



Prevalence of Meal Skipping among First-Year College Students with and without Food Allergies

Maya Stadler, BS & Jesse Stabile Morrell, PhD
Department of Agriculture, Nutrition, and Food Systems
University of New Hampshire | Durham NH

Introduction

A **food allergy** occurs when the body is hypersensitive to certain proteins within foods¹. The CDC reports that rates of food allergies have risen by 50% from 1997 to 2011². Given these rates, it is likely a greater proportion of young adults will enter college with food allergy.



Nine Major Food Allergens⁵

A health condition like a food allergy can be life-threatening and challenging to control. Previous research looking at food allergies in the college student population found that many do not carry a self-injectable device (like an EpiPen), and some do not know how to use one, or would be afraid to use one due to fear of needles³.

Meal-skipping is the practice of omitting one or more of the “traditional meal” from one’s dietary patterns⁴. On-campus students with food allergies that eat at dining halls may experience even higher rates of meal-skipping due to lack of options, fear of cross contact (when certain proteins from one food mix in with another), or many other factors. If skipping meals is prevalent in this population, students may present with nutrition deficiencies.

Acknowledgements

This project was funded by the New Hampshire Agriculture Experiment Station and USDA National Institute of Food and Agriculture Hatch Project 1010738.

References

- Center for Food Safety and Applied Nutrition. Food allergies. U.S. Food and Drug Administration. <https://www.fda.gov/food/food-labeling-nutrition/food-allergies>. Published October 20, 2022. Accessed November 30, 2022.
- Facts and statistics. Food Allergy.org. <https://www.foodallergy.org/resources/facts-and-statistics>. Published 2022. Accessed December 9, 2022.
- Mehta H, Gowland ML, MacKenzie H, et al. How do teenagers manage their food allergies? Clinical & Experimental Allergy. 2010;40:1533-1540.
- Pendergast FJ, Livingstone KM, Worsley A, McNaughton SA. Correlates of meal skipping in young adults: a systematic review. Int J Behav Nutr Phys Act. 2016;13:125.
- “Food Allergen Awareness.” Wake County Government, 2023. www.wake.gov/departments-government-environmental-health-safety/regulated-facilities/risk-factor-studies/food-allergen-awareness.

Purpose

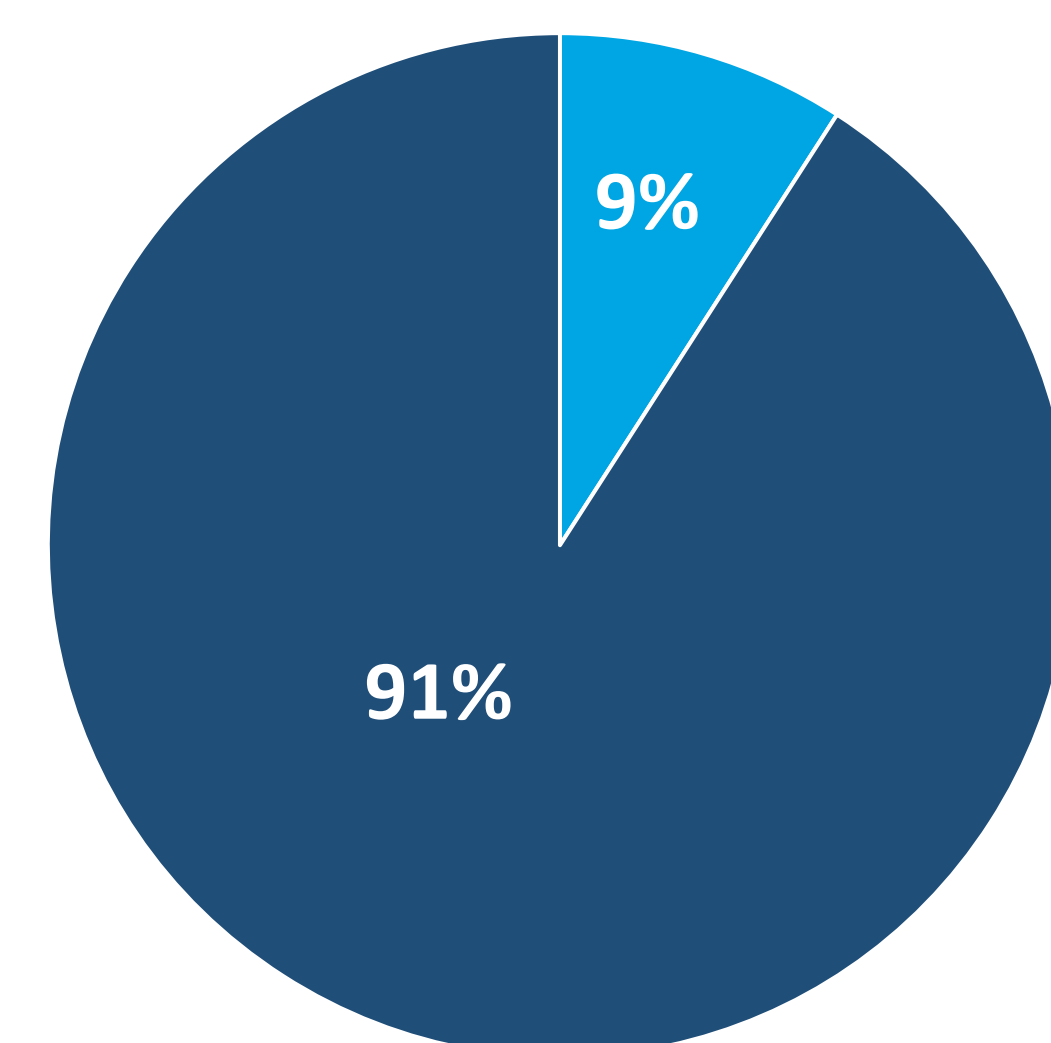
To examine the meal skipping prevalence of first-year college students with and without food allergies to better understand the dietary habits of this population and highlight the need to provide support during this vulnerable time.

