

Understanding Food Allergies & Consumer Perceptions of Labelling

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Food Allergy Research & Education (FARE)

Nation's largest food allergy patient advocacy organization.

Mission: To improve the quality of **life** and the **health** of individuals with food allergies, and to provide them **hope** through the promise of new treatments.

- **LIFE.** Support the ability of individuals with food allergies to live safe, productive lives with the respect of others through our education and advocacy initiatives.
- **HEALTH.** Enhance the healthcare access of individuals with food allergies to state-of-the-art diagnosis and treatment.
- **HOPE.** Encourage and fund research in both industry and academia that promises new therapies to improve the allergic condition.

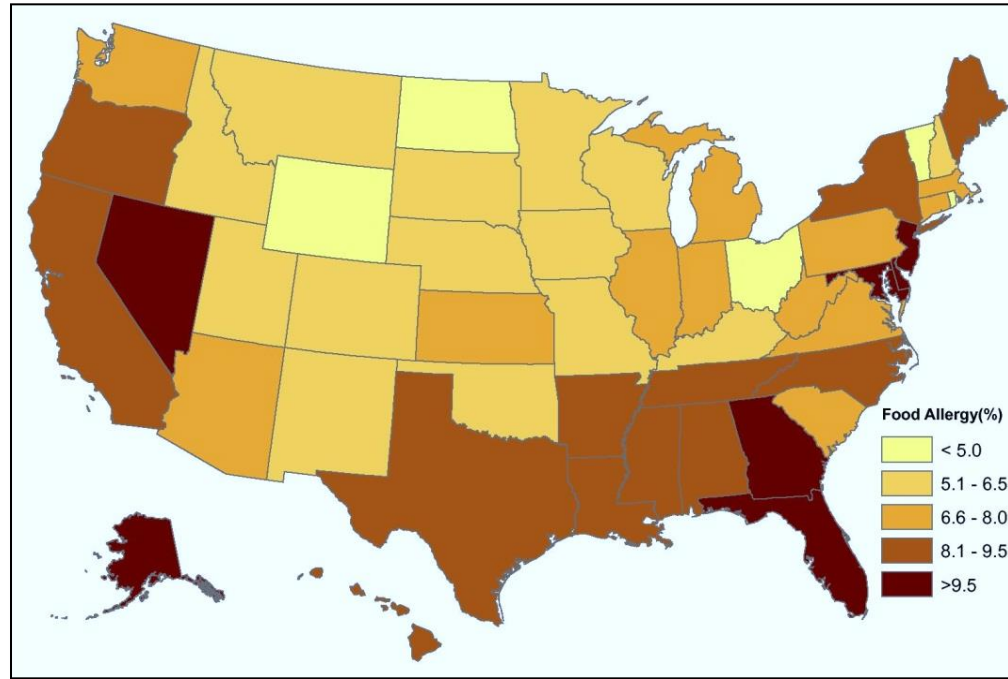
Overview

1. Food Allergy Epidemiology
2. Food Allergy Severity
3. Consumer Attitudes About Precautionary Advisory Labeling

Food Allergy Facts and Stats

- Up to 15 M have food allergies; 9 M (4%) of adults; nearly 6 M (8%) of children ^{1, 2, 3, 4, 5}
- Boys more than girls. ⁵
- Childhood allergies to milk⁶, egg⁷, wheat⁸ and soy⁹ generally resolve in childhood, but more slowly than in previous decades; many children still allergic beyond age 5. Allergies to peanuts, tree nuts, fish, shellfish¹⁰ are generally lifelong.
- 2013 CDC study: food allergies among children increased approximately 50% between 1997 and 2011¹¹

Geographic Variability



- North-to-South decline **not** observed
- Odds of food allergy significantly **higher** at more southern and middle latitudes compared to northern states; also higher in coastal states.

Food Allergy- Mild Symptoms of a Reaction

- NOSE: Itchy/runny nose, sneezing
- MOUTH: Itchy mouth
- SKIN: A few hives, mild itch
- GUT: Mild nausea/discomfort

Food Allergy – Severe Symptoms of a Reaction

- LUNG: Short of breath, wheezing, repetitive cough
- HEART: Pale, blue, faint, weak pulse, dizzy
- THROAT: Tight, hoarse, trouble breathing/ swallowing
- MOUTH: Significant swelling of the tongue, lips
- SKIN: Many hives over body, widespread redness
- GUT: Repetitive vomiting, severe diarrhea
- OTHER: Feeling something bad is about to happen, anxiety, confusion
- Anaphylaxis, shock, possible death in as little as 30 minutes post exposure

