

Gluten-Free Claims Are Displayed Mostly on Processed and Ultra-Processed Foods in Canada

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Objectives: Celiac disease is an autoimmune condition characterized by an adverse response to gluten ingestion. While only 1% of the population must follow a gluten-free diet (e.g., those with celiac disease), gluten-free products are becoming increasingly prevalent in Canada, particularly among packaged products, which are largely processed or ultra-processed. Yet, excess consumption of processed and ultra-processed foods has been associated with poor diet quality, a risk factor for obesity and other non-communicable diseases.

Objectives: To examine whether the presence of gluten-free claims (GFC) on packaged food and beverage products was associated with level of processing.

Methods: Cross-sectional analysis of the University of Toronto Food Label Information Program 2017. GFC were identified by systematically reviewing the photographs of food labels ($n = 17,267$). Products were classified into 22 main food categories as determined

by the Health Canada's Table of Reference Amounts for Foods. Using the NOVA food processing classification system, products were also classified into two groups: 1) Unprocessed or minimally processed and processed culinary ingredients; and 2) processed or ultra-processed. Proportions of products displaying GFC were calculated overall, by food category and by level of processing. Binomial logistic regression models examined the association of GFC with level of processing.

Results: Fifteen % of products displayed GFC. Categories displaying the largest proportion of GFC were snacks (32%), meat and poultry products (28%), and nuts and seeds (26%). The presence of GFC claim was associated with foods being processed or ultra-processed ($\beta = 1.63$, $P < 0.001$). In 8 of the 22 food categories, 100% of products displaying GFC were processed or ultra-processed, while more than 80% of foods displaying GFC in 17 of 22 categories were considered processed or ultra-processed.

Conclusions: About 1/6 of prepackaged foods and beverages displayed gluten-free claims in the Canadian Food supply. Most of them were considered processed and ultra-processed foods.

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