**SCRIPT & TIMESTAMP OF PODCAST:**

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| **TIMESTAMP:** | **SCRIPT:** |
| **0:00-0:37** | **Intro (SEBREENA):****Hello and Welcome to our Food Allergy Podcast: “Allergic and Thriving”.****My name is Sebreena and here with us today are:*** **Anamica: Greeting**
* **Erin: Greeting**
* **Loveleen: Greeting**

**Today on our agenda, we will talk about the journey of a food allergen through the body, how the body reacts (pathophysiology), different types of reactions, diagnostic tests, and treatment strategies. We will also talk about a situation where a food allergy occurred and what that individual experienced. Do any of you guys have experiences with food allergies or know anyone who has had an experience with a food allergy?** |
| **0:38-0:49** | **Response (ERIN):****I know someone with a strawberry allergy! Food allergies are pretty common! A food allergy is a reaction in relation to certain foods that affect the body negatively and may require medical intervention if severe enough (Bright et al., 2023) (Loebet al, 2024).** |
| **0:50-1:14** | **Case Study (SEBREENA):****Thank you for sharing Erin! Let's expand on that and talk about a common case that occurs in 8 % of school-aged children around the world (Bright et al., 2023). As well as the precautions that are put in place for prevention, what would happen if exposure occurred, and treatments needed to stop the food allergy. Bobby is a young boy with a severe peanut allergy. If he comes into contact with peanuts, what symptoms would Bobby have?** |
| **1:15-1:53** | **Signs and Symptoms of a Food Allergy (ANAMICA):****Exposure to peanuts would result in Bobby experiencing, hives, edema, flushing, nausea, vomiting, abdominal pain, diarrhea, wheezing, coughing, difficulty breathing, runny nose, and fainting, which can occur alone or in combination, and typically begins within minutes of food ingestion (Vickery et al., 2011; Lopez et al., 2023)****However, in some people, a food allergy can trigger a severe allergic reaction called anaphylaxis. This can cause life-threatening symptoms, including:*** **Constriction and tightening of the airways.**
* **A sensation of a lump in your throat that makes it hard to breathe.**
* **Shock with a severe drop in blood pressure.**
* **Rapid pulse.**
* **Dizziness, lightheadedness or loss of consciousness.**

**(MayoClinic, 2024; Lopez et al., 2023; Vickery et al., 2011; Waserman et al., 2018)** |
| **1:54-2:07** | **Response (LOVELEEN):****So, depending on the severity of Bobby’s food allergy, he may experience a variety of symptoms which could negatively impact Bobby’s health and even put him at severe risk of anaphylactic shock or death!** |
| **2:08-3:44** | **Pathophysiology of a Food Allergy (SEBREENA):****Yes, exactly! Let's take a deep dive into the pathophysiology of a food allergy. There are two types of food allergies IgE mediated and non-IgE mediated. For the purpose of this podcast we will focus on IgE mediated food allergies (Loebet al, 2024).*** **IgE mediated food allergens are: Eggs, milk, peanuts, tree nuts, soy, wheat, fish, shellfish, and sesame.**

**A food allergy or anaphylaxis is a Hypersensitivity Type 1 reaction where an immediate and exaggerated IgE immune response occurs. This adverse reaction to a normally harmless element in food results in an abnormal immune response.*** **Upon initial exposure also known as the sensitization period, the allergen (peanut antigen or protein) enters the body of the susceptible person (Bobby).**
* **The antigen presenting cell (APC) or undifferentiated T cell sees the peanut antigen and decides the food is harmful for the immune system.**
* **APC’s are a group of cells like dendritic cells, macrophages, and B cells.**
* **A reaction occurs where the T cell differentiates into Th2 cells that then signals a B cell.**
* **The B cell makes IgE antibodies specific to that peanut antigen or protein.**
* **The peanut specific IgE antibodies interact with the peanut antigen or protein and mast cells.**
* **These antibodies then bind to mast cells that are filled with histamine at the FC region sensitizing mast cells.**

**(Anila, 2024; ASPEN, 2022; Cleveland Clinic, 2024; Robertson, 2024)** |
| **3:45-3:47** | **Response (ANAMICA): Oh wow, all of that is happening in Bobby's body?** |
| **3:48-4:25** | **Pathophysiology of a Food Allergy Part 2 (SEBREENA):*** **Yes, it is. However, upon subsequent exposure to the allergen (peanut antigen or protein), mast cells with IgE antibodies bind to the peanut antigen.**
* **If enough IgE interacts with mast cells, they burst apart and release histamine; if enough mast cells burst = Anaphylaxis occurs.**
* **Histamine is a chemical mediator the body releases to respond to the allergen; it causes allergy-like symptoms and plays a key role in the body’s inflammatory response.**
* **This process has a quick onset and results in an immediate adverse reaction which occurs within minutes.**

