*
- *Is there any treatment?*
- *What about school?*
- *What about holidays?*
- *What if...*

Thinking all of these thoughts is completely normal.

It’s also normal to be angry, sad, and scared.

You’ve probably heard the tragic stories about children having severe allergic reactions, and you’ve also probably seen from friends or family members or on social media how much anxiety and a change in lifestyle this diagnosis can bring.



But life does not have to be that way!

3 COMPONENTS YOU NEED FOR your family to live your best lives with food allergy:

1. A support network of family, friends, and your faith
2. A board-certified allergist who is experienced in food allergy
3. A discerning mind to identify and learn accurate food allergy information while ignoring sensationalized, scare-tactic stories

Food Allergy and Your Kiddo will provide you with support in all three of these areas, and this *Guide* will provide you with a solid foundation of what food allergy is, how it is diagnosed, and how it is managed. Nothing here is medical advice – that should only come from your kiddo’s allergist, so take what you learn in this guide and discuss your questions with your allergist.



Evidence-based information from reputable sources is critical to your family's success!

Wherever you are on your journey, this *Guide* will provide you a solid foundation upon which to build your understanding of food allergy.

5 Key Topics

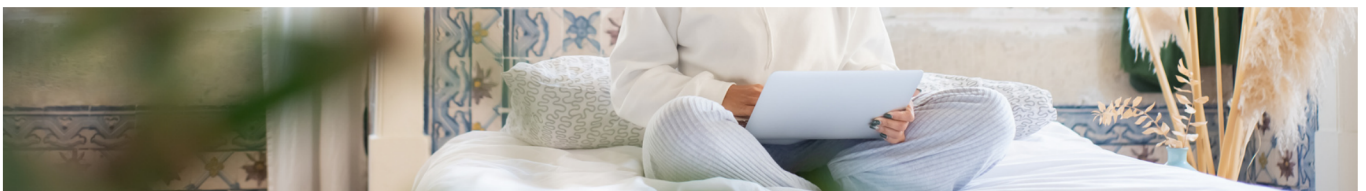
1 What is Food Allergy?

2 Is it an Allergy?

3 Treating an Allergic Reaction

4 Pro Tips for Success in Navigating an Amazing Life with Your Child's Food Allergy

5 Food Allergy FAQ's



KEY TOPIC #1

What is Food Allergy?

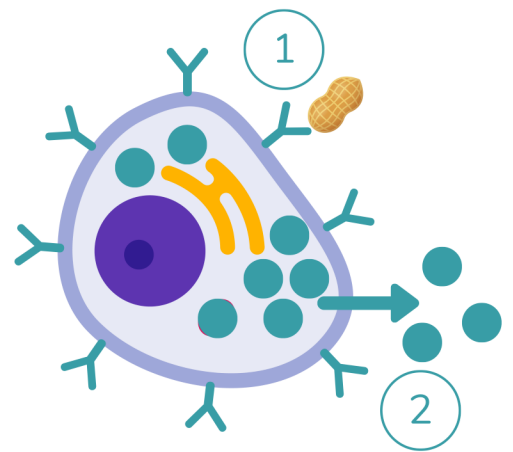
Not all food allergy disorders cause anaphylaxis. This is because not all food allergy disorders are IgE-mediated.

Food allergy is an inappropriate immune response to a food.

A food that causes an allergic reaction is called an “allergen.” The cause of food allergy is unclear, but much of the immunologic machinery of allergy is made up of the same cells that are involved in protecting us from parasite infections. Simply put, in a kiddo with a food allergy, the immune system thinks it is protecting the body when it attacks that specific food, but that attack can be very dangerous. We will talk about treatment later in this *Guide*.

Food allergy disorders can be divided into three categories. These categories are based upon whether the food allergy disorder involves IgE.

IgE is a molecule found on the outsides of allergy cells, specifically mast cells as depicted in the illustration to the right. IgE binds to allergens, such as peanut. When that binding occurs, the IgE sends an activation signal into the cell. That signal triggers the cell to release chemical-filled granules, a process called “degranulation.” When the cell degranulates, those chemicals are released into the surrounding tissues and blood stream. Those chemicals spread throughout the body causing the signs and symptoms of an allergic reaction. When severe, that reaction is called anaphylaxis.



