Abstract Title: Knowledge, attitudes and perceptions of carbohydrates among nutrition undergraduates in Canada

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Introduction: Dietitians play an important role in improving Canadians' health through communication of evidence-based nutrition information. Students gain knowledge from nutrition courses and develop critical thinking skills required for future careers as dietitians. However, students may also be influenced by information online and in mainstream and social media that contain competing messages not always based on high-quality science.

Objectives: This study aimed to assess knowledge and attitudes/perceptions of carbohydrates among students enrolled in undergraduate nutrition courses in Canada.

Methods: Surveys with 32 questions were distributed in nutrition classes to students at different stages of their education at seven Canadian universities in Winter 2016. Responses to individual questions were analyzed using SPSS.

Results: A total of 784 students (58% enrolled in a nutrition degree program) participated between January and April 2016. When asked to list three sources where they obtain nutrition-related information, 68% of respondents included at least one internet source (e.g. Wikipedia, Google, YouTube); only 10% listed three credible sources (e.g. scientific journals, dietitians, government). A modest majority of students knew the correct amount of Calories per gram for both starch and sugars (56% and 58%, respectively); the proportions who knew the equivalent answers for fat and protein were higher, both at 70%. Almost 71% of students correctly identified carbohydrates as a preferred source of efficient energy over protein or fat for intensive physical activity. Perceptions of sugars-related health topics were generally negative, many reflecting information and opinions communicated online, in mass and social media sources.

Conclusions: Knowledge gaps were identified among undergraduates enrolled in nutrition courses. These knowledge gaps highlight the importance of critical thinking when learning basic food chemistry and metabolism of carbohydrate, and warrant greater emphasis on addressing knowledge gaps, improving knowledge retention and ensuring nutrition curricula are based on current high-quality evidence. The importance of accessing nutrition information from credible sources needs to be reinforced throughout the degree programs.