



POSTER PRESENTATION

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# Estimating the prevalence of milk, egg, and wheat allergies in the Canadian population

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## Background

Milk and egg are the most common allergens in childhood. Recent reports also indicate that wheat may contribute to a significant number of food-related anaphylactic events. However, there have so far been no Canadian studies to assess the prevalence of these three important allergens. Our objective was to estimate the prevalence of milk, egg, and wheat allergies in the Canadian population.

## Materials and methods

We performed a cross-sectional, nationwide, telephone survey adapted from a questionnaire used by Sicherer in the US to assess the prevalence of other food allergies [1,2]. Telephone numbers were randomly selected from the electronic white pages and an information letter was mailed to households. Respondents were eligible to participate if they were 18 or older, were living in the household, and appeared to have no language-mental-hearing barriers to understanding the questions. To optimize response rates and minimize selection bias, up to ten attempts were made to contact households, calling was done on different days and at different times during the day. Individuals were asked whether they had an allergy to milk, egg, and/or wheat.

## Results

Of 10,596 households surveyed, 3666 responded, representing 9667 individuals (35% response rate). Of these, 202 (2.09% [95% CI, 1.81,2.39%]) self-reported an allergy to milk, 77 (0.8% [0.63,0.99%]) to egg, and 74 (0.77% [0.6,0.96%]) to wheat. Egg allergy was more prevalent in children than adults, and wheat allergy was more

prevalent in adults than children. Both egg and wheat allergies were more prevalent in households with a post-secondary graduate. Regional differences between allergies to milk, wheat and egg were also evident, with Quebec showing a lower prevalence compared to elsewhere in Canada. The unusually high prevalence of milk and wheat allergy in adults is not consistent with the literature [3,4], and may be due to participant confusion with lactose intolerance and celiac disease, respectively. Currently, our research team is contacting participants from the survey in order to validate their report of allergy to milk, egg and/or wheat.

## Conclusions

This is the first nationwide Canadian study to determine the prevalence of milk, egg, and wheat; three allergens which affect many Canadians and may cause life-threatening anaphylactic reactions. Because of the potential danger associated with having a food allergy, it is crucial to undertake novel research studies to better understand the natural history, diagnosis, and management of food allergy so that we may improve the quality of life of allergic Canadians.

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