3 TYPES OF food allergy disorders:

1. **IgE-Mediated Food Allergy**

IgE-mediated food allergy is the most common type of food allergy. These types of food allergy disorders can often result in anaphylaxis. Examples include classic food allergy (e.g. peanut allergy), food-dependent exercise induced anaphylaxis, food pollen syndrome, and alpha-gal allergy.

2. **Non-IgE-Mediated Food Allergy**

These types of food allergy disorders are less common than IgE-mediated food allergy disorders yet still wreak havoc. These disorders involve allergy cells but not IgE. These types of food allergy disorders include food protein-induced gastrointestinal disorders or, rarely, involve the lungs. Food protein induced enterocolitis syndrome (FPIES) is an example of a non-IgE-mediated food allergy. This disorder can be acute or chronic. In acute FPIES, a specific food or foods trigger profuse vomiting and, sometimes, diarrhea, which can lead to significant dehydration. That dehydration can lead to lethargy. Symptoms of chronic FPIES may include watery diarrhea as well as some vomiting, and these symptoms can lead to failure to thrive and other issues.

3. **Mixed IgE- and Non-IgE-Mediated Food Allergy**

These types of food allergy disorders also are less common than IgE-mediated food allergy disorders yet may co-occur with IgE-mediated food allergies. They are driven by mechanisms that do and that do not include IgE. Examples of these disorders include food-induced flaring of atopic dermatitis, which involves allergic inflammation of the skin, and eosinophil esophagitis (EOE), which involves allergic inflammation of the esophagus.

Common food allergens

Simply stated, an “allergen” is something which you are allergic. For example, in milk allergy, the allergen is milk. Allergens are typically proteins. Allergens that cause anaphylaxis include foods, drugs, and venoms (such as bee stings). Common food allergens include:

- **Peanut**
- **Tree nut**
- **Egg**
- **Milk**
- **Wheat**
- **Soy**
- **Fish**
- **Shellfish**
- **Sesame seed**

Being allergic to a food does not always mean a kiddo has to avoid the food in all its forms.

For example, many children with egg and/or milk allergy can tolerate these foods when they are baked. This is because baking egg and milk heats the allergenic proteins, causing them to be less allergenic.

Alternatively, roasting peanuts seems to make peanuts more allergenic compared to non-roasted forms of peanuts.

IT'S IMPORTANT TO HAVE YOUR ALLERGIST CLARIFY WHAT IS SAFE AND WHAT TO STRICTLY AVOID.



Is it allergy, or is it intolerance?

Food allergy is different from food intolerance.

The role of allergy cells differentiates a food allergy from a food intolerance.

In food allergy, allergy cells are activated and then cause the symptoms of the allergic response. For example, in IgE-mediated food allergy, mast cells cause allergy symptoms by releasing chemicals – such as histamine – when the allergen binds to the mast cell. The chemicals released by mast cell cause specific bodily responses, such as hives, swelling, trouble breathing, and vomiting. A severe allergic reaction can cause blood vessels to widen, which decreases the blood pressure and can result in death. Epinephrine stops the signs and symptoms of the allergic reaction.

A food intolerance is not an immune response to a food and may be an adverse effect of a food. For example, “Dr. Hoyt, my heart rate increases when I drink coffee.” While this certainly is a response to a food, it is not a food allergy. This example is a known effect of the caffeine found in the drink. Some food intolerances, such as lactose intolerance, are driven by the lack of an enzyme to digest the food. In the case of lactose intolerance, that lack of lactase enzyme may result in bloating and other uncomfortable symptoms upon ingestion of the lactose-containing foods.

Knowing the actual type of adverse reaction to food your kiddo has is critical to:

- 1) keeping your kiddo safe by avoiding unsafe foods, and**
- 2) improving quality of life by NOT avoiding safe foods.**

KEY TOPIC #2

Is it an Allergy?

Different disorders may warrant different management plans.

It's important to know whether or not the adverse reaction to food is an allergy or some form of intolerance.

