Food Allergy and Anxiety
Anaphylaxis Phobia and Its Impact on Daily Life: Identification, Management, and Intervention

Katherine Dahlsgaard, PhD, ABPP
Licensed Psychologist
Board Certified in Behavioral and Cognitive Psychology
Former Co-Director: The Food Allergy Bravery Clinic at CHOP

Megan O. Lewis, MSN, RN, CPNP-PC
Pediatric Nurse Practitioner
Program Manager, Food Allergy Center
Co-Director: The Food Allergy Bravery Clinic at CHOP

Disclosures: Katherine Dahlsgaard, PhD, ABPP
• Contributor to Philadelphia Inquirer
• Private Practice Brave Is Better LLC

Disclosures: Megan Lewis, CRNP
• Consultant- DBV Technologies
Case Study

“Carrie” – 12-year-old girl with
Specific Phobia of Anaphylaxis

Paradigms and perspectives

New issue of food allergy: Phobia of anaphylaxis in pediatric patients

Katherine K. Dahlsgaard, PhD, ABPP,* Megan O. Lewis, MSN,† and Jonathan M. Sperry, MD, PhD* Phila-delphia, Pa.

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Your 10-year-old patient with peanut allergy has come for her annual appointment. Her allergy was identified after an anaphylactic event as a toddler that she does not remember.

The main concern described by parents is not the food allergy, but anxiety. Over the last year—after experiencing minor allergic symptoms that did not require epinephrine—the child has become increasingly fearful of accidental cross-contamination, even under the most remote of circumstances. She no longer sits near someone eating peanut butter and runs from a room if she smells it. She has stopped eating with friends at school or going on playdates without her mother. There is an overwhelming of hands and “constant” seeking of reassurance that minor stomach aches or “feeling hot” aren’t signs of an impending allergic reaction.

The patient’s mother has grown preoccupied with news reports of anaphylactic deaths that are shared on social media. She complains that her husband is “too cavalier” about food safety.

When is anxiety in the context of food allergy “excessive”?

A certain level of anxiety, vigilance, and avoidance is adaptive in children with food allergies and other anaphylactic conditions. Anxiety may also increase after diagnosis, an allergic reaction, or when the child moves toward greater autonomy and negotiates new social situations with less parental supervision. This anxiety is typically temporary and support plus education by the care provider will generally prove sufficient. ²

In contrast, the hallmark of excessive anxiety is not merely the intensity of emotional distress, but rather the persistence of unnecessary and unhelpful avoidance as the main “coping” strategy to alleviate that distress. Children with food allergy who have a personal or family history of another anxiety disorder, are female, have experienced previous traumatic events (including anaphylaxis), or have parents with high anxiety and an overprotective style may be particularly at risk.³ As in the case example above, when children with allergy or their anxious parents avoid situations in which the risk of accidental ingestion is very low, all family members can feel a temporary relief that inadvertently drives increased anxiety via a spiral of negative reinforcement (see Fig 1). Even when the avoidance becomes excessive and compromises daily functioning,
Meet Carrie

• 12 year old girl with multiple food allergies. Described as previously joyful and happy, maybe a bit prone to worry. Now described as “fearful and moody.”

• A few years ago, participated in a clinical trial and she underwent desensitization to dairy, which she began eating in normal amounts. She was also cleared to eat sesame, cashews, walnut and hazelnut. Mom would make brownies containing those ingredients and Carrie would eat these brownies 2-3 times a week.
  • Requires regular ingestion of allergens to maintain desensitization.

• Began to have mouth itch with pizza and ultimately stopped all dairy for fear of reacting. Prior to this event, was eating 5 slices in one serving happily!

• Had an ED visit after eating Mom’s brownie (!?). Trigger was unclear but she did receive epinephrine.

Carrie – Functional Impairment

• Increasingly, has become worried about allergens and cross-contamination.

• Nervous and jumpy in school lunch room – friends aren’t allowed to touch her or her stuff.

• Stopped going to parties because she was afraid she couldn’t eat the cake.

• And forget about going to restaurants. (Warning: Bat Mitzvah season is coming up!)

• Began avoiding additional non-allergenic foods, like peanut, almond milk, coconut.