Subject Characteristics

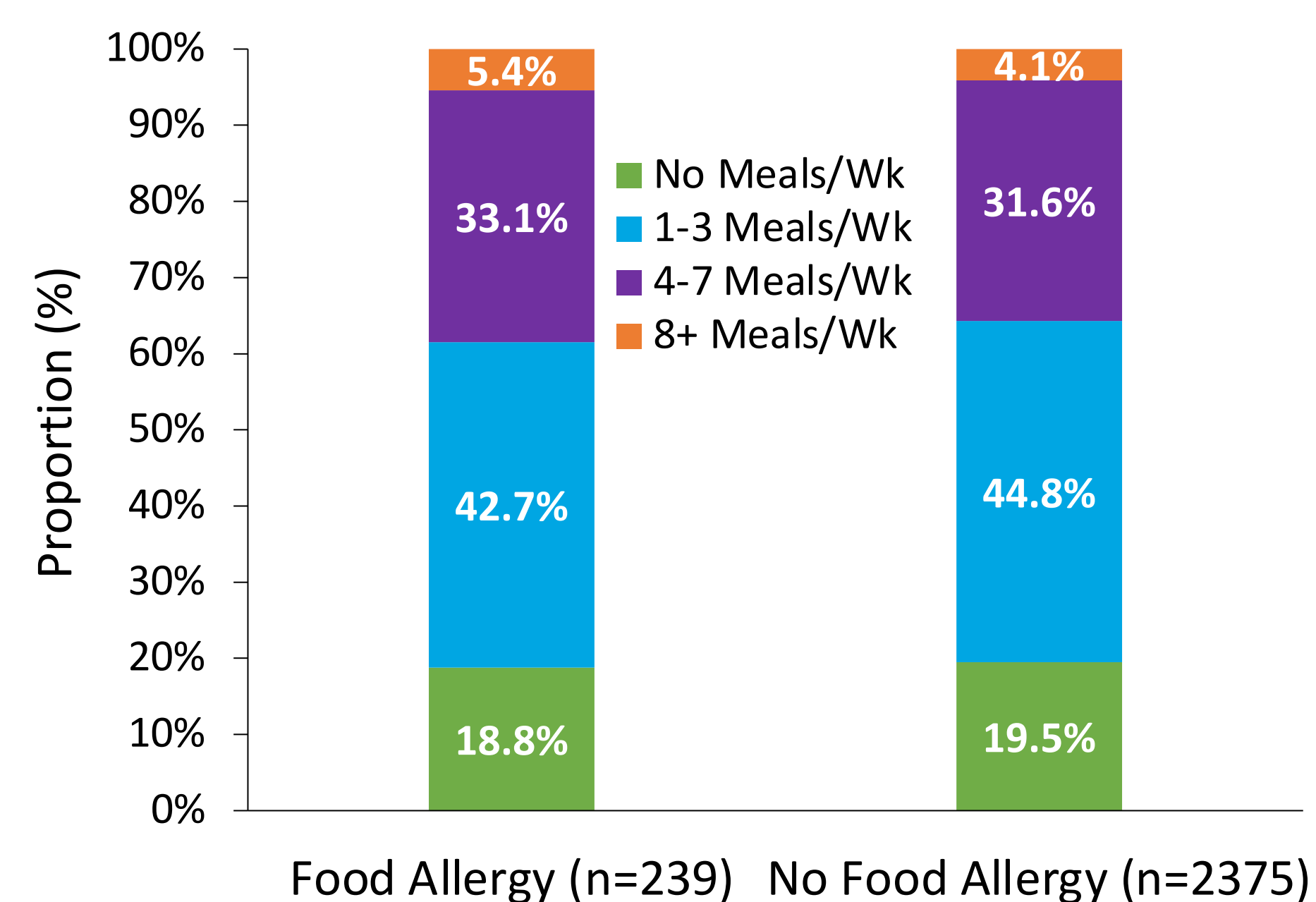
	First-Year Students With Food Allergy (n = 239)	First-Year Students Without Food Allergy (n = 2375)
Age (mean±SD)	18.3±0.54	18.3±0.53
Gender (%)		
Male	28.0% (n=67)	29.2% (n=694)
Female	72.0% (n=172)	70.8% (n=1681)
Pell Grant Status (%)		
No	72.9% (n=129)	72.9% (n=1271)
Yes	27.1% (n=48)	27.1% (n=472)
Dining Hall Use (%)		
No dining hall	3.8% (n=9)	2.0% (n=48)
1-6 meals/wk	10% (n=24)	8.2% (n=194)
7-13 meals/wk	22.2% (n=53)	19.4% (n=461)
14 or more meals/wk	64.0% (n=153)	70.4% (n=1671)

