

# SYMPTOM AND TREATMENT PERCEPTIONS OF PATIENTS WITH DAIRY HYPERSENSITIVITIES

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## INTRODUCTION

Milk and dairy products have long been considered a dietary staple, yet dairy is one of the most common food allergens and intolerances.<sup>1</sup> There are numerous mechanisms for dairy hypersensitivities, with many overlapping characteristics and symptoms.<sup>2</sup> Many patients choose to self-diagnose rather than seek medical diagnosis. The high prevalence of self-diagnosis indicates the probability of self-treatment as well.<sup>3</sup> While the issue of patient misunderstanding, self-diagnosis, and self-treatment of dairy hypersensitivities is well documented, why this is occurring has not yet been reviewed. In examining the differences in perceptions between patients with formally diagnosed dairy hypersensitivities and patients with self-diagnosed dairy hypersensitivities, nutrition professionals can have a better understanding of the appropriate nutrition information to promote optimal nutrition behavior in future nutrition education.

## OBJECTIVES

- To examine patients with dairy hypersensitivities' perceptions of their symptoms and preferred resources and treatments of dairy hypersensitivities.
- To determine whether patients who have been formally diagnosed with dairy hypersensitivities have different perceptions than those who have self-diagnosed dairy hypersensitivities.

## MATERIALS AND METHODS

### Participants:

110 participants total in the greater Boston area from Hallmark Health Primary Care: 55 with self-diagnosed dairy hypersensitivities, 55 with formally diagnosed dairy hypersensitivities

*Inclusion criteria:* Aged 18-50; citizen of the United States; identify as a patient with a dairy hypersensitivity

*Exclusion criteria:* other food allergies, intolerances, or gastrointestinal diseases; terminal illness

### Design:

Cross-sectional online survey via Qualtrics survey site.

Participants will be screened via Hallmark Health primary care and e-mailed the survey invitation.

Survey data will include: demographics; dairy hypersensitivity symptom severity; dairy hypersensitivity resources; dairy hypersensitivity treatments.

### Data Collection:

Perceptions will be ranked via Likert-scale

Resources will be assigned point value based on rank frequency

Treatments will be multiple choice questions and ranked based on frequency of responses

## MATERIALS AND METHODS (CONT)

**Table 1. Participant Demographics**

Demographic	n/%
<b>Sex</b>	
Male	n/%
Female	n/%
Other (separated by participant's narrative box)	n/%
<b>Education Level</b>	
Some High School	n/%
Some College	n/%
Associates Degree	n/%
Bachelors Degree	n/%
Masters Degree	n/%
Doctorate Degree	n/%
<b>Household Income</b>	
Less than \$25,000	n/%
\$25,000-\$49,999	n/%
\$50,000-\$99,999	n/%
\$100,000-\$199,999	n/%
\$200,00 or more	n/%
Prefer not to answer	n/%
<b>Have you been formally diagnosed for your dairy intolerance or allergy?</b>	
Yes	n/%
No	n/%

### Data Analysis:

Demographics data, such as age, gender, education level, and income will be analyzed using Chi-square goodness-of-fit test.

Participant's survey answers regarding symptoms and resources/treatments of dairy hypersensitivities will be analyzed using Pearson's chi-square test.

Mann-Whitney *U* test will be used to analyze survey results between formally-diagnosed and self-diagnosed patients with dairy hypersensitivities.

## RESULTS

Chi-square goodness-of-fit test will examine survey sample representation

Pearson's chi-square test will compare participant's survey answers to demographics

Mann-Whitney *U* test will determine if there is a significant difference in median survey responses between formally-diagnosed and self-diagnosed patients with dairy hypersensitivities

**Table 2. Mann-Whitney *U* test for median survey response rank: symptom severity**

Likert	Group	N	Median Rank	Mann-Whitney U	P
Stomach Pain	FD				
	SD				
Gas	FD				
	SD				
Bloating	FD				
	SD				
Diarrhea	FD				
	SD				
Constipation	FD				
	SD				
Nausea	FD				
	SD				
Rashes	FD				
	SD				
Trouble Breathing	FD				
	SD				

FD: Formally-Diagnosed; SD: Self-Diagnosed  
Statistical significance for all analysis will be set at  $P = 0.05$ .

## CONCLUSIONS/IMPLICATIONS

By examining the perceptions of patients regarding symptoms and treatments of dairy hypersensitivities, this research will provide the foundation information to address the issue of patient misunderstanding, self-diagnosing, and self-treating dairy hypersensitivities.

By understanding what patients are perceiving, and what the differences are between different types of patients, future research can be developed to design more effective communication and educational strategies.

## LIMITATIONS

Convenience sampling was selected to reasonably obtain patients with dairy hypersensitivities. However, this method limits the study by introducing sampling bias, and therefore cannot be applied to the population as a whole.

The small study size further limits the statistical power.

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