Addressing Food Allergy Misconceptions

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Learning Objectives

Upon completion of this talk, learners should be able to

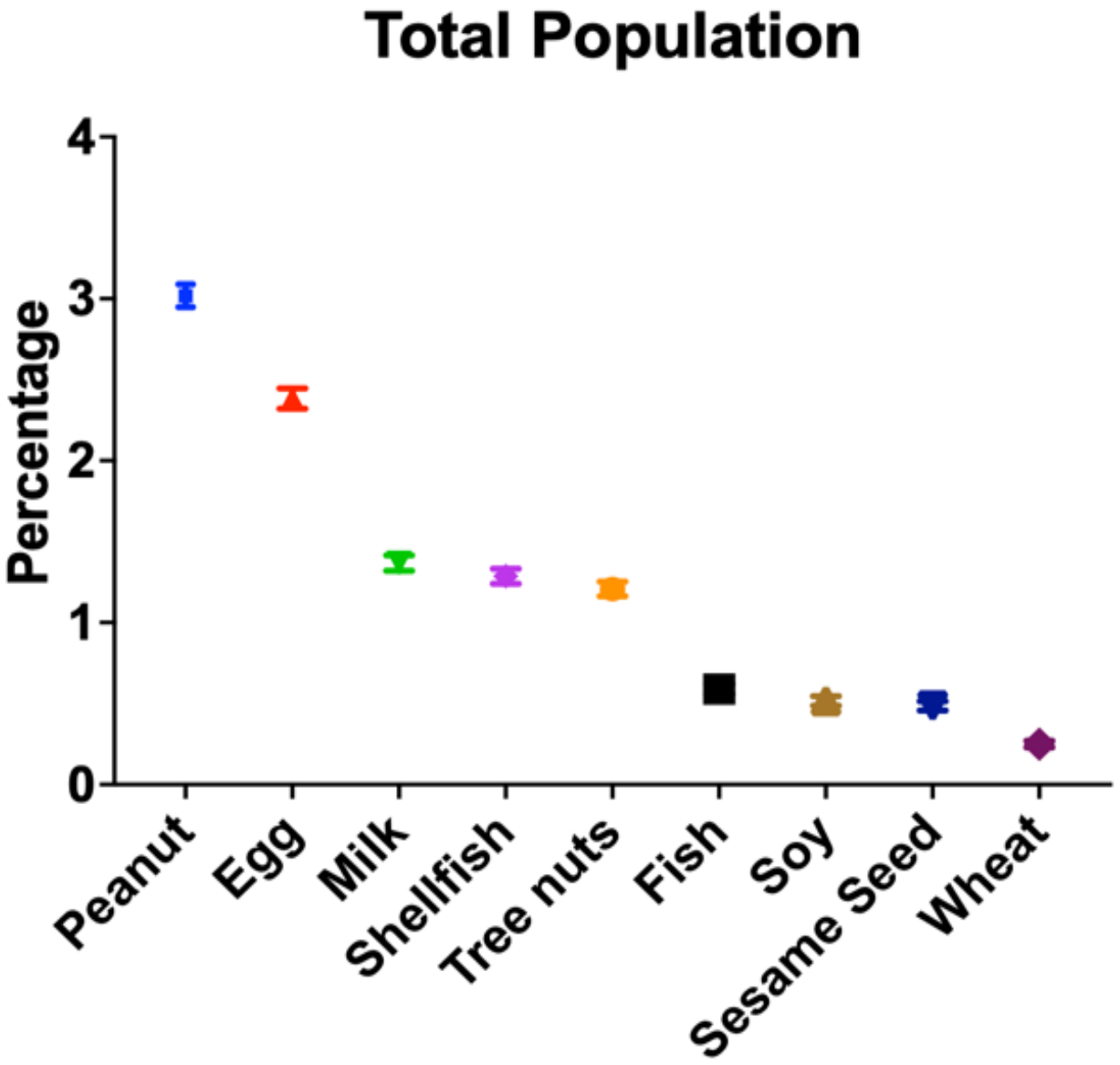
1) Recognize the prevalence of food allergies
2) Recognize the differences of food allergy labels versus oral food challenge outcomes
3) Recognize the increased prevalence of sesame allergy and understand the prevalence concurrent seed allergies

