

An assessment of snack consumption by Canadian soldiers training in the Arctic

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Introduction: Canadian Armed Forces (CAF) soldiers have elevated energy needs given their physical activity, especially when training in the Arctic. Often during trainings/deployments, combat rations are given to soldiers when fresh-feeding is not possible. These pre-packaged meals provide a daily total of ~4800kcal. Light Meal Combat rations (LMCs) are snacks occasionally offered by CAF in addition to main meal rations and provide an additional 1000kcal/d. They include multiple snacks: beef jerky, trail mix, fruit bars, sport drink, coffee, etc. Additionally, a common practice for soldiers in training/deployment is to bring snacks from home with them.

Objective: To assess consumption of snacks by CAF soldiers training in the Arctic.

Methods: CAF soldiers who trained in the Arctic (2015-2018) were invited to participate in an online bilingual survey questionnaire sent via SurveyMonkey. It included questions related to intake of snacks (LMCs and/or brought from home), and feedback on 13 acceptability factors using a 7-level Likert scale (*1-Very unacceptable to 7-Very acceptable*), and comment boxes. Results are presented as mean±standard deviation.

Results: Forty-eight soldiers participated; 29 (60%) reported consuming LMCs and 34 (71%) brought food from home (e.g., granola/energy/protein bars, candy, trail mix, coffee, instant soup/broth). In total, 43 (90%) consumed snacks. The three highest scores of LMC acceptability were weight (5.8 ± 1.2), ease of preparation (5.3 ± 1.5), and preparation time (5.3 ± 1.5). LMCs were eaten sporadically throughout the day, reflecting their purpose as snacks between meals (26% eaten between 12-3:59am; 23% between 1-3:59pm; 30% between 7-9:59pm). Fifteen participants provided comments. Many talked specifically about the jerky and fruit bar being good snack options, but were always frozen making them difficult to consume, even more so on-the-move. Others wanted a greater variety of snacks. When asked why they brought home food, some indicated it was for added energy.

Conclusion: The majority of soldiers consumed snacks (LMCs and snacks from home) throughout the day, likely providing extra energy to help reach their elevated nutritional needs in the Arctic.

Significance: These preliminary findings emphasize the importance of providing soldiers with energy-dense snacks in addition to meals. Snack options and suitability could be optimized to be easily consumed in the Arctic.

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