**(Anila, 2024; ASPEN, 2022; Cleveland Clinic, 2024; Robertson, 2024)** |
| **4:26-4:30** | **Response (ERIN):****Wow! That’s fascinating! How would we diagnose/test for a food allergy?** |
| **4:31- 7:10** | **Diagnostic Tests (LOVELEEN):****Before any test is even considered, the first and most important part of diagnosing an allergy is thorough patient history (Santos et al., 2023)). This involves asking key questions to get a clear picture on Bobby's health status. These details help in knowing what might be happening and guide the allergist in choosing the best tests to move forward (Food Allergy Canada, 2022).****One of the first tests that Bobby can have done is the blood IgE test where a blood sample is taken, and mixed with different allergens. The test measures how much IgE antibodies are produced in response to an allergen in this case peanuts. But, presence of IgE antibodies in blood, does not always mean someone is truly allergic. On the contrary, you could have an allergy without having IgE in your blood. So while this test is helpful, it may not always be true (Food Allergy Canada, 2022).****Another test that Bobby can get done is the skin prick test. In this test, a tiny drop of allergen is placed on your skin, which is then pricked with a small needle to allow the allergen to enter. You must wait about 15-20 minutes to see if there is any redness or swelling at the site. If a reaction occurs, it may suggest an allergy is present—but it’s not 100% conclusive. A negative result can help rule out an allergy, but does not guarantee that you are not allergic (Food Allergy Canada, 2022).****With food allergies, one of the most definitive tests is often the Oral Food Challenge. There are 3 types of oral food challenges and these tests are done under extremely controlled conditions. An allergist gives Bobby small, increasing doses of the suspected allergen (peanuts) and carefully monitors for any signs of a reaction. If symptoms appear, the test is stopped immediately and medications are given. If no symptoms occur, the food allergy is ruled out.*** **Challenge 1 is the Double-Blind Food Challenge where neither the patient (Bobby), nor the doctor know if an allergen or placebo is being given.**
* **Challenge 2 is the single-blind food challenge, the allergist knows an allergen is being given, but the patient (Bobby) does not.**
* **Challenge 3 is the Open-Food Challenge where both the patient (Bobby) and the doctor know an allergen is being given (FARE, 2024). However, it is important to remember that no one test is perfect.**
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| **7:11-7:15** | **Response (ANAMICA):****Hmmmm, that’s interesting! I wonder if there are any treatments for a food allergy!** |
| **7:16-8:12** | **Treatments and Medical Interventions (ERIN):*** **Yes there are! But firstly I'd like to discuss some ways to reduce the chance of an allergic reaction: you can notify family and friends of your allergies and what signs to look out for, you can also wear a medical bracelet or necklace with your allergies on them. (Mayo Clinic, 2024)**
* **One of the most important things to remember is to avoid the specific food you're allergic to. It seems obvious, right? But it's not always that simple. Be especially careful with food packaging labeled 'may contain,' as even tiny amounts can trigger a reaction. When you go out at a restaurant, always inform your server about your allergies and emphasize how important it is that they use uncontaminated surfaces and cookware to avoid cross-contamination. (ACAAI, 2024)**
* **Once a food allergy is determined, avoiding the allergen is the only proven way to prevent a reaction. Unfortunately, there's no cure, so education is important, especially for parents and children.**
* **For those at risk of anaphylaxis, recognizing symptoms early and acting fast is necessary. You should always have access to epinephrine, like an EpiPen and antihistamines, and know how to use them. (Vickery et al., 2011)**
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| **8:12-8:16** | **Response (ANAMICA):****Oh I've heard of epipens, are they hard to use? And are there any medications you can take?** |
| **8:17-9:24** | **Treatments Part 2 (ERIN):*** **Luckily they make them pretty simple for people to use. Just remember blue to the sky, orange to the thigh!**
* **And yes there are also some medical treatments available to help manage food allergies. Immunology has come a long way. One option is injectable medications that blocks IgE response. This injection is typically given every 2 to 4 weeks and offers some protection to raise tolerance levels. So, allergy causing foods still need to be avoided, and treatment must be continuous to remain effective. (Food Allergy Canada, 2022)**
* **There are also newer immunotherapy treatments aimed at gradually increasing tolerance to allergens. Oral and sublingual immunotherapy involves giving patients small, controlled amounts of the allergen and slowly increasing the dose over time, while epicutaneous therapy uses patches containing the allergen placed on the skin. All methods aim to build tolerance slowly. (Food Allergy Canada, 2022).**
* **Additionally, synthetic antibody treatments target IgE. These synthetic antibodies block IgE from binding to immune cells, making them less reactive over time (niaid, 2024)**
* **While there's no cure for food allergies, careful management can reduce the risk of severe reactions.**
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| **9:25-9:29** | **Response (ANAMICA):****Wow thank you for an informative session, I feel much better about my knowledge around food allergies!** |
| **9:29-9:43** | **Response (LOVELEEN):****Yes, I agree! I am so glad we were able to discuss how a food allergen affects the body and what we can do to combat an allergic reaction. This knowledge will be helpful for Bobby to stay allergy free and for our future nursing careers!** |
| **9:44-10:00** | **Closing Remarks (SEBREENA):****Thank you Anamica, Erin, and Loveleen for joining us on our “Allergic and Thriving” podcast! I completely agree, staying informed on food allergies will allow us to keep our community and individuals like Bobby educated, safe, and healthy. Goodbye everyone!** |