Background

- Food allergy rates have increased in recent decades
- There is evidence that the rates of specific food allergies vary among different populations and demographic factors may influence allergy management
- Sesame allergy became the ninth major food allergy with passage of FASTER Act (2021), but there is limited knowledge of other seed allergies

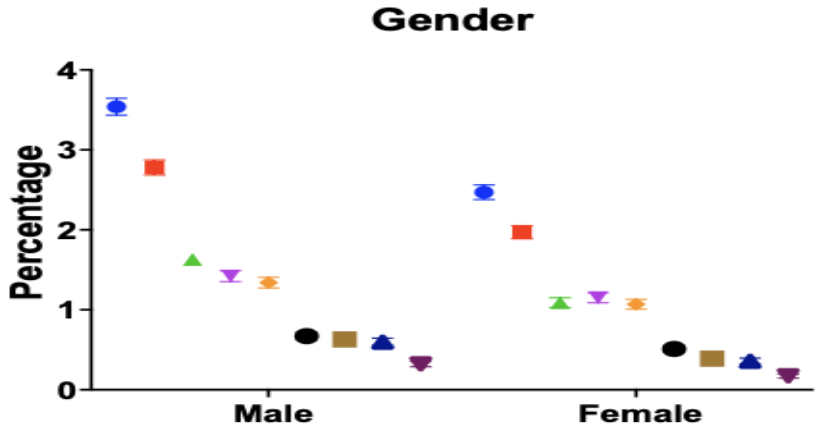
How Prevalent Are Food Allergies?

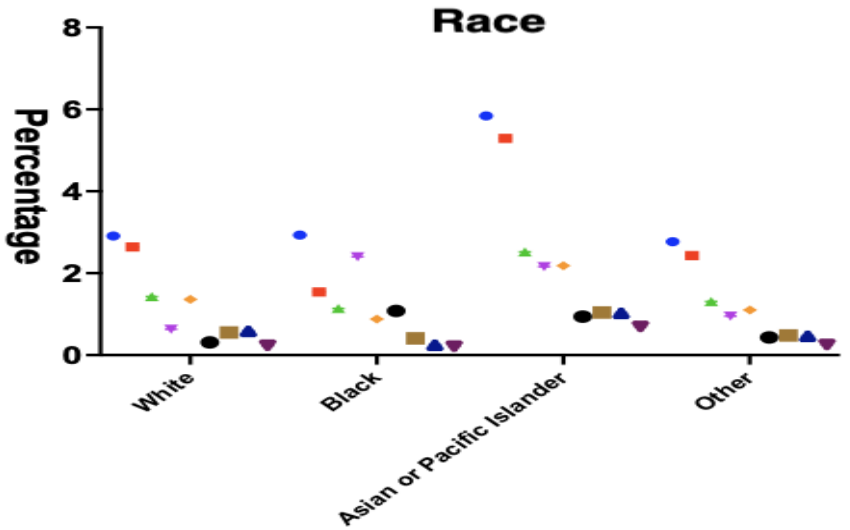
- We sought to understand food allergy prevalence
- Performed a retrospective cohort study utilizing the Children's Hospital of Philadelphia (CHOP) Birth Cohort from 2000 – 2024
- Assessed both overall prevalence and prevalence by demographic characteristics

