

Determinants of Food Choice, Dietary Intake

One-Carbon Metabolism Nutrient Intakes among Canadian Women of Childbearing Years: Findings from the 2015 Canadian Community Health Survey Nutrition

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Introduction: Adequate intake of one-carbon (1-C) nutrients are vital for normal fetal development. Since many pregnancies are unplanned, maintenance of optimal nutritional status during childbearing years is essential for positive pregnancy outcomes. Currently, limited research exists which examines 1-C intakes among Canadian woman of childbearing years (WCBY).

Objectives: The purpose of this study was to determine dietary intakes and major dietary sources of 1-C nutrients in Canadian WCBY.

Methods: Nationally representative dietary data from 24-h recalls collected in the Canadian Community Health Survey Nutrition 2015 were analyzed to determine intake and food sources of folate, choline, vitamin B₆ and vitamin B₁₂ among non-pregnant and non-lactating Canadian women aged 18-44years old (n=2429). Percent contributions were estimated for all food sources contributing to intake of each nutrient.

Results: Among WCBY, mean intake was above the Estimated Average Requirement (EAR) for Vitamins B₁₂, B₆ and folate with intakes of $3.7 \pm 0.2 \mu\text{g}$, $1.5 \pm 0.03 \text{ mg}$ and $523 \pm 11.9 / \mu\text{g DFE}$ respectively. Mean choline intake ($243 \pm 5.5 \text{ mg}$) fell below the Adequate Intake (AI). Grain products were the highest contributors to folate intake (42%), while fruits and vegetables were the highest contributors to Vitamin B₆ intake (34%). Eggs and dairy were the highest contributors to B₁₂ (49%) and choline (30%) intake.

Conclusions: Our findings suggest that a large portion of Canadian WCBY are meeting current nutrient recommendations for folate, vitamin B₆ and B₁₂. Food sources for choline are primarily animal in origin but the majority of women are not meeting the AI for choline. Given the importance of choline in pregnancy, strategies are needed to improve intake.

Significance to the Field of Dietetics: Dietitians need to focus not only on folate consumption in WCBY but choline as well. Top food sources of choline should be considered as a strategy to improve dietary intake among women.