• Has begun to ask for excessive reassurance about even familiar foods.

• Parents have pulled allergens out of house so she can have “one safe place” where she doesn’t have to be anxious.
What causes people with food allergy to worry?
What causes people with food allergy to worry?

• Exposures outside of the home: school, restaurants, travel...
• Labels are confusing!
• Myths abound – families aren’t sure where to get “correct information”
• Social Media can be a mixed blessing
• As children age, developmental capabilities also mature
  • The “rules” keep changing as a child develops and grows more independent
• Food Challenges, blood draws, & scratch tests – oh my!
• Some of the Normies think FAs are “fake.”
• The well-meaning intentions of others.

Yes, but when is anxiety regarding food allergies “excessive?”
When anxiety regarding food allergies is, indeed, “excessive.”

- Anxiety is protective, necessary, and helpful in the food allergic population.
  - But it can be too much of a good thing...

- Three factors are good indicators of excessive anxiety
  - An over-reliance on medically unnecessary avoidance as the main coping strategy
  - Functional Impairment
  - Duration: “Specific Phobia” requires ~ 6 months duration to meet criteria

And then what happens...?

- Anxious children and their families may overestimate their risk of
  - accidental cross-contamination,
  - the probability of a **fatal** anaphylactic reaction,
  - their inability to cope effectively in social situations where allergens are present,
  - and the significance of **bodily sensations** – many of them the result of anxiety – as predictors of an impending allergic attack.

- This faulty risk assessment can propel a cycle of medically unnecessary avoidance,
  - which in turn decreases joy in life,
  - while increasing a foreboding preoccupation on catastrophe and threat.

- Reviews on the unmet needs of this population have noted that anxiety related to FA remains **difficult to manage** and called for **more research on assessment and intervention**.

| Chan et al., 2020; Dahlgaard et al., 2020; Herbert & DunnGalvin, 2022; Polloni & Muraro, 2020; Shaker et al., 2017 |

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**Time Out: Is the diagnosis “Specific Phobia of Anaphylaxis” appropriate?**

**Yes.**

**Yes it is.**

Please consider “**Specific Phobia of Choking**”
Assessment

Problems with Assessment

• Generic measures of anxiety (SCARED, MASC)
  • Are long! And difficult to score!
  • Are too general – may not be helpful clinically
    • When is a “separation anxiety” subscore “elevated” for FA population?
    • May explain the equivocal research findings on whether FA kids have elevated anxiety

• A semi-structured diagnostic interview (ADIS, KSADS)
  • Perhaps more specific and accurate
  • Yields a yes/no on diagnosis of a separate anxiety disorder
  • May yield good clinical information
  • But do you have the time or the training or the resources for a full diagnostic interview?

(Dahlgaard, et al., 2021)
Come sit on our SOFAA...

• Newly published screening measure for kids 8-18
• Parent- and child-report versions for cross-informant assessment
• Full (21-item) and Condensed (7- and 14-item) versions available
• It’s free.

(Dahlsgaard, et al., 2021)
Why a screener that emphasizes unnecessary avoidance?
Intervention

Interventions: Food Allergy Bravery Clinic

So FAB!
Received funding from CHOP to develop this clinic. Collaboration between Psychiatry and Allergy to address this unmet need.

Multifaceted Approach:
- Developed the SOFAA- a measure to identify excessive anxiety and medically unnecessary avoidance around food allergy to screen all patients through the allergy clinic.
- CBT approach for those identified, focused on exposures.
Rationale for Exposures

• **Cognitive-Behavioral Therapy (CBT)** designated as “Well-Established” and “first-line” treatment for anxiety disorders in children and adolescents (AACAP, 2020; Higa-McMillan et al., 2016; Wang et al., 2017)

• CBT in youth anxiety RCTs has not shown consistent superiority to TAU; remission rates in CAMS below 50% (Ale et al., 2015; Ginsburg et al., 2011; James et al., 2020)

• Treatment for OCD, which introduces exposure earlier, shows better outcomes (Abramowitz, Whiteside, & Deacon, 2005; Ale et al., 2015; Storch et al., 2013)

• Emerging evidence suggests that exposure more efficacious than relaxation* or cognitive techniques (Ale et al., 2015; VandeVoort et al., 2010; Whiteside et al., 2020)

• Despite this, a minority of therapists report using exposure (~10-30%), many citing concerns (Becker-Haimes et al., 2017; deJong et al, 2020; Peris et al., 2017)

Interventions Studied

• **Boyle and colleagues** found a brief (45 min) CBT intervention for mothers of children with food allergy significantly reduced anxiety.