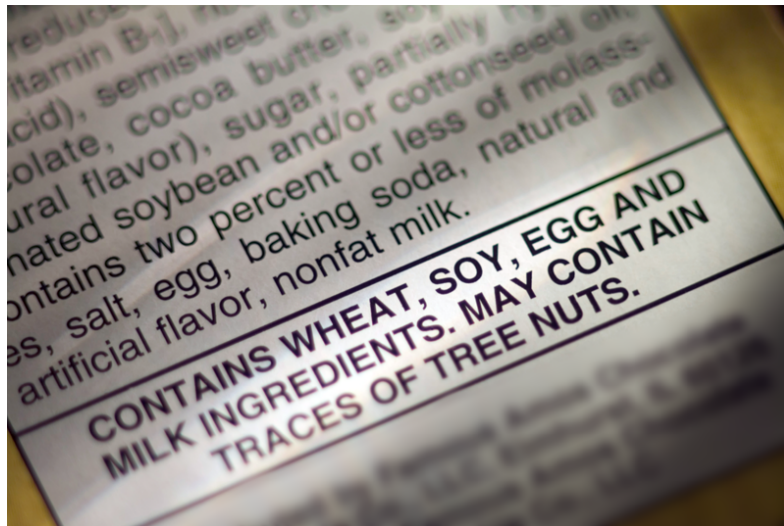
Food Allergies & Anaphylaxis

- CDC reports that food allergies result in 300,000+ ambulatory-care visits a year among children under the age of 18.¹
- Every 3 minutes a food allergy reaction sends someone to the emergency department— app. 200,000 visits PY; every 6 minutes the reaction is anaphylaxis.²
- From 2004 to 2006, there were approximately 9,500 hospital discharges per year with a diagnosis related to food allergy among children under age 18 years.¹
- Food allergy is the leading cause of anaphylaxis outside the hospital setting.³
- Teenagers and young adults with food allergies are at the highest risk of fatal food-induced anaphylaxis.^{4,5, 6}
- More than 15% of school aged children with food allergies have had a reaction in school.^{7, 8}

Label Reading



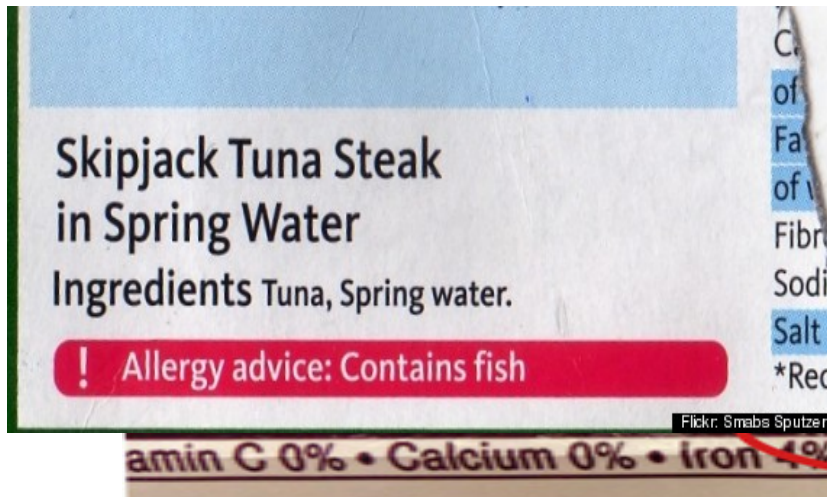
Confusion Abounds



Contains nuts & tree nuts.
Made in a facility and on
equipment that processes
nuts, tree nuts, soy and milk.

*The Almonds and Coconut are
the source of 10g fat per serving

No gluten ingredients
Ingredients: Almonds,
Sweetened Coconut
(coconut, cane sugar),
Organic Sprouted Lentils,
Quinoa



INGREDIENTS: CORN SYRUP; SEMI-SWEET CHOCOLATE
(CHOCOLATE; SUGAR; COCOA; MILK FAT; COCOA
BUTTER; SOY LECITHIN; PGPR, EMULSIFIER); COCONUT;
SUGAR; SALT; NATURAL AND ARTIFICIAL FLAVOR;
HYDROLYZED MILK PROTEIN; SODIUM METABISULFITE,
TO MAINTAIN FRESHNESS; SULFUR DIOXIDE, TO
MAINTAIN FRESHNESS; CARAMEL COLOR; MILK (U) D

**ALLERGY INFORMATION: MANUFACTURED ON THE SAME
EQUIPMENT THAT PROCESSES ALMONDS AND IN A
FACILITY THAT ALSO PROCESSES PEANUTS.**