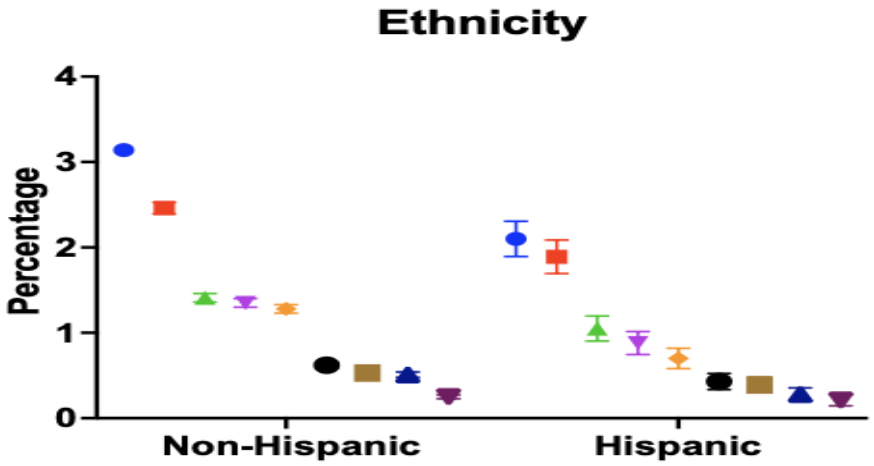


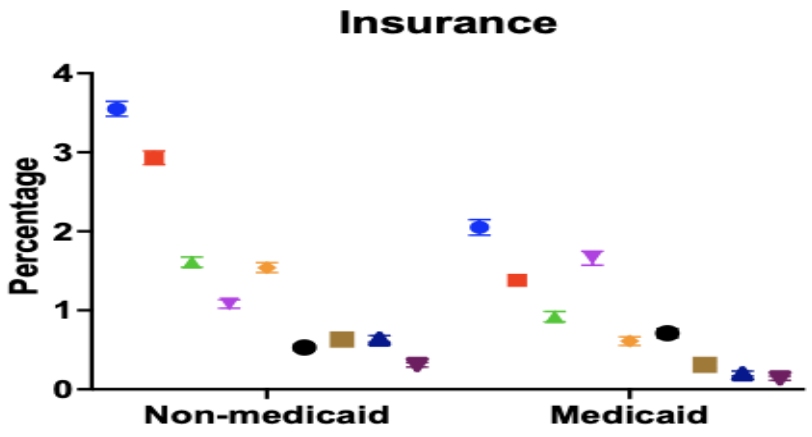
- Similar to a previous study at our institution, peanut (3.02%), egg (2.38%) and milk (1.37%) were the most common food allergens
- Milk and soy allergies decreased compared to previous study
- Wheat was least common food allergy
- Food allergies rates increased in each 5-year birth interval from 2000-2019.
- Sesame allergy greatly increased.
  - In this cohort – prevalence of 0.5%
  - Previous studies - prevalence of 0.1%

*Data not yet published









- There are differences in food allergy labeling rates based on patient demographic characteristics
- Potential hypotheses include differences in social and cultural practices of food introduction, understanding of the various types of food adverse reactions and access to and/or management in the healthcare system

*Data not yet published

Label Versus Outcome

Yet, a 2024 study at our institution assessing 11,869 OFCs over the span of 20 years showed the food challenges outcomes do not differ based on either race or ethnicity

There is no evidence to support incorporating a patient's race or ethnicity when an allergist makes a recommendation to perform an OFC

Further research is needed on the discrepancy between labeling and outcomes

Seed Allergy

- Sesame allergy has increased 5-fold
- There is a limited understanding of the epidemiology and predictive value of testing for other seed allergies
- We aimed to assess prevalence of seed allergies and rate of concurrent seed allergies

Seed Allergy

- From October 2005-March 2024, 392 seed OFCs were performed in 361 individuals.
- Sesame was #1 most common (295 sesame OFCs performed)
  - 28% of sesame OFCs were positive, which is similar to prior research
- #2 Sunflower (48 OFCs) and #3 mustard (39 OFCs)
- <5 OFCs for each of the following: annatto, caraway, chia, flaxseed, and poppy
- 94% individuals who underwent a sesame OFC did not undergo an OFC to a different seed
- Not a single individual had a positive OFC to two different seeds
- An individual having multiple seed allergies is rare

	Age (yr)	SPT wheal (mm)	sIgE (kU/L)
Sunflower			
Tolerate (N=42)	7.4 (3.73-10.71)	4 (3-4)**	1.49 (0.38-5.39)
React (N=6)	7.34 (4.55-12.23)	8 (4-10)**	2.22*
Mustard			
Tolerate (N=32)	6.73 (3.39-12.33)	4 (3-5)	1.22 (0.66-3.27)
React (N=7)	6.38 (2.76-8.15)	4 (3-8)	8.12 (0.79-14.6)
Sesame			
Tolerate (N=212)	6.68 (3.74-10.88)	4 (2-5)**	1.09 (0.51-3.27)**
React (N=83)	5.65 (3.75-9.7)	5 (4-7)**	2.21 (1.15-5.73)**

Data is reported as Median (IQR) unless otherwise stated.
* indicates 2 or fewer values.
** indicates p-value <0.01 using Mann-Whitney test.

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THANK YOU!

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