• **LeBovidge and colleagues** found that a half-day educational workshop for children (5-7) and parents resulted in parent report of lessened perception of burden and increased perception of competence.

• **Baptist and colleagues** in RCT found a self-regulation educational intervention for parents (via three ~25-minute phone calls) decreased frustration, helplessness & anxiety.

• **Proximity Challenges (they are exposures!)**
  • Two double-blind placebo-controlled studies showed that children allergic to peanut did not have systemic reactions when they deliberately inhaled or had direct skin contact with their allergen.
  • Dinakar and colleagues described adapting these experimental protocols to the office setting in the form of “proximity food challenges;” recommended allergists offer them during routine clinical visits to reduce anxiety and improve QOL.

(Boyle, et al, 2017; Lebovidge et al., 2008; Baptist et al., 2012; Simonte et al., 2003; Wainstein et al., 2007; Dinakar et al., 2016)
FAB Clinic – The Basics

1. Psychoeducation about healthy management of food allergy.

2. Exposures appropriate for that child (and family)

3. Contingency Management: Reinforcement to master brave practices.

4. Cognitive restructuring*

FAB Clinic Manualized Treatment

• Six sessions + 1 booster session
  • Sessions weekly at first, then increasingly spaced to facilitate independence and confidence
  • “Parent/patient becomes their own CBT therapist” model

• Exposures starting at session 1
  • Exposures are hard!
  • Doing exposure homework is hard!

• Exposure homework
  • Recommend daily exposures
  • Generalize gains to ecologically valid settings

• Parents-only check-in at most sessions
Actual FAB Clinic homework from Session 4!

FAB Clinic Booster Sessions

Wonderful Wendy*

Mom switched her coffee creamer back to almond and hazelnut and Wendy has been reheating it for her in the microwave.

We have been out to eat at Panera and Wendy has informed them of her allergies herself and felt safe enough to eat there.

Wendy has eaten at Red Robin next to me when I ordered a salad that contained pecans and she behaved normally.

We went to bath and body works and she felt safe enough to test out a new hand soap.

We have been to her great grandparents and she accepted a hug without asking them if they have eaten anything she was allergic to.

* FAB Clinic
Did it work????

Child SOFAA

Parent SOFAA

Did it work????

Child-Rated Anxiety

Parent-Rated Anxiety

Parent-Rated Quality of Life
Patient Stories

• Dominic’s story...
  • https://www.chop.edu/stories/learning-live-food-allergies-dominics-story

To learn more about our earlier case example of “Carrie”...

Thank you!
QUESTIONS?

(Bonus: Specific Considerations for CBT For Food Allergy-Related Anxiety)

- Cognitive restructuring: “Worst that could happen?”, potentially serious outcome.
- YEARS of over-learning of unhelpful safety behaviors
- Eating is a “high base rate” activity and anxiety can very rapidly upward spiral and kid can look like a GAD kid
- Child may lose weight → increases anxiety (as well as risk for AN or ARFID)
- Physical sensations of anxiety can be easily misconstrued as allergic reaction
- Parents often have a difficulty recognizing anxiety about allergens as “excessive” or “unhelpful”
- EVERYONE HAS TO AGREE ON THE SPECIFICS OF THE TREATMENT PLAN. Necessity of very strong communication and collaboration between doctors, therapist, and family
- Often there is over-accommodation by community and schools, which reinforces the anxiety

YOUR QUESTION HERE

References


• Soller, L., Hsu, E., To, S., Newlove, T., Chan, E.S. (2019). Factors associated with increased food allergy-related anxiety in an outpatient allergy clinic setting: A quality improvement project. *JACI*, 143(2), AB56.