Labeling Study Objectives and Methods

- To gather preliminary information regarding consumer perspective of food allergen labeling practices from multiple countries
- To share summary data to help advance the dialogue amongst key stakeholders (i.e. food industry, food scientists, clinicians and researchers, government regulators, and patient groups)
- Subjects included those with food allergy, those with family members with food allergy, and caregivers of those with food allergy
- Survey captured information about the prevalence of specific food allergies, severity of reaction, buying practices in response to different type of labeling such as 'may contain'

Labeling Study Results

- 6,684 respondents: 5,507 (82.4%) from the U.S and 1,177 (17.9%) from Canada
- Up to 40% of respondents purchase food with common precautionary allergen labeling (PAL)
- Severe allergic reaction history made respondents less likely to purchase foods containing PAL
- Canadians had higher odds of buying “may contain allergen” labeling
- The US had lower odds of buying products that utilized the “manufactured in a facility that also processes allergen” or “manufactured on shared equipment with products containing allergen”

Respondent Purchasing Behavior

Variable	Frequency, % (n)		
	All Respondents (US & Canada)	United States	Canada
Purchase Product with the Following Label:			
“May Contain Allergen”			
Never	87.7% (5,574)	89.9% (4,730)	77.2% (844)
Sometimes	11.3% (716)	9.4% (492)	20.5% (224)
Always	1.0% (63)	0.7% (37)	2.4% (26)
“Manufactured in a Facility that Also Processes Allergen”			
Never	59.7% (3,795)	58.9% (3,098)	63.5% (697)
Sometimes	34.2% (2,174)	35.0% (1,841)	30.4% (333)
Always	6.1% (389)	6.1% (322)	6.1% (67)
“Manufactured on Shared Equipment with Products Containing Allergen”			
Never	83.3% (5,301)	83.0% (4,375)	84.7% (926)
Sometimes	14.2% (904)	14.5% (762)	13.0% (142)
Always	2.5% (160)	2.6% (135)	2.3% (25)

Respondent Knowledge about Labeling Laws

Variable	Frequency, % (n)		
	All Respondents (US & Canada)	United States	Canada
Food Source Names of Major Allergens Required by Law			
True	71.7% (4,522)	70.7% (3,740)	72.7% (782)
False	17.2% (1,092)	17.6% (929)	15.2% (163)
Don't Know	11.8% (749)	11.7% (618)	12.2% (131)
Advisory Label Required by Law			
True	28.8% (1,831)	25.6% (1,355)	44.1% (476)
False	54.4% (3,460)	57.9% (3,061)	37.0% (399)
Don't Know	16.9% (1,075)	16.5% (871)	18.9% (204)**
Advisory Label Not Based on Amounts			
True	63.3% (4,024)	63.3% (3,345)	63.3% (679)
False	8.5% (539)	8.3% (441)	9.1% (98)
Don't Know	28.2% (1,746)	28.4% (1,501)	27.5% (295)

Global perceptions of food allergy thresholds in 16 countries

- To better understand the knowledge/attitudes of consumers on food allergy thresholds and food purchasing habits related to PALs
- Patient support organizations from 16 countries (Australia, Canada, Chile, France, Germany, Ireland, Israel, Italy, Japan, Mexico, New Zealand, South Africa, Spain, the Netherlands, UK, and US) recruited adults w/FA or caregiver of someone w/FA for online survey on consumer perspectives on thresholds and labeling.

Results

- Less than 1/4 of participants in 11 of 16 countries reported that they would be willing to purchase foods containing their allergen if the amount would be incapable of causing an allergic reaction.
- When asked whether they would purchase foods containing their allergen if it were capable of only triggering a mild reaction, rates were lower across all countries (weighted average of 3%).
- 16% of respondents reported that they would be willing to purchase products with “May Contain Allergen”

What is a threshold and can it be ascertained?

- Threshold: Maximum amount of an allergenic food that can be tolerated without producing any adverse reaction.
- Double-blind, placebo-controlled oral food challenge : allergist administers increasing doses of food to determine amount that elicits reaction.
- Not optimal: illness, body temp, activity level, menstruation, other factors can change reactivity
- Population thresholds not possible to discern at this time.

Conclusions

- Consumers seem to trust PAL to estimate allergen reaction risk. This risk assessment seems to occur at different rates depending on country and the PAL statement used.
- Imperative that we educate consumers with food allergy on thresholds and PAL, develop effective policies for labeling, and change the way physicians advise their patients about avoidance.
- All stakeholders, including consumers, physicians, and food industry, need to be engaged to build understanding and trust in labels based on validated allergen thresholds when they can be reliably ascertained.

Sesame

- Sesame allergies have increased more than any other type of food allergy over the past 10 to 20 years.
- 2014: CSPI citizen petition: Sesame be regulated the same way as other major allergens.
- 2015: Food Labeling Modernization Act would have added sesame to FALCPA list
- 2017: TBD