

Abstract Title: Electronic Sodium Calculator screening tools: A promising intervention for improving sodium-related knowledge, attitudes and behaviours
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Objectives: Dietary sodium reduction strategies aim to prevent and manage health outcomes associated with excess sodium intake, including hypertension. At the individual level, a significant barrier to implementation and personal action are the misconceptions and awareness surrounding personal sources of dietary sodium. To engage the public to take personal action in reducing sodium, tools to screen for and educate about dietary sodium are warranted. The objective of this study was to determine if two web-based dietary sodium screening tools, with instant personalized feedback on the amount and sources of dietary sodium (Sodium Calculator and Sodium Calculator Plus, SC, www.projectbiglife.ca), could improve sodium-related knowledge, attitudes and behaviors (KAB) in a group of young adults.

Methods: In this cross-sectional study, post-secondary students 18-35 years without a meal plan and with no sodium homeostasis disorders were recruited. To assess KAB, a short, paper-based questionnaire was administered to 199 subjects (21±4 yrs, 48% male) immediately before and after completing the SC.

Results: After completing the SC the number of subjects who thought they consumed too much sodium significantly increased from 41% to 66% ($p < 0.001$). Recall of dietary sodium recommendations also significantly improved following completion of the SC from 19% to 74% for the sodium Adequate Intake level of 1500 mg ($p < 0.001$) and from 23% to 74% for the sodium tolerable Upper Level of 2300 mg ($p < 0.001$). After using the SC, participants reported significantly greater interest in limiting sodium intake (33% to 48%, $p < 0.015$) and interest in engaging behavioral modification to reduce dietary sodium, specifically related to reading the Nutrition Facts table, consuming more vegetables and fruit, consuming less packaged foods and limiting restaurant foods.

Conclusion: The web-based SC are promising tools that can improve sodium-related knowledge, attitudes and behavior.

Significance to the field of Dietetics: These innovative tools may be a cost-effective approach for dietitians, and other healthcare professionals, to incorporate into practice to assist individuals in achieving dietary sodium reduction goals.