Prevalence of Food Allergy Among First-Year Students

■ Food Allergy (n=239) ■ No Food Allergy (n=2375)



Meal Skipping Among First-Year Students With or Without Food Allergy



Key Findings

In the final sample (n=2614) of first-year students, 9.1% (n = 239) reported a food allergy(s). No differences were observed between first-year students with food allergies and meal skipping prevalence compared to those without food allergies (p = .71). Results from logistic regression analysis showed no differences between meal skipping in first-year students when adjusting for gender (p = .83).

Methods

Participants:

Undergraduate college students, ages 18-24, were recruited from an introductory nutrition course and provided written consent to participate. (UNH IRB #5524).

Data Collection:

- Data were collected between from Fall 2012 to Fall 2021 through the College Health and Nutrition Assessment Survey (an ongoing, cross-sectional study at a midsize, northeast public university).
- Both food allergy status and meal skipping prevalence were self-reported via online questionnaire (Qualtrics).
- Meal skipping status was categorized into 4 groups: 0, 1-3, 4-7, and ≥ 8 meals skipped per week.

Data Management and Analysis:

- Data are presented as frequency percentages or as means \pm SD.
- Differences in meal skipping and allergy status among first-year students were evaluated using a chi-square analysis (p<.05).
- Logistic regression model assessed the differences between meal skipping prevalence in first-year students with food allergies and adjusting for gender.
- All analyses were conducted by SPSS V28.

Implications for Future Research

- Our data do not show differences in meal skipping between first-year students with or without food allergies.
- However, our data shows a high prevalence of overall meal-skipping in first-year students (87%, n=2106).
- Future work may consider the impact of food allergies on students throughout the college experience, and the implications of food allergies on eating behaviors and nutrient intake or deficiencies in this population.

Contact Information

For more information on this research, please contact maya.stadler@unh.edu or jesse.morrell@unh.edu.