This is important because these two disorders differ in treatment plans. For example, epinephrine treats allergic reactions but will not stop the bloating in a patient with lactose intolerance. Likewise, lactase replacement is helpful in a patient with lactose intolerance but would not prevent an allergic reaction in someone with cow's milk allergy.

The history of reaction is incredibly important when determining whether allergy, intolerance, or something else is present. When a family comes to see me concerned that their kiddo has a food allergy, we focus on key questions:

- What food do they think caused the reaction?
- How was the food prepared?
- What symptoms were involved in the reaction?
- How long after eating the food until symptoms began?
- When did symptoms finally resolve?
- How were symptoms treated?
- Has this happened before or since that reaction?



The answers to these questions then help determine next steps in evaluation. This is why it's incredibly important to understand what symptoms of allergy may have occurred in your kiddo.

Symptoms of Food Allergy Reactions

IgE-mediated food allergy reactions are caused by mast cells, so the signs and symptoms of allergic reactions are caused by the chemicals released from those mast cells. Those chemicals can cause:

- **Hives**
- **Swelling**
- **Trouble breathing**
- **Vomiting**
- **Change in mental status**
- **Drop in blood pressure**
- **Increase in heart rate**
- **Death if not recognized and treated promptly**

Symptoms of an IgE-mediated allergic reaction are typically quick to begin. They sometimes start while eating the food but most commonly start within 30 minutes to a couple hours after ingestion.* Symptoms typically resolve within 24 hours unless symptoms are severe, which warrants hospitalization.

What about other forms of allergy?

Symptoms of reactions caused by other forms of food allergies may present more indolently with spontaneous stomach upset, trouble swallowing, skin rashes, and other non-specific symptoms. It's the constellation of symptoms that helps allergists key in on potential allergic disorders.

***Alpha-Gal Allergy is a unique food allergy in which symptoms begin 2-6 hours later – we will discuss this in a later article.**



How is food allergy diagnosed?

Unfortunately, there is no easy test for food allergy. This may come as a surprise as you may have heard that skin prick testing and blood testing can determine whether or not your kiddo is allergic. While some forms of skin and blood testing certainly can be helpful in the evaluation of possible food allergy, neither are the gold standard in the diagnosis of IgE, non-IgE, or mixed IgE/non-IgE allergic disorders.

Diagnosing IgE-Mediated Food Allergy

IgE-mediated food allergy is diagnosed with the help of skin and/or blood testing but, ultimately, it's the clinical history and/or the outcome of an ingestion challenge that clarifies the diagnosis.

An ingestion challenge in an in-office procedure in which the allergen in question is eaten in small and incrementally increasing amounts. The “goal” amount of food to consume is the age-appropriate serving size. For example, in a teenager who is being evaluated for milk allergy and in whom the allergist suspects the teen may tolerate (and, thus, not be allergic) to milk, the “goal dose” of milk would be an 8-ounce serving.

Diagnosing Non-IgE-Mediated Food Allergy

The diagnoses of non-IgE-mediated food allergy disorders, such as food protein induced enterocolitis syndrome, typically are clinical diagnoses, meaning there is not a specific test that says a kiddo does or does not have the disorder.

Diagnosing Mixed IgE- and Non-IgE-Mediated Food Allergy

Mixed IgE and non-IgE-mediated food allergy disorders, such as eosinophilic esophagitis (EOE) and atopic dermatitis, vary in the approaches to diagnosis. In EOE, the diagnosis is made with esophageal biopsy accompanying the clinical picture. In atopic dermatitis, the diagnosis is a clinical diagnosis.

KEY TOPIC #3

Treating an Allergic Reaction

Different types of reactions may require different therapies.

Just as the diagnosis of food allergy depends on the type of food allergy disorder that is suspected, the treatment of the disorder also depends on whether the food allergy disorder is IgE-mediated, non-IgE-mediated, or mixed IgE- and non-IgE-mediated. Also, there is a difference between treating the underlying, chronic disease process and treating an acute exacerbation of an allergic disorder.

Acute reactions are reactions that occur due to the underlying disease process being triggered.

Ideally, to prevent acute reactions, treatment of the underlying disease process would occur; however, more research is needed to find therapies for the underlying causes of many food allergy disorders.



Having good plans in place for when acute reactions occur is important to both the safety of your kiddo and your (and your kiddo's!) peace of mind. Talk with your allergist about your Emergency Action Plan, and be sure anyone who cares for your child (such as your school nurse) is aware of and understands the plan.

TREATING THE 3 TYPES OF food allergy disorders:

1. **IgE-Mediated Food Allergy - Treatment of Acute Reactions**

The treatment for an allergic reaction is epinephrine.

Epinephrine is the medication that helps not only the itchy/swelly parts of an allergic reaction but also helps the blood vessel and heart rate issues. It also helps “turn off” those allergy cells. Antihistamines can help some but not all symptoms of an allergic reaction.

The challenge with allergic reactions is that we don't know which reactions will become severe, so it's safest to treat an allergic reaction promptly with epinephrine. When patients tell me that an antihistamine has always stopped their food allergy reaction, I counsel them not to be deceived or falsely reassured: **a mild reaction one time does not preclude a severe reaction next time**. Also, some reactions will progress to severe, and some will not. An antihistamine will not stop a reaction from progressing, but epinephrine does. Talk with your allergist about proper response to an allergic reaction, and make sure your kiddo has an anaphylaxis action plan.

Treatment of the Underlying IgE-Mediated Food Allergy Disorder

Until recently, the only management strategy for IgE-mediated food allergy was avoidance. That has been changing, and now many people with food allergy can undergo immunotherapy. Immunotherapy for IgE-mediated food allergy works by teaching the immune system to tolerate the food. Forms of immunotherapy include oral (OIT), sublingual (SLIT), and epicutaneous (EPIT). To date, there is only one FDA-approved product for OIT though many allergists regularly perform OIT using actual food products.

2. **Non-IgE-Mediated Food Allergy**

The treatment of these disorders depends on the actual diagnosis. For example, in FPIES, a specific food will trigger reactions, so it is imperative to identify and avoid that food. If a reaction occurs, the kiddo often needs to be seen in the emergency department for evaluation and will need IV fluids.

3. **Mixed IgE- and Non-IgE-Mediated Food Allergy**

The treatment of these disorders also depends on the underlying disease process. For example, acute flares of atopic dermatitis are often treated with intense moisture therapy, such as aggressively applying hypoallergenic creams, and with topical steroids; however, treatment can include highly potent steroids, by-mouth steroids, and biologic medications. It's important to have a daily skincare regimen to prevent such flares. Rarely are foods avoided due to atopic dermatitis because, contrary to popular belief, foods do not cause atopic dermatitis; however, atopic dermatitis places a child at risk for food allergy. In some cases, if a child with atopic dermatitis avoids potential allergens for a prolonged period of time, the risk of developing IgE-mediated food allergy can actually increase.

EOE also may be treated with steroids that are meant to treat the inflammation localized to the esophagus. EOE may also be treated with proton pump inhibitors (PPI's). PPI's also treat gastroesophageal reflux. Food-avoidance, such as a six-food elimination diet (which is avoidance of milk, egg, soy, wheat, peanuts/tree nuts, and fish/shellfish). Other therapies are becoming available for EOE. It is important to keep esophageal inflammation to a minimal as chronic inflammation can result in stricturing (a hardened tightening of the esophagus). If food gets stuck in the esophagus from the stricture, that is treated with an endoscopy and removal of the food from the esophagus. Note that this is different than "choking" – choking is when food is stuck in the trachea, a.k.a. the "windpipe" or "breathing tube," whereas a food impaction from EOE occurs in the esophagus, a.k.a. the "swallowing tube."

Do you have clarity on your kiddo's food allergy disorder and how to treat acute reactions and the underlying disorder?



Emotionally and Cognitively Processing a Reaction

Allergic reactions are scary, both for kiddos and for their parents. That fear can last a long time and can permeate into many aspects of everyday life.

Sometimes, though, a reaction may be mild at first, and you don't really realize what happened. For example, you may be the mom of an 8 month old who ate scrambled eggs for the first time. Sweet Pea seemed to like them! 30 minutes later, you were giving Sweet Pea a bath and noticed a few red raised bumps on her arms. These bumps seemed to be itchy to her. She got a little fussy and vomited once but then felt better. It's totally possible not to think, "Oh, maybe those eggs made my Sweet Pea sick!" But the next time Sweet Pea has eggs, the same thing happens, and you put it together! (Call 911 if you think your child is having an allergic reaction!). Then you tell your pediatrician and see an allergist.

Everyone has different experiences with food allergy. The important thing is to be informed. Information can help you can make the best decisions for/with Sweet Pea (depending on his/her age, of course!). Also, lean into your support system, and consider connecting with a food allergy-informed therapist.

KEY TOPIC #4

Pro Tips for Success in Navigating an Amazing Life with Your Child's Food Allergy

Follow these pro tips as you walk your food allergy journey.

- Do be prayerful. This journey will have ups and downs. Prayer will help steady you.
- Don't believe everything you read online. Verify information with your allergist or with another evidence-based source.
- Do show grace to those who are food allergy naive. If you aren't living with food allergies 24/7, it's hard to truly get it. "Ya catch more flies with honey than vinegar!"
- Don't order blood testing online. This is often NOT evidence-based, meaning it likely is irrelevant to your Sweet Pea. This testing often is a waste of your time and money. It will leave you disappointed and feeling like you've been taken advantage of (because you have been).
- Do embrace the three keys to navigating food allergy.
- Don't ever feel alone. You are not alone! Food allergy can be tricky, so ask your allergist if there are any food allergy mama groups in your area. Also, reach out to us at *Food Allergy and Your Kiddo* for education on more topics!

KEY TOPIC #5

Food Allergy FAQ's

Does a positive skin test mean my Sweet Pea is allergic?

Not necessarily, but this is where you want to ask your allergist what your child's skin testing results mean. "Sensitization" is when a person has a positive allergy test but tolerates the food. "Allergy" is when the food causes an allergic reaction, meaning the person does NOT tolerate the food. Your allergist may want to perform a food challenge. A food challenge will determine whether or not your Sweet Pea is allergic to the food in question.

Does a positive blood test mean my Sweet Pea is allergic?

Same as with skin testing, so talk with your allergist.

Is it possible for my child outgrow a food allergy?

Yes, BUT it depends on the allergen. Many children outgrow egg and milk allergies, but fewer children outgrow peanut allergy.

How should an allergic reaction be treated?

An allergic reaction to a food is best treated with epinephrine from an auto-injector.

If my Sweet Pea has only ever had hives with allergic reactions, does he or she need an epinephrine auto-injector?

Absolutely yes. Most allergists today will recommend administration of epinephrine from an auto-injector at the first symptom of an allergic reaction. This is especially true if the child is thought to have consumed his or her allergen. Having hives with prior reactions does not mean future reactions will be limited to hives.

How often should my Sweet Pea see our allergist?

I see my patients at least annually. This is the minimum because we need to annually check in regarding accidental ingestions and reactions, etc. Often, kiddos with food allergies often have other allergic disorders, such as asthma and eczema. It is important to keep those diseases well-controlled. Also, with food allergy, there are more and more therapies and studies becoming available. Annual follow-up allows patients to stay up-to-date with food allergy treatment options!

The Last Thing You Need to Know about Food Allergy

I'm so glad you've read this *Food Allergy and Your Kiddo Foundations Guide for Parents*. I hope you've submitted questions!

Here is my final piece of encouragement:

“Give your entire attention to what God is doing right now, and don't get worked up about what may or may not happen tomorrow. God will help you deal with whatever hard things come up when the time comes.” Matthew 6:34, *The Message*

Navigating the world for/with your child is not easy. Add food allergy into those daily challenges, and the anxiety of “what if this?” and “what if that?” can increase exponentially. Knowledge and faith are a powerful combination that can combat that anxiety, so arm yourself with good food allergy resources and focus on your faith. Your Sweet Pea and your family can live a happy, healthy life!

Dr